

FLOWING EXPERTISE

2022



# GENERAL PRODUCT GUIDE





**COMPONENTS FOR CENTRAL HEATING SYSTEMS**

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**AIR AND DIRT SEPARATION DEVICES**

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**VALVES AND ACCESSORIES FOR RADIATORS**

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**ZONE AND MOTORISED VALVES, DISTRIBUTION MANIFOLDS, BOXES AND ACCESSORIES**

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**RADIANT PANEL SYSTEM CONTROL**

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**COMPONENTS FOR DOMESTIC WATER SYSTEMS**

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**BACKFLOW PREVENTION DEVICES**

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**BALANCING AND CONTROL DEVICES**

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**FITTINGS**

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**GAS SAFETY**

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**EXPANSION VESSELS, CHRONO-THERMOSTATS, THERMOSTATS**

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**HEAT SYSTEMS**

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**COMPONENTS FOR RENEWABLE ENERGY SYSTEMS**

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**SPARE PARTS - For spare parts, please contact the appropriate department**

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**FITTING COUPLING - PRODUCT DIMENSIONS are available on [www.caleffi.com](http://www.caleffi.com)**

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## FLOWING EXPERTISE

With our heating and plumbing solutions, we have been redesigning the comfort of the spaces we live and work in for over 60 years. This is thanks to the flow of expertise, technology, experience and innovations that we have acquired over the years by constantly exchanging ideas with our customers and suppliers. A flow that pushes boundaries, allowing us to constantly set the benchmark. A flow that allows us to always look one step ahead into the future.



### FLOW OF LIFE

A unique way of flowing.  
It is **continuous change**, a high degree of reliability in our work, and the ongoing pursuit of total quality, which is the result of small daily actions.



### FUTURE

Innovation aimed at creating **new forms of comfort** for spaces, which motivates us to continue to grow and improve.



### SUSTAINABILITY

Our focus on preserving **environmental, social and economic well-being** so that it can be passed on to future generations through our products and processes.



### TECHNOLOGY

Our ability to do research, invest in processes and develop **state-of-the-art solutions** in an ever-evolving world of expertise.



### MADE IN CALEFFI

A uniqueness consisting of many details, which is what we are known for worldwide. True **"Made in Italy"** quality, the hallmark of our company.



### HISTORIC BRAND

After more than 60 years in the business, we have been included in the special register of historic brands of national interest.

**We have played a part in Italy's history** and we are proud of it.





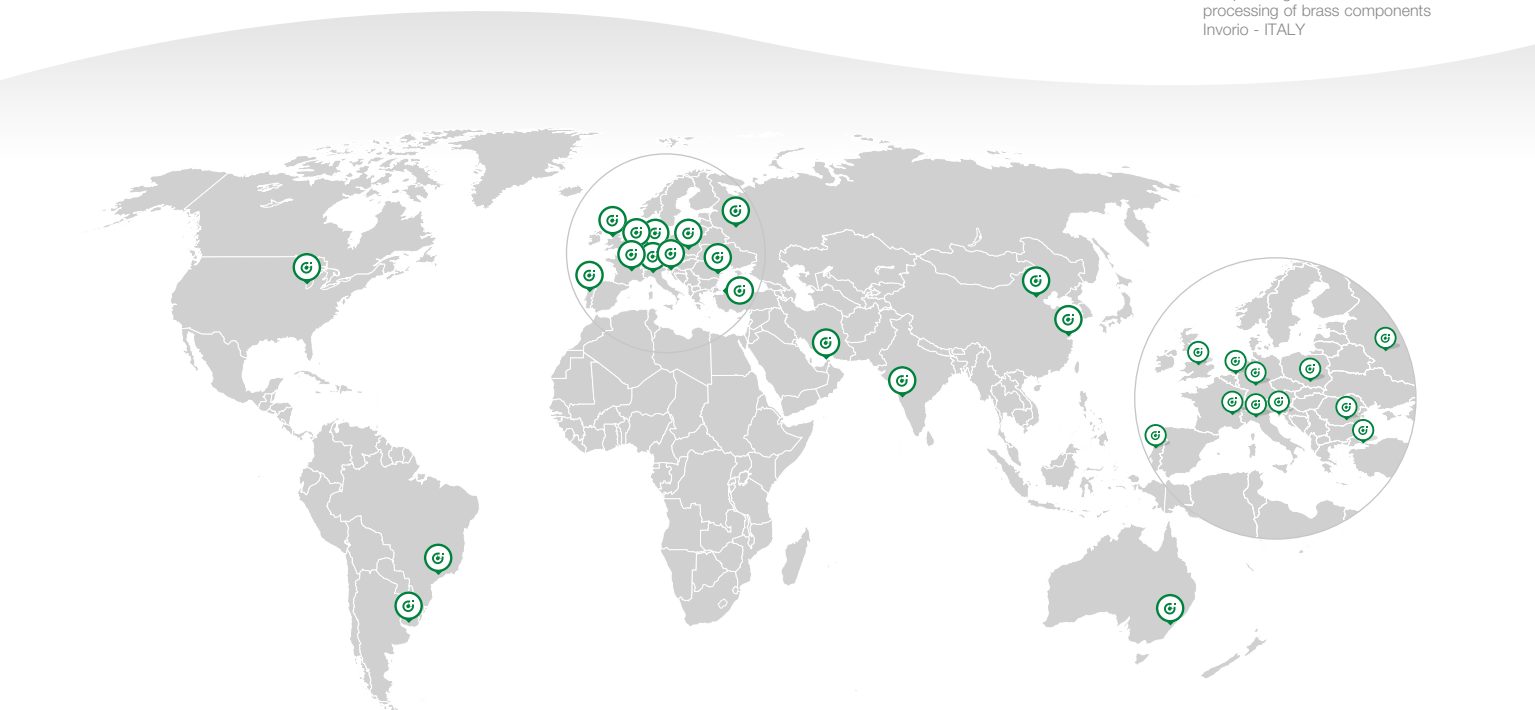
# WHERE WE ARE SET WORLDWIDE



Caleffi Hydronic Solutions counts over **1,000 employees** worldwide and distributes to over **90 countries**.

Caleffi is member of the European association CEIR (Taps and Valves Industry) and of the Italian association ADV (Valvole e Rubinetti).

- 1 Caleffi S.p.A.  
Corporate Headquarters - Plant 1  
Fontaneto d'Agogna - ITALY
- 2 Caleffi S.p.A.  
Plant 2  
Fontaneto d'Agogna - ITALY
- 3 Caleffi S.p.A.  
Plant 3  
Gattico-Veruno - ITALY
- 4 PRESSCO S.p.A.  
Hot pressing and mechanical  
processing of brass components  
Invorio - ITALY

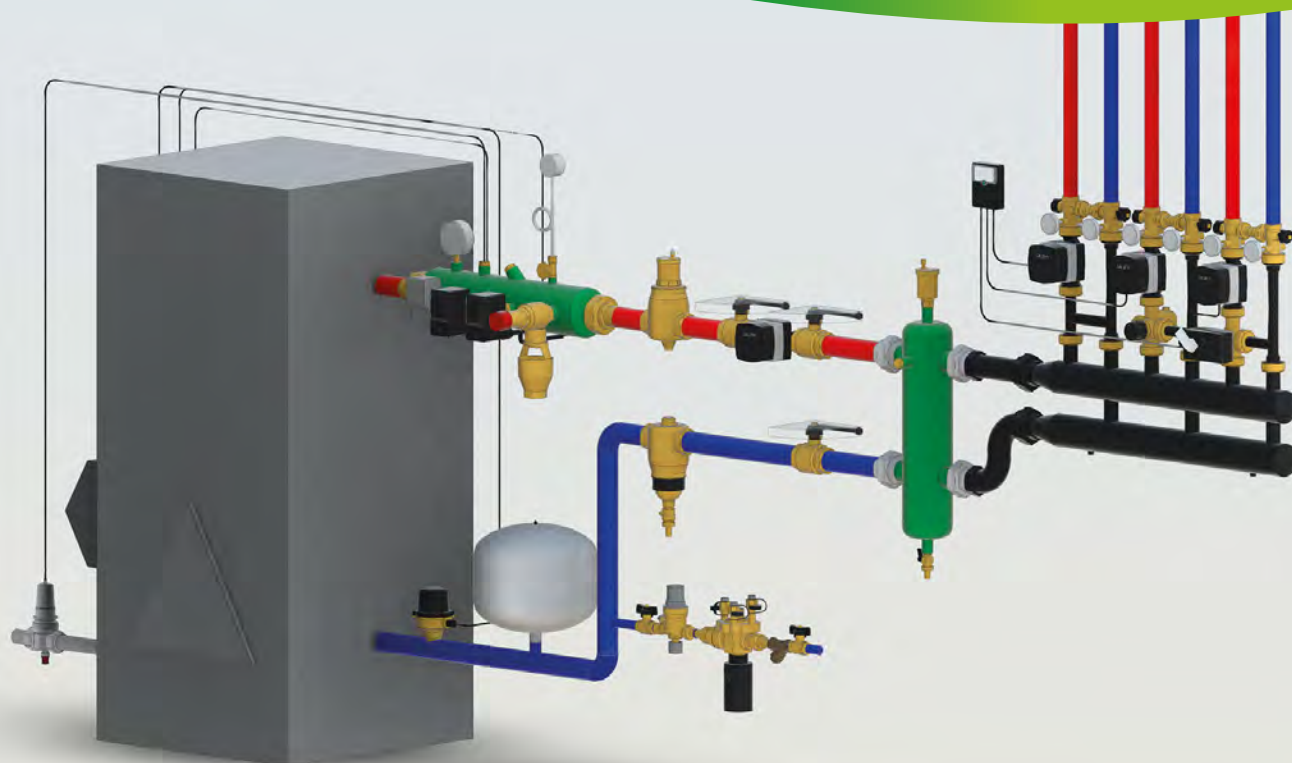




# APPROVAL & CERTIFICATIONS



# COMPONENTS FOR CENTRAL HEATING SYSTEMS



**BIM**  
bim.caleffi.com

**Safety relief valves**  
**Fuel shut-off valves**  
**Temperature relief valves**  
**Differential by-pass valve**  
**BALLSTOP - anti-thermosiphon check valve**  
**Air separators, instrument holders, draught regulating valve**  
**Automatic filling units**  
**Thermostats**  
**Pressure switches and float switch**  
**Flow switches**  
**Automatic shut-off cocks**  
**Accessories for boilers**  
**Pressure gauges and temperature gauges**  
**Strainers**  
**Hydraulic separators**  
**Hydraulic separators-manifold SEPCOLL**  
**Compact manifolds**  
**Manifolds for central heating system**  
**Distribution units**  
**Temperature regulators**

## SAFETY RELIEF VALVES



### 527 EST

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 10 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Settings:  
2,25 - 2,5 - 2,7 - 3 - 3,5 - 4 - 4,5 - 5 - 5,4 - 6 bar.



Code



|                   |                 |   |    |
|-------------------|-----------------|---|----|
| <b>5274</b> ●●EST | 1/2" x 3/4"     | 1 | 25 |
| <b>5275</b> ●●EST | 3/4" x 1"       | 1 | 25 |
| <b>5276</b> ●●EST | 1" x 1 1/4"     | 1 | 10 |
| <b>5277</b> ●●EST | 1 1/4" x 1 1/2" | 1 | 10 |



### 527 EST Special settings

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 10 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Non-standard pressure settings available  
on request: 1 - 1,5 - 2 - 7 - 8 bar.



Code



|                   |                 |   |    |
|-------------------|-----------------|---|----|
| <b>5274</b> ●●EST | 1/2" x 3/4"     | 1 | 25 |
| <b>5275</b> ●●EST | 3/4" x 1"       | 1 | 25 |
| <b>5276</b> ●●EST | 1" x 1 1/4"     | 1 | 10 |
| <b>5277</b> ●●EST | 1 1/4" x 1 1/2" | 1 | 10 |



### 5521

tech. broch. 01253

Elbow tundish.

Code



|               |                     |   |   |
|---------------|---------------------|---|---|
| <b>552140</b> | 1/2" M x 3/4" F     | 1 | – |
| <b>552150</b> | 3/4" M x 3/4" F     | 1 | – |
| <b>552160</b> | 1" M x 1 1/4" F     | 1 | – |
| <b>552170</b> | 1 1/4" M x 1 1/4" F | 1 | – |



### 5520

tech. broch. 01253

Straight tundish.

Code



|               |                     |   |    |
|---------------|---------------------|---|----|
| <b>552050</b> | 3/4" F x 3/4" F     | 1 | 25 |
| <b>552070</b> | 1 1/4" F x 1 1/4" F | 1 | –  |



### 5520

tech. broch. 01253

Pre-formed "special" tundish.

Code



|               |          |   |   |
|---------------|----------|---|---|
| <b>552080</b> | 1 1/2" F | 1 | – |
|---------------|----------|---|---|

#### ●● Code completion

| bar  | ●●        | bar | ●●        | bar | ●●        |
|------|-----------|-----|-----------|-----|-----------|
| 1    | <b>10</b> | 2,7 | <b>27</b> | 5   | <b>50</b> |
| 1,5  | <b>15</b> | 3   | <b>30</b> | 5,4 | <b>54</b> |
| 2    | <b>20</b> | 3,5 | <b>35</b> | 6   | <b>60</b> |
| 2,25 | <b>22</b> | 4   | <b>40</b> | 7   | <b>70</b> |
| 2,5  | <b>25</b> | 4,5 | <b>45</b> | 8   | <b>80</b> |



## SAFETY RELIEF VALVES



### 311

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Settings:  
1,5 - 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar for 1/2" size;  
2 - 2,5 - 3 - 3,5 - 4 - 5 - 5,5 - 6 - 7 - 8 - 9 bar  
for 3/4" size.



Code

|                |      |   |    |
|----------------|------|---|----|
| <b>3114 ●●</b> | 1/2" | 1 | 50 |
| <b>3115 ●●</b> | 3/4" | 1 | 50 |



### 314

tech. broch. 01253

Safety relief valve.  
Male - female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Max. pressure gauge temperature: 90 °C.  
Settings: 2,5 - 3 - 6 - 7 - 8 bar.



Code

|                |   |   |    |
|----------------|---|---|----|
| <b>3144 ●●</b> | 1/2" with pressure gauge                  | 1 | 50 |
| <b>314432</b>  | 1/2" 3 bar with pressure gauge connection | 1 | 50 |
| <b>314462</b>  | 1/2" 6 bar with pressure gauge connection | 1 | 50 |



### 312

tech. broch. 01253

Safety relief valve.  
Male - female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Settings: 1,8 - 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar.



Code

|                |      |   |    |
|----------------|------|---|----|
| <b>3124 ●●</b> | 1/2" | 1 | 50 |
|----------------|------|---|----|



### 311

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 15 %.  
Power rating: 110 kW.  
Temperature range: 5–110 °C.  
Certified to NF P 52-001 - Class 2.



Code

|               |            |   |    |
|---------------|------------|---|----|
| <b>311431</b> | 1/2" 3 bar | 1 | 50 |
|---------------|------------|---|----|



### 313

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Max. pressure gauge temperature: 90 °C.  
Settings: 2,5 - 3 - 6 - 7 - 8 bar.



Code

|                |   |   |    |
|----------------|---|---|----|
| <b>3134 ●●</b> | 1/2" with pressure gauge                  | 1 | 50 |
| <b>3135 ●●</b> | 3/4" with pressure gauge                  | 1 | 50 |
| <b>313432</b>  | 1/2" 3 bar with pressure gauge connection | 1 | 50 |
| <b>313532</b>  | 3/4" 3 bar with pressure gauge connection | 1 | 50 |



### 313

tech. broch. 01253

Safety relief valve.  
Female connections.  
With pressure gauge connection.  
Discharge overpressure 20 %.  
Closing differential 15 %.  
Power rating: 110 kW.  
Temperature range: 5–110 °C.  
Certified to NF P 52-001 - Class 2.



Code

|               |            |    |   |
|---------------|------------|----|---|
| <b>313433</b> | 1/2" 3 bar | 50 | – |
|---------------|------------|----|---|



### 5121

Safety relief valve.  
Male - female connections.  
Discharge overpressure 20 %.  
Closing differential 15 %.  
Power rating: 110 kW.  
Temperature range: 5–110 °C.  
Certified to NF P 52-001 - Class 2.



Code

|               |            |    |   |
|---------------|------------|----|---|
| <b>512131</b> | 1/2" 3 bar | 50 | – |
|---------------|------------|----|---|

## SAFETY RELIEF VALVES



### 5320

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Power rating: 50 kW.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.



Code

|               |                     |   |    |
|---------------|---------------------|---|----|
| <b>532042</b> | 1/2" x 3/4" 2,5 bar | 1 | 50 |
| <b>532043</b> | 1/2" x 3/4" 3 bar   | 1 | 50 |



### 5321

Safety relief valve.  
Female connections. With pressure gauge.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Power rating: 50 kW.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.  
Max. pressure gauge temperature: 90 °C.



Code

|               |                     |   |    |
|---------------|---------------------|---|----|
| <b>532142</b> | 1/2" x 3/4" 2,5 bar | 1 | 50 |
| <b>532143</b> | 1/2" x 3/4" 3 bar   | 1 | 50 |



### 5322

Safety relief valve. Female connections.  
With pressure gauge connection.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Power rating: 50 kW.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.



Code

|               |                     |   |    |
|---------------|---------------------|---|----|
| <b>532242</b> | 1/2" x 3/4" 2,5 bar | 1 | 50 |
| <b>532243</b> | 1/2" x 3/4" 3 bar   | 1 | 50 |



### 5327

Safety relief valve.  
Male - female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Power rating: 50 kW.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.



Code

|               |                     |    |   |
|---------------|---------------------|----|---|
| <b>532742</b> | 1/2" x 3/4" 2,5 bar | 48 | – |
| <b>532743</b> | 1/2" x 3/4" 3 bar   | 48 | – |



### 530

Safety relief valve. Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.



Code

|               |                   |   |    |
|---------------|-------------------|---|----|
| <b>530525</b> | 3/4" x 1" 2,5 bar | 1 | 25 |
| <b>530530</b> | 3/4" x 1" 3 bar   | 1 | 25 |



### 530

Safety relief valve. Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Max. percentage of glycol: 50 %.  
Temperature range: 5–120 °C.  
Settings: 2,5 - 3 - 4 - 5 - 6 - 7 - 8 - 9 bar.  
**Settings 4 - 5 - 6 - 7 - 8 - 9 bar without TÜV certification.**



Code

|                |                 |   |    |
|----------------|-----------------|---|----|
| <b>5306 ●●</b> | 1" x 1 1/4"     | 1 | 25 |
| <b>5307 ●●</b> | 1 1/4" x 1 1/2" | 1 | 10 |



### 531

Safety relief valve  
**for domestic water systems.**  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Medium: water.  
Temperature range: 5–95 °C.  
Settings: 4 - 6 - 8 - 10 bar.



Code

|                |             |   |    |
|----------------|-------------|---|----|
| <b>5314 ●●</b> | 1/2" x 3/4" | 1 | 50 |
| <b>5315 ●●</b> | 3/4" x 1"   | 1 | 25 |



### 531

Safety relief valve  
**for domestic water systems.**  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Medium: water.  
Temperature range: 5–95 °C.  
Settings: 4 - 6 - 8 - 10 bar.



Code

|                |                 |   |    |
|----------------|-----------------|---|----|
| <b>5316 ●●</b> | 1" x 1 1/4"     | 1 | 25 |
| <b>5317 ●●</b> | 1 1/4" x 1 1/2" | 1 | 10 |

## SAFETY RELIEF VALVES



**513**

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.



Code

|                |  |   |    |
|----------------|--|---|----|
| <b>5134 ..</b> | 1/2" 1,5 - 2 - 2,5 - 3 - 3,5 - 6 - 7 - 8 bar | 1 | 50 |
|----------------|--|---|----|



**513**

tech. broch. 01253

Safety relief valve.  
Female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Settings:  
1,5 - 2 - 2,5 - 3 - 3,5 - 4 - 5,5 - 6 - 7 - 8 - 9 bar  
for 1" x 1 1/4" size;  
2,5 - 3 - 3,5 - 6 - 7 - 8 bar for 1 1/4" x 1 1/2" size.



Code

|                |                 |   |    |
|----------------|-----------------|---|----|
| <b>5136 ..</b> | 1" x 1 1/4"     | 1 | 25 |
| <b>5137 ..</b> | 1 1/4" x 1 1/2" | 1 | 10 |



**514**

tech. broch. 01253

Safety relief valve.  
Male - female connections.  
Discharge overpressure 20 %.  
Closing differential 20 %.  
PN 10.  
Temperature range: 5–110 °C.  
Settings: 2 - 2,5 - 3 - 3,5 - 4 - 5 - 6 - 7 - 8 bar.



Code

|                |      |   |    |
|----------------|------|---|----|
| <b>5144 ..</b> | 1/2" | 1 | 50 |
|----------------|------|---|----|



**312**

Safety relief valve.  
CR dezincification resistant alloy body.  
**For domestic water systems.**  
M x Ø 15 compression end.  
**With stainless steel seat.**  
Discharge overpressure 20 %.  
Closing differential 20 %.  
Temperature range: 5–110 °C.  
Settings: 100 - 200 - 400 - 600 kPa.  
5 - 8 bar.



Code

|               |                         |           |    |   |
|---------------|-------------------------|-----------|----|---|
| <b>312406</b> | 1/2" M x Ø 15 - 200 kPa | Black cap | 50 | - |
| <b>312405</b> | 1/2" M x Ø 15 - 400 kPa | Red cap   | 50 | - |
| <b>312407</b> | 1/2" M x Ø 15 - 600 kPa | Green cap | 50 | - |
| <b>312418</b> | 1/2" M x Ø 15 - 8 bar   |           | 50 | - |



**309**

tech. broch. 01130

Temperature and pressure relief valve.  
CR dezincification resistant alloy body.  
**For domestic water system,  
to protect the hot water storage.**  
Set temperature: 90 °C.  
Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.  
3/4" x Ø 22: 25 kW.  
Settings: 3 - 4 - 6 - 7 - 10 bar.  
**Settings certified to EN 1490: 4 - 7 - 10 bar.**



| Code          |               |        | Probe length<br>(mm) |   |    |
|---------------|---------------|--------|----------------------|---|----|
| <b>309430</b> | 1/2" M x Ø 15 | 3 bar  | 100                  | 1 | 20 |
| <b>309440</b> | 1/2" M x Ø 15 | 4 bar  | 100                  | 1 | 20 |
| <b>309460</b> | 1/2" M x Ø 15 | 6 bar  | 100                  | 1 | 20 |
| <b>309470</b> | 1/2" M x Ø 15 | 7 bar  | 100                  | 1 | 20 |
| <b>309400</b> | 1/2" M x Ø 15 | 10 bar | 100                  | 1 | 20 |
| <b>309542</b> | 3/4" M x Ø 15 | 4 bar  | 100                  | 1 | 20 |
| <b>309530</b> | 3/4" M x Ø 22 | 3 bar  | 100                  | 1 | 20 |
| <b>309560</b> | 3/4" M x Ø 22 | 6 bar  | 100                  | 1 | 20 |
| <b>309570</b> | 3/4" M x Ø 22 | 7 bar  | 100                  | 1 | 20 |
| <b>309500</b> | 3/4" M x Ø 22 | 10 bar | 100                  | 1 | 20 |
| <b>309435</b> | 1/2" M x Ø 15 | 3 bar  | 200                  | 1 | 20 |
| <b>309445</b> | 1/2" M x Ø 15 | 4 bar  | 200                  | 1 | 20 |
| <b>309465</b> | 1/2" M x Ø 15 | 6 bar  | 200                  | 1 | 20 |
| <b>309475</b> | 1/2" M x Ø 15 | 7 bar  | 200                  | 1 | 20 |
| <b>309405</b> | 1/2" M x Ø 15 | 10 bar | 200                  | 1 | 20 |
| <b>309547</b> | 3/4" M x Ø 15 | 4 bar  | 200                  | 1 | 20 |
| <b>309535</b> | 3/4" M x Ø 22 | 3 bar  | 200                  | 1 | 20 |
| <b>309565</b> | 3/4" M x Ø 22 | 6 bar  | 200                  | 1 | 20 |
| <b>309575</b> | 3/4" M x Ø 22 | 7 bar  | 200                  | 1 | 20 |
| <b>309505</b> | 3/4" M x Ø 22 | 10 bar | 200                  | 1 | 20 |



**309**

Temperature and pressure relief valve.  
CR dezincification resistant alloy body.  
**For domestic water system,  
to protect the hot water storage.**  
Set temperature: 95 °C.  
Discharge rating: 25 kW.  
Setting: 6 bar.  
**For systems with nominal pressure of 400 kPa.**



| Code          |               |       | Probe length<br>(mm) |   |    |
|---------------|---------------|-------|----------------------|---|----|
| <b>309563</b> | 3/4" M x Ø 22 | 6 bar | 100                  | 1 | 20 |

### • • Code completion

| bar | • •       | bar | • •       | bar | • •       |
|-----|-----------|-----|-----------|-----|-----------|
| 1,5 | <b>15</b> | 3,5 | <b>35</b> | 7   | <b>70</b> |
| 1,8 | <b>28</b> | 4   | <b>40</b> | 8   | <b>80</b> |
| 2   | <b>20</b> | 5   | <b>50</b> | 9   | <b>90</b> |
| 2,5 | <b>25</b> | 5,5 | <b>55</b> | 10  | <b>10</b> |
| 3   | <b>30</b> | 6   | <b>60</b> |     |           |

## FUEL SHUT-OFF VALVES



### 541

tech. broch. 01046

Fuel shut-off valve.  
Brass body.  
Female threaded connections.  
Max. working pressure: 50 kPa.  
Capillary length: 5 or 10 m.  
Settings: 98 °C, 110 °C, 120 °C.



| Code    | Settings      |   |   |
|---------|---------------|---|---|
| 54104 • | 1/2" ... °C   | 1 | – |
| 54105 • | 3/4" ... °C   | 1 | – |
| 54106 • | 1" ... °C     | 1 | – |
| 54107 • | 1 1/4" ... °C | 1 | – |
| 54108 • | 1 1/2" ... °C | 1 | – |
| 54109 • | 2" ... °C     | 1 | – |
| 541140* | 1/2" 110 °C   | 1 | – |
| 541150* | 3/4" 110 °C   | 1 | – |
| 541160* | 1" 110 °C     | 1 | – |
| 541170* | 1 1/4" 110 °C | 1 | – |
| 541180* | 1 1/2" 110 °C | 1 | – |
| 541190* | 2" 110 °C     | 1 | – |

\* Capillary length 5 m only



### 541

tech. broch. 01046

Fuel shut-off valve  
for high pressure use.  
Bronze body.  
Flanged connections PN 16.  
To be coupled  
with flat counterflanges EN 1092-1.  
Max. working pressure: 50 kPa.  
Capillary length: 5 or 10 m.  
Settings: 98 °C, 110 °C, 120 °C.



| Code    | Settings     |   |   |
|---------|--------------|---|---|
| 54161 • | DN 65 ... °C | 1 | – |
| 54181 • | DN 80 ... °C | 1 | – |
| 541630* | DN 65 110 °C | 1 | – |
| 541830* | DN 80 110 °C | 1 | – |

\* Capillary length 5 m only



### 541

tech. broch. 01046

Fuel shut-off valve.  
Bronze body.  
Flanged connections PN 16.  
To be coupled  
with flat counterflanges EN 1092-1.  
Max. working pressure: 11 kPa.  
Capillary length: 5 or 10 m.  
Settings: 98 °C, 110 °C, 120 °C.



| Code    | Settings     |   |   |
|---------|--------------|---|---|
| 54160 • | DN 65 ... °C | 1 | – |
| 54180 • | DN 80 ... °C | 1 | – |
| 541620* | DN 65 110 °C | 1 | – |
| 541820* | DN 80 110 °C | 1 | – |

\* Capillary length 5 m only

#### • Code completion

|         | 541    | 540    | capillary<br>5 m | capillary<br>10 m |
|---------|--------|--------|------------------|-------------------|
| setting | 98 °C  | 97 °C  | 0                | 1                 |
|         | 120 °C | 120 °C | 2                | 3                 |

## FUEL SHUT-OFF VALVES



### 540

tech. broch. 01074

Fuel shut-off valve.  
Aluminium body.  
Female threaded connections.  
Max. working pressure: 50 kPa.  
Capillary length: 5 m.  
Setting: 98 °C.



| Code   | Settings     |   |   |
|--------|--------------|---|---|
| 540040 | 1/2" 98 °C   | 1 | — |
| 540050 | 3/4" 98 °C   | 1 | — |
| 540060 | 1" 98 °C     | 1 | — |
| 540070 | 1 1/4" 98 °C | 1 | — |
| 540080 | 1 1/2" 98 °C | 1 | — |
| 540090 | 2" 98 °C     | 1 | — |

### 540

tech. broch. 01074

Fuel shut-off valve.  
Aluminium body.  
Flanged connections PN 16.  
To be coupled  
with flat counterflanges EN 1092-1.  
Max. working pressure: 50 kPa.  
Capillary length: 5 or 10 m.  
Settings: 97 °C, 110 °C, 120 °C.



| Code    | Settings      |   |   |
|---------|---------------|---|---|
| 54060 • | DN 65 ... °C  | 1 | — |
| 54080 • | DN 80 ... °C  | 1 | — |
| 54010 • | DN 100 ... °C | 1 | — |
| 540610* | DN 65 110 °C  | 1 | — |
| 540810* | DN 80 110 °C  | 1 | — |
| 540110* | DN 100 110 °C | 1 | — |

\* Capillary length 5 m only

## TEMPERATURE RELIEF VALVES



### 542

tech. broch. 01001

Temperature relief valve, with fail-safe action.  
Manual reset for burner switch off  
or alarm activation.  
Working pressure: 0,3 bar ≤ P ≤ 10 bar.  
Temperature range: 5–100 °C.  
Setting temperature: 98 °C and 99 °C.  
Discharge rating:  
1 1/2" x 1 1/4" - 136 kW.  
1 1/2" x 1 1/2" - 419 kW.



| Code   | Settings                  |   |    |
|--------|---------------------------|---|----|
| 542870 | 1 1/2" M x 1 1/4" F 98 °C | 1 | 10 |
| 542880 | 1 1/2" M x 1 1/2" F 99 °C | 1 | 10 |

### 543

tech. broch. 01057

Temperature safety relief valve,  
with double safety sensor,  
for solid fuel generators.  
Brass body. Chrome plated.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.  
Setting temperature: 98 °C (0/–4 °C).  
Discharge flow rate with Δp of 1 bar  
and T=110 °C: 3000 l/h.  
Capillary length: 1300 mm.  
**Certified to EN 14597.**



| Code   | Settings                       |   |    |
|--------|--------------------------------|---|----|
| 543513 | 3/4" F 98 °C                   | 1 | 10 |
| 543503 | 3/4" F 98 °C yellow brass body | 1 | 10 |

### 544

tech. broch. 01058

Temperature relief valve,  
with positive action with automatic filling.  
For solid fuel generators.  
Max working pressure: 6 bar.  
Max. working temperature: 110 °C.  
Temperature range: 5–110 °C.  
Ambient temperature range: 1–50 °C.  
Setting temperature: 100 °C (0/–5 °C).  
Discharge flow rate with Δp of 1 bar  
and T=110 °C: 1600 l/h.  
Capillary length: 1300 mm.



| Code   | Settings    |   |    |
|--------|-------------|---|----|
| 544400 | 1/2" 100 °C | 1 | 10 |

### 544

Temperature relief valve  
with automatic filling for solid fuel generators,  
with knob for manual discharge.  
Max. working pressure: 6 bar.  
Max. working temperature: 120 °C.  
Setting temperature: 100 °C (0/–5 °C).  
Discharge flow rate with Δp of 1 bar  
and T=110 °C: 1800 l/h.



| Code   | Settings    |   |   |
|--------|-------------|---|---|
| 544501 | 3/4" 100 °C | 1 | — |



## DIFFERENTIAL BY-PASS VALVES



**519**

tech. broch. 01007

Differential by-pass valve, adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–110 °C.  
Max. percentage of glycol: 30 %.



### Threaded connections

| Code          |        | Setting range<br>m w.g. |   |    |
|---------------|--------|-------------------------|---|----|
| <b>519500</b> | 3/4"   | 1–6                     | 1 | 50 |
| <b>519504</b> | 3/4"   | 10–40                   | 1 | 50 |
| <b>519700</b> | 1 1/4" | 1–6                     | 1 | 10 |
| <b>519703</b> | 1 1/4" | 5–25                    | 1 | 10 |

### Compression ends

| Code          |      | Setting range<br>m w.g. |   |    |
|---------------|------|-------------------------|---|----|
| <b>519002</b> | Ø 22 | 1–6                     | 1 | 50 |



**NEW**

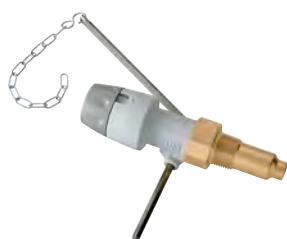
**519**

tech. broch. 01007

Differential by-pass valve, adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.  
Max. percentage of glycol: 30 %.

| Code          |      | Setting range<br>m w.g. |   |    |
|---------------|------|-------------------------|---|----|
| <b>519015</b> | 3/4" | 1–6                     | 1 | 25 |

## DRAUGHT REGULATING VALVE



**529**

tech. broch. 01226

Draught regulating valve.  
Male threaded connection.  
Adjustment temperature range: 30–90 °C.  
**Certified to EN 14597.**



| Code          |                | Pocket<br>length (mm) |   |    |
|---------------|----------------|-----------------------|---|----|
| <b>529050</b> | 3/4" M ISO 7/1 | 58                    | 1 | 10 |
| <b>529151</b> | 3/4" M ISO 7/1 | 78                    | 1 | 10 |



**529**

tech. broch. 01226

Draught regulating valve.  
Male threaded connection.  
Adjustment temperature range: 30–90 °C.  
**Certified to EN 14597.**

| Code          |                | Pocket<br>length (mm) |   |    |
|---------------|----------------|-----------------------|---|----|
| <b>529150</b> | 3/4" M ISO 7/1 | 58                    | 1 | 10 |

## BALLSTOP - ANTI-THERMOSIPHON



**327  
BALLSTOP**

tech. broch. 01021

Ball valve with built-in check valve for heating systems.  
Low head losses.  
Max. working pressure: 16 bar.  
Temperature range: 5–110 °C.

Code

|               |        |                  |    |   |
|---------------|--------|------------------|----|---|
| <b>327400</b> | 1/2"   | butterfly handle | 10 | – |
| <b>327500</b> | 3/4"   | butterfly handle | 10 | – |
| <b>327600</b> | 1"     | lever handle     | 4  | – |
| <b>327700</b> | 1 1/4" | lever handle     | 4  | – |
| <b>327800</b> | 1 1/2" | lever handle     | 2  | – |
| <b>327900</b> | 2"     | lever handle     | 1  | – |



**510**

tech. broch. 01045

Anti-thermosiphon check valve to prevent natural circulation of water.  
Removable cap allows straight or angled installations.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.

Code

|               |        |   |    |
|---------------|--------|---|----|
| <b>510500</b> | 3/4"   | 1 | 20 |
| <b>510600</b> | 1"     | 1 | 20 |
| <b>510700</b> | 1 1/4" | 1 | 20 |

## AIR SEPARATOR



**547**

Air separator.  
Cast iron body.  
Female connections.

Code

|               |        |   |    |
|---------------|--------|---|----|
| <b>547060</b> | 1"     | 1 | 10 |
| <b>547070</b> | 1 1/4" | 1 | 10 |
| <b>547080</b> | 1 1/2" | 1 | 10 |
| <b>547090</b> | 2"     | 1 | 10 |
| <b>547200</b> | 2 1/2" | 1 | –  |
| <b>547300</b> | 3"     | 1 | –  |



**547**

Air separator.  
Steel body.  
Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.

Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>547400</b> | DN 100 | 1 | – |
| <b>547500</b> | DN 125 | 1 | – |

## INSTRUMENT HOLDER FOR EXPANSION VESSEL

### 336

Instrument holder for heating systems. Equipped with automatic shut-off cock for expansion vessel and male connection for safety valve 531 series.

Max. working temperature: 110 °C.  
Up to 50 kW.



Code

|        |      |   |    |
|--------|------|---|----|
| 336600 | 3/4" | 2 | 10 |
|--------|------|---|----|

### 336

Assembled instrument holder for heating systems. Equipped with air vent, safety relief valve, pressure gauge and automatic shut-off cock for expansion vessel.

Max. working temperature: 110 °C.  
Up to 50 kW.



Code

|        |   |   |   |
|--------|---|---|---|
| 336630 | 3/4" 3 bar with automatic shut-off cock | 1 | 5 |
| 336631 | 3/4" 3 bar with ball shut-off cock      | 1 | 5 |

### 305

Instrument holder kit in composite material for heating systems. Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.

**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.



Code

|        |                |   |    |
|--------|----------------|---|----|
| 305503 | 3/4" 3 bar TÜV | 1 | 10 |
|--------|----------------|---|----|

## INSTRUMENT HOLDER

### 302

Combined air separator with heating system accessories. Equipped with air vent, safety relief valve and pressure gauge.  
Max. working temperature: 110 °C.  
Up to 50 kW.



Code

|        |                                     |   |    |
|--------|-------------------------------------|---|----|
| 302630 | 1" 3 bar                            | 1 | 10 |
| 302631 | 1" 3 bar with pre-formed insulation | 1 | 10 |

### 305

Instrument holder in composite material for heating systems. Equipped with air vent, safety relief valve in composite material and pressure gauge.  
**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.



Code

|        |              |   |   |
|--------|--------------|---|---|
| 305663 | 1" 3 bar TÜV | 1 | 5 |
|--------|--------------|---|---|

### 305

Instrument holder in composite material for heating systems. Equipped with air vent in composite material, safety relief valve and pressure gauge.  
**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.



Code

|        |                             |   |   |
|--------|-----------------------------|---|---|
| 305572 | 3/4" 2,5 bar TÜV            | 1 | 5 |
| 305671 | 1" 1,8 bar                  | 1 | 5 |
| 305673 | 1" 3 bar NF                 | 1 | 5 |
| 305674 | 1" 4 bar without insulation | 1 | 5 |

## AUTOMATIC FILLING UNITS



**553**

tech. broch. 01061

Pre-adjustable automatic filling unit, anti-scale, inspectionable, with pressure setting indicator, manual cock, strainer, check valve. Setting pressure range: 0,2–4 bar. Max. inlet pressure: 16 bar. Max. working temperature: 65 °C.

Code

|               |                                     |   |    |
|---------------|-------------------------------------|---|----|
| <b>553540</b> | 1/2" with pressure gauge connection | 1 | 10 |
| <b>553640</b> | 1/2" with pressure gauge            | 1 | 10 |



**553**

tech. broch. 01025

Automatic filling unit, with manual cock, strainer, check valve. Setting pressure range: 0,3–4 bar. Max. inlet pressure: 16 bar. Max. working temperature: 70 °C.

Code

|               |                                     |   |    |
|---------------|-------------------------------------|---|----|
| <b>553040</b> | 1/2" with pressure gauge connection | 1 | 10 |
| <b>553140</b> | 1/2" with pressure gauge            | 1 | 10 |

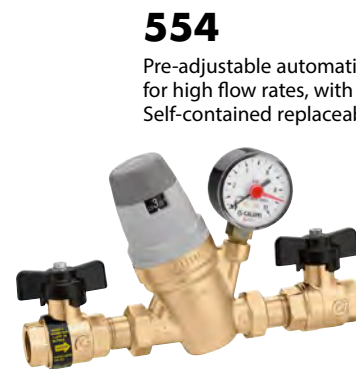


**553**

Pre-adjustable automatic filling unit, anti-scale, inspectionable, with pressure setting indicator, manual cock, strainer and check valve. **With hose connection.** Setting pressure range: 0,2–4 bar. Max. inlet pressure: 16 bar. Max. working temperature: 65 °C.

Code

|               |                                     |   |    |
|---------------|-------------------------------------|---|----|
| <b>553740</b> | 1/2" with pressure gauge connection | 1 | 10 |
| <b>553840</b> | 1/2" with pressure gauge            | 1 | 10 |



**554**

tech. broch. 01125

Pre-adjustable automatic filling unit for high flow rates, with double shut-off valve, check valve. Self-contained replaceable cartridge.

Setting pressure range: 1–6 bar. Max. inlet pressure: 16 bar. Max. working temperature: 60 °C.

Code

|               |                                     |   |   |
|---------------|-------------------------------------|---|---|
| <b>554040</b> | 1/2" with pressure gauge connection | 1 | – |
| <b>554140</b> | 1/2" with pressure gauge            | 1 | – |
| <b>554150</b> | 3/4" with pressure gauge            | 1 | – |



## BOILER FILLING LOOP

**3006  
ROBOFIL**

Boiler filling loop. **CR** dezincification resistant alloy body. Equipped with double check valve with shut-off valve, hose connection and shut-off valve.

Max. working pressure: 10 bar. Max. working temperature: 95 °C. Flexible hose length: 400 mm.



Code

|               |  |   |    |
|---------------|--|---|----|
| <b>300600</b> |  | 1 | 10 |
|---------------|--|---|----|





## AUTOMATIC CHARGING UNITS

### 573001

tech. broch. 01061

Automatic charging unit with **CAa type** backflow preventer and shut-off valve. Filling unit setting pressure range: 0,2–4 bar. Max. working pressure: 10 bar. Max. working temperature: 65 °C. Backflow preventer certified to EN 14367 standard.



Code

573001 1/2"



1 5

### 574011

tech. broch. 01161

Compact automatic charging unit with **BA type** backflow preventer, shut-off valve and strainer.

**With pre-formed insulation.** Filling unit setting pressure range: 0,2–4 bar. Max. working pressure: 10 bar. Max. working temperature: 65 °C. Backflow preventer certified to EN 12729 standard.



Code

574011 1/2"



1 5

### 574000

tech. broch. 01061

Automatic charging unit with **BA type** backflow preventer, Y-strainer and shut-off valve. Filling unit setting pressure range: 0,2–4 bar. Max. working pressure: 10 bar.

Max. working temperature: 65 °C. Backflow preventer certified to EN 12729 standard.



Code

574000 1/2"



1 5

### 574001

tech. broch. 01125

Automatic charging unit with **BA type** backflow preventer, Y-strainer and shut-off valve. Pressure reducing valve setting pressure range: 1–6 bar.

Max. working pressure: 10 bar. Max. working temperature: 60 °C. Backflow preventer certified to EN 12729 standard.



Code

574001 3/4"



1 -

## AUTOMATIC COMPACT CHARGING UNIT

### NEW 580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve. For horizontal or vertical installations. **CR** dezincification resistant alloy body.

**With insulation.**

Filling unit setting pressure range: 0,8–4 bar. Max. working pressure: 10 bar. Max. working temperature: 65 °C. Backflow preventer certified to EN 12729 standard. Pressure reducing valve certified to EN 1567 standard. PATENT.



Code

580011 1/2"



1 5

### 580010

tech. broch. 01333

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve. For horizontal or vertical installations. **CR** dezincification resistant alloy body.

**With insulation.**

Filling unit setting pressure range: 0,8–4 bar. Max. working pressure: 10 bar. Max. working temperature: 65 °C. Backflow preventer certified to EN 12729 standard. Pressure reducing valve certified to EN 1567 standard. PATENT PENDING.



Code

580010 1/2"



1 5

## FLOW SWITCHES



**315**

tech. broch. 01184

Flow switch with magnetically operated contacts. 230 V - 0,02 A (an appropriate relays must be used in case of higher power consumption). Max. working pressure: 6 bar. Temperature range: -15–100 °C.

Contact closing with

**increasing flow rate** at: 156 l/h (1/2")  
456 l/h (3/4")

Contact opening with

**decreasing flow rate** at: 108 l/h (1/2")  
348 l/h (3/4")



Code

|               |      |   |    |
|---------------|------|---|----|
| <b>315400</b> | 1/2" | 1 | 50 |
| <b>315500</b> | 3/4" | 1 | 25 |



**626**

tech. broch. 01052

Flow switch. Suitable for 1" to 8" pipes. 250 V (AC) - 15 (5) A. Max. working pressure: 10 bar. Temperature range: -30–120 °C. Protection class: IP 54.



Code

|               |               |   |   |
|---------------|---------------|---|---|
| <b>626600</b> | 1"            | 1 | 5 |
| <b>626009</b> | set of blades | 1 | – |

## SHUT-OFF COCK FOR EXPANSION VESSELS



**558**

Automatic shut-off cock, for expansion vessels. **For domestic water circuit.** Max. working pressure: 10 bar. Max. working temperature: 110 °C.

Code

|               |      |   |    |
|---------------|------|---|----|
| <b>558500</b> | 3/4" | 1 | 50 |
|---------------|------|---|----|



**558**

Automatic shut-off cock, for expansion vessel, with drain cock. **For domestic water circuit.** Max. working pressure: 6 bar. Max. working temperature: 85 °C.

Code

|               |      |   |    |
|---------------|------|---|----|
| <b>558510</b> | 3/4" | 1 | 50 |
|---------------|------|---|----|



**5580**

Ball shut-off valve, for expansion vessels, with drain cock. **For domestic water circuit.** Max. working pressure: 6 bar. Max. working temperature: 85 °C.

Code

|               |        |   |    |
|---------------|--------|---|----|
| <b>558050</b> | 3/4"   | 1 | 20 |
| <b>558060</b> | 1"     | 1 | 20 |
| <b>558070</b> | 1 1/4" | 1 | 20 |



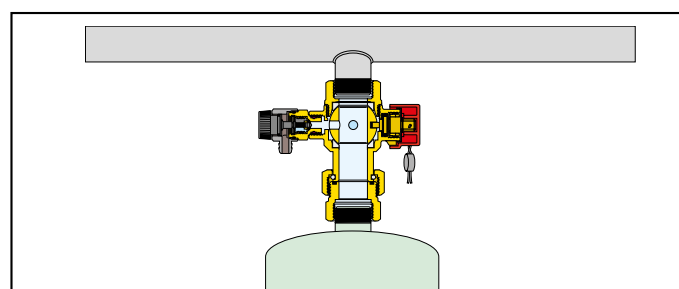
**5580**

Ball shut-off valve, for expansion vessels, with drain cock. **For solar thermal systems.** Max. working pressure: 6 bar. **Max. working temperature: 120 °C.** **Max. percentage of glycol: 30 %.**

Code

|               |      |   |    |
|---------------|------|---|----|
| <b>558052</b> | 3/4" | 1 | 20 |
| <b>558062</b> | 1"   | 1 | 20 |

### Application diagram of shut-off valve 5580 series



## ACCESSORIES FOR BOILERS



### 690

Three way tap for INAIL master pressure gauge.  
Max. working pressure: 15 bar.  
Temperature range: 5–90 °C.

| Code   |      |   |   |
|--------|------|---|---|
| 690200 | 1/4" | 5 | – |
| 690300 | 3/8" | 5 | – |
| 690400 | 1/2" | 5 | – |



### 538

Drain cock with hose connection and cap.  
Max. working pressure: 10 bar.  
Max. working temperature: 110 °C.

| Code   |        |   |     |
|--------|--------|---|-----|
| 538201 | 1/4" M | 1 | –   |
| 538400 | 1/2" M | 1 | 100 |



### 691

Water hammer reducing loop.  
In chrome plated copper.

| Code   |      |   |   |
|--------|------|---|---|
| 691200 | 1/4" | 5 | – |
| 691300 | 3/8" | 5 | – |
| 691400 | 1/2" | 5 | – |



### 694

INAIL test pocket,  
1/2" connection.

| Code   | Pocket length |   |   |
|--------|---------------|---|---|
| 694045 | 45 mm         | 1 | – |
| 694100 | 100 mm        | 1 | – |



### 692

Thermometer in sleeve.  
1/2" pocket connection.

| Code   | Pocket length | °C    |   |   |
|--------|---------------|-------|---|---|
| 692000 | 45 mm         | 0–120 | 1 | – |



### 693

Bulb thermometer.

| Code   | °C    |   |   |
|--------|-------|---|---|
| 693000 | 0–120 | 1 | – |

NEW

### 538

Drain cock with hose connection and cap.  
**Complete with manual lever.**  
Max. working pressure: 10 bar.  
Max. working temperature: 110 °C.



| Code   |        |   |     |
|--------|--------|---|-----|
| 538405 | 1/2" M | 1 | 100 |

## THERMOSTATS






**621**

Adjustable contact thermostat.  
Temperature range: 20–90 °C.  
Protection class: IP 20.

| Code          | 1 | 10 |
|---------------|---|----|
| <b>621000</b> | 1 | 10 |








**622**

Adjustable immersion thermostat.  
Temperature range: 0–90 °C.  
With 1/2" connection pocket.  
Protection class: IP 40.

| Code          | 1 | 10 |
|---------------|---|----|
| <b>622000</b> | 1 | 10 |





**NEW**




**622**

Stainless steel pocket  
for domestic application exempt from INAIL  
certification requirements.  
For thermostat code 622000.  
Max. working pressure: 15 bar.  
Temperature range: 0–100 °C.

| Code                 | 1 | 10 |
|----------------------|---|----|
| <b>622010</b> 1/2" M | 1 | –  |



**623**

Double immersion thermostat:  
- safety thermostat with manual reset,  
setting 100 °C (+0 °C -6 °C),  
setting 110 °C (+0 °C -6 °C)  
- adjustment thermostat,  
temperature range: 0–90 °C,  
temperature range: 0–100 °C.  
With 1/2" connection pocket.  
Protection class: IP 40.

| Code          | Safety setting | Adjustment range | 1 | 5 |
|---------------|----------------|------------------|---|---|
| <b>623000</b> | 100 °C         | 0–90 °C          | 1 | 5 |
| <b>623100</b> | 110 °C         | 0–100 °C         | 1 | 5 |









**624**

Immersion safety thermostat,  
with manual reset,  
- setting 100 °C (+0 °C -6 °C),  
- setting 110 °C (+0 °C -6 °C).  
With 1/2" connection pocket.  
Protection class: IP 40.

| Code          | Safety setting | 1 | 10 |
|---------------|----------------|---|----|
| <b>624000</b> | 100 °C         | 1 | 10 |
| <b>624100</b> | 110 °C         | 1 | 10 |



Spare pocket for 622, 623 and 624 series.

| Code          | Use              | 1 | 10 |
|---------------|------------------|---|----|
| <b>622401</b> | 622 - 624 series | 1 | –  |
| <b>623002</b> | 623 series       | 1 | –  |

## PRESSURE SWITCHES







**625**

Safety pressure switch, with manual reset.  
250 V - 16 (10) A.  
Max. working pressure: 5 bar.  
Ambient temperature range: 0–50 °C.  
Medium temperature range: 20–110 °C.  
1/4" female connection.  
Protection class: IP 44.

| Code          | Setting range | 1 | 50 |
|---------------|---------------|---|----|
| <b>625000</b> | 2–4,5 bar     | 1 | 50 |







**625**

Minimum pressure safety switch,  
with manual reset.  
250 V - 16 (10) A.  
Max. working pressure: 5 bar.  
Ambient temperature range: 0–50 °C.  
Medium temperature range: 20–110 °C.  
1/4" female connection.  
Protection class: IP 44.

| Code          | Setting range | 1 | 10 |
|---------------|---------------|---|----|
| <b>625100</b> | 0,5–1,7 bar   | 1 | 10 |







**625**

Pressure switch for boosting sets and domestic  
water applications.  
Up to 500 V three-pole - 16 (10) A.  
Ambient temperature range: 0–55 °C.  
Medium temperature range: 0–55 °C.  
1/4" female connection.  
Protection class: IP 44.

| Code          | Setting range | Max. pressure | 1 | 10 |
|---------------|---------------|---------------|---|----|
| <b>625005</b> | 1– 5 bar      | 5 bar         | 1 | 10 |
| <b>625010</b> | 3–12 bar      | 12 bar        | 1 | 10 |





**613**

Float switch,  
250 V - 10 A.  
Heavy duty approved.

| Code          | Cable length | 1 | 5 |
|---------------|--------------|---|---|
| <b>613030</b> | 3 m          | 1 | 5 |
| <b>613050</b> | 5 m          | 1 | 5 |

## TEMPERATURE AND PRESSURE GAUGES



### 557

Pressure gauge.  
Accuracy class: UNI 2,5.  
Temperature range: -20–90 °C.

| Code   | bar  | Position                      | Ø  |   |   |
|--------|------|-------------------------------|----|---|---|
| 557104 | 0–4  | 1/4" central back conn.       | 50 | 1 | – |
| 557204 | 0–4  | 1/4" "off-centred" back conn. | 50 | 1 | – |
| 557304 | 0–4  | 1/4" bottom conn.             | 50 | 1 | – |
| 557106 | 0–6  | 1/4" central back conn.       | 50 | 1 | – |
| 557306 | 0–6  | 1/4" bottom conn.             | 50 | 1 | – |
| 557310 | 0–10 | 1/4" bottom conn.             | 50 | 1 | – |
| 557410 | 0–10 | 1/4" central back conn.       | 63 | 1 | – |
| 557425 | 0–25 | 1/4" central back conn.       | 63 | 1 | – |
| 557704 | 0–4  | 3/8" bottom conn.             | 80 | 1 | – |
| 557706 | 0–6  | 3/8" bottom conn.             | 80 | 1 | – |
| 557710 | 0–10 | 3/8" bottom conn.             | 80 | 1 | – |



### 503

Temperature/pressure gauge.  
1/2" central back connection.  
With shut-off pocket.  
Ø 80 mm.  
Accuracy class:  
- temperature gauge UNI 2;  
- pressure gauge UNI 2,5.

| Code   | bar | °C    |   |    |
|--------|-----|-------|---|----|
| 503040 | 0–4 | 0–120 | 1 | 10 |
| 503060 | 0–6 | 0–120 | 1 | 10 |



### 503

Temperature/pressure gauge.  
1/2" bottom connection.  
With shut-off pocket.  
Ø 80 mm.  
Accuracy class:  
- temperature gauge UNI 2;  
- pressure gauge UNI 2,5.

| Code   | bar | °C    |   |    |
|--------|-----|-------|---|----|
| 503140 | 0–4 | 0–120 | 1 | 20 |
| 503160 | 0–6 | 0–120 | 1 | 20 |



### 5560

Pressure gauge  
for expansion vessel pressure test.  
Accuracy class: UNI 2,5.

| Code   | bar  |   |   |
|--------|------|---|---|
| 556000 | 0–10 | 1 | – |



### 688

Temperature gauge.  
1/2" central back connection.  
With pocket.  
Ø 80 mm.  
Accuracy class: UNI 2.

| Code   | Pocket length  | °C    |   |    |
|--------|----------------|-------|---|----|
| 688000 | 45 mm          | 0–120 | 1 | 10 |
| 688010 | 100 mm         | 0–120 | 1 | 5  |
| 688011 | without pocket | 0–120 | 1 | 5  |



### 688

Temperature gauge.  
1/2" bottom connection.  
With pocket.  
Ø 80 mm.  
Accuracy class: UNI 2.

| Code   | Pocket length | °C    |   |    |
|--------|---------------|-------|---|----|
| 688100 | 45 mm         | 0–120 | 1 | 10 |



### 687

Temperature gauge for cooling systems.  
1/2" central back connection.  
With pocket.  
Ø 80 mm.  
Accuracy class: UNI 2.

| Code   | Pocket length | °C     |   |   |
|--------|---------------|--------|---|---|
| 687000 | 45 mm         | -30–50 | 1 | – |
| 687010 | 100 mm        | -30–50 | 1 | – |



### 687

Temperature gauge for cooling.  
1/2" bottom connection.  
With pocket.  
Ø 80 mm.  
Accuracy class: UNI 2.

| Code   | Pocket length | °C     |   |    |
|--------|---------------|--------|---|----|
| 687110 | 100 mm        | -30–50 | 1 | 10 |



### 689

Flow gauge.  
3/8" bottom connection.  
Ø 80 mm.  
Accuracy class: UNI 2,5.  
Temperature range: -20–90 °C.

| Code   | m w.g. |   |    |
|--------|--------|---|----|
| 689010 | 0–10   | 1 | 20 |
| 689016 | 0–16   | 1 | 20 |
| 689025 | 0–25   | 1 | 30 |

For higher pressures see pressure gauges 557 series.



## HYDRAULIC SEPARATOR

### 548

tech. broch. 01076



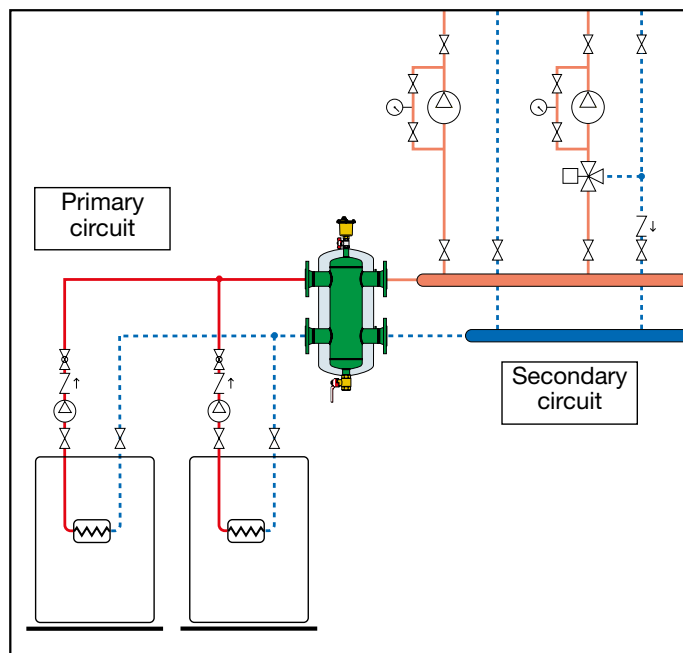
Hydraulic separator.  
Epoxy resin coated steel body.  
**With pre-formed insulation.**  
Female union connections.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.  
Complete with:  
air vent with automatic shut-off cock,  
drain cock.

| Code   |        | Max. recommended<br>flow rate m³/h |   |   |
|--------|--------|------------------------------------|---|---|
| 548006 | 1"     | 2,5                                | 1 | – |
| 548007 | 1 1/4" | 4                                  | 1 | – |
| 548008 | 1 1/2" | 6                                  | 1 | – |
| 548009 | 2"     | 8,5                                | 1 | – |

#### Choice of hydraulic separator 548 series

The hydraulic separator should be sized according to the **maximum flow rate value at the inlet**. The selected design value must be the greatest between the primary circuit and the secondary circuit.

#### 548 series hydraulic separator application diagram



### 548

tech. broch. 01076



Hydraulic separator.  
Epoxy resin coated steel body.  
**With pre-formed insulation.**  
Flanged connections PN 16.  
To be coupled with flat counterflanges  
EN 1092-1.  
Max. working pressure: 10 bar.  
Temperature range:  
0–105 °C (DN 50–DN 100),  
0–100 °C (DN 125 - DN 150).  
Temperature probe connection: 1/2" F.  
Complete with:  
automatic air vent, shut-off valve,  
drain valve.

| Code   |        | Max. recommended<br>flow rate m³/h |   |   |
|--------|--------|------------------------------------|---|---|
| 548052 | DN 50  | 9                                  | 1 | – |
| 548062 | DN 65  | 18                                 | 1 | – |
| 548082 | DN 80  | 28                                 | 1 | – |
| 548102 | DN 100 | 56                                 | 1 | – |
| 548122 | DN 125 | 75                                 | 1 | – |
| 548152 | DN 150 | 110                                | 1 | – |

### 548

tech. broch. 01076



Hydraulic separator.  
Epoxy resin coated steel body.  
Flanged connections PN 10.  
To be coupled with flat counterflanges  
EN 1092-1.  
Max. working pressure: 10 bar.  
Temperature range: 0–110 °C.  
Temperature probe connection: 1/2" F.  
Complete with:  
automatic air vent, shut-off valve,  
drain valve.

| Code   |        | Max. recommended<br>flow rate m³/h |   |   |
|--------|--------|------------------------------------|---|---|
| 548200 | DN 200 | 180                                | 1 | – |
| 548250 | DN 250 | 300                                | 1 | – |
| 548300 | DN 300 | 420                                | 1 | – |

## MULTIFUNCTION HYDRAULIC SEPARATOR



### 5495 SEP<sup>4</sup>

tech. broch. 01249

Multifunction hydraulic separator.  
Epoxy resin coated steel body.

**With pre-formed insulation.**

Female union connections.

Max. working pressure: 10 bar.

Temperature range: 0–100 °C.

Complete with:

- hydraulic separator,
- automatic air vent,
- dirt separator,
- magnetic ring,
- drain cock with hose connection.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

### Function

The multifunction hydraulic separator combines different functional components, each of them to satisfy specific needs of heating and cooling system circuits.

It is supplied complete with hot pre-formed shell insulation to ensure perfect thermal insulation when used with both hot and chilled water.

The device is designed to carry out the following functions:

#### - Hydraulic separation

To keep connected hydraulic circuits totally independent from each other.

#### - Deaeration



Utilises the combined action of several physics principles: the widening of the cross section decreases the flow velocity and the technopolymer mesh creates whirling movements so as to facilitate the release of micro-bubbles. The bubbles, fusing with each other, increase in volume and, rising towards the top of the unit, are released through a float-operated automatic air vent.

#### - Dirt separation

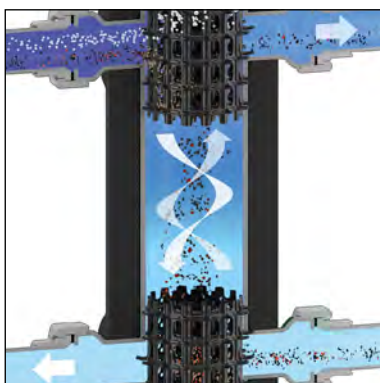
The dirt separator separates and collects any impurities in the circuits as they collide with the surface of the internal element.

#### - Removal of magnetic particles

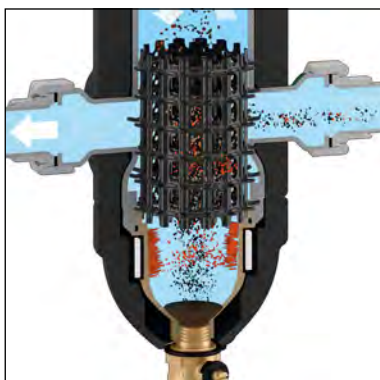
The special patented magnetic system also attracts ferromagnetic impurities in the water: the ferromagnetic particles are trapped in the collection zone, meaning they are prevented from being recirculated.

| Code   |        | Max. recommended<br>flow rate m <sup>3</sup> /h |  |  |
|--------|--------|---|--|--|
| 549506 | 1"     | 2,5   | 1  | –  |
| 549507 | 1 1/4" | 4   | 1  | –  |
| 549508 | 1 1/2" | 6   | 1  | –  |
| 549509 | 2"     | 8,5   | 1  | –  |

### Hydraulic separation



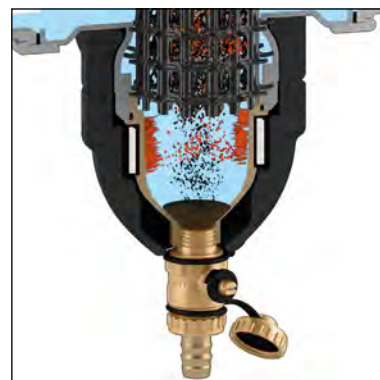
### Dirt removal



### Deaeration



### Removal of magnetic particles



## HYDRAULIC SEPARATOR-MANIFOLD

### Outlet centre distance 90 mm



### 559 SEPCOLL 2+2.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.

Steel body, PN 6.

**With pre-formed insulation.**

1 1/4" F main connections.

1" M outlet connections:

two at the top and two at the bottom.

Temperature range: 0–110 °C.

Complete with mounting brackets.

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559022 | 90 mm                  | 1 | – |



### 559 SEPCOLL 3+1.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.

Steel body, PN 6.

**With pre-formed insulation.**

1 1/4" F main connections.

1" M outlet connections:

three at the top and one at the bottom (can be inverted).

Temperature range: 0–110 °C.

Complete with mounting brackets.

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559031 | 90 mm                  | 1 | – |



### 559 SEPCOLL 2+1.

tech. broch. 01084

Hydraulic separator-manifold for **heating and cooling systems**.

Steel body, PN 6.

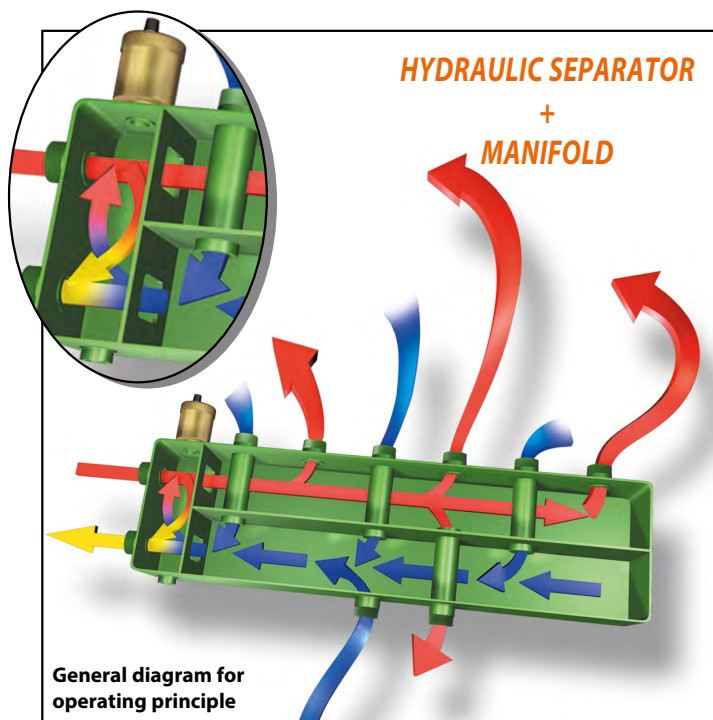
1" F main connections.

Outlet connections: two 1" M at the top with captive nut and one 1" F at the side.

Temperature range: 0–110 °C.

Complete with mounting brackets.

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559021 | 90 mm                  | 1 | – |



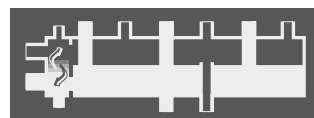
#### Hydraulic connections



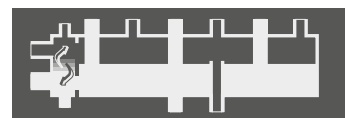
559022



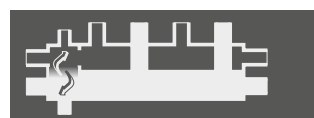
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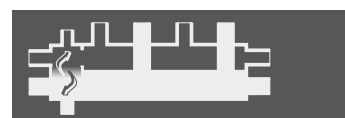
559031



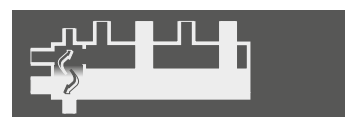
559231 - 559331



559021



559221



559220 - 559320

#### Maximum recommended flow rate at inlets of SEPCOLL separator 559 series

| Outlets | Primary  | Secondary (total) |
|---------|----------|-------------------|
| 2+1 / 2 | 2 m³/h   | 5 m³/h            |
| 2+2     | 2,5 m³/h | 6 m³/h            |
| 3+1     | 2,5 m³/h | 6 m³/h            |



## HYDRAULIC SEPARATOR-MANIFOLD

### Outlet centre distance 125 mm



**559**

**SEPCOLL 2+2.**

tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1 1/4" F main connections.  
1 1/2" outlet connections with captive nut: two at the top and two at the bottom.  
Temperature range: 0–110 °C.  
Complete with mounting brackets.



**559**

**SEPCOLL 2.**

tech. broch. 01084

Hydraulic separator-manifold for heating and air conditioning systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1" F main connections.  
Outlet connections: two 1 1/2" at the top with captive nut.  
Temperature range: 0–100 °C.  
Complete with mounting brackets.

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559222 | 125 mm                 | 1 | – |

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559320 | 125 mm                 | 1 | – |



**559**

**SEPCOLL 3+1.**

tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1 1/4" F main connections.  
1 1/2" outlet connections with captive nut: three at the top and one at the bottom (can be inverted).  
Temperature range: 0–110 °C.  
Complete with mounting brackets.



**559**

**SEPCOLL 3+1.**

tech. broch. 01084

Hydraulic separator-manifold for heating and air conditioning systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1 1/4" F main connections.  
1 1/2" outlet connections with captive nut: three at the top and one at the bottom (can be inverted).  
Temperature range: 0–100 °C.  
Complete with mounting brackets.

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559231 | 125 mm                 | 1 | – |

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559331 | 125 mm                 | 1 | – |



**559**

**SEPCOLL 2+1.**

tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1" F main connections.  
Outlet connections: two 1 1/2" at the top with captive nut and one 1" F at the side.  
Temperature range: 0–110 °C.  
Complete with mounting brackets.

| Maximum recommended flow rate at inlets of SEPCOLL separator 559 series |          |                   |
|---|----------|-------------------|
| Outlets   | Primary  | Secondary (total) |
| 2+1 / 2   | 2 m³/h   | 5 m³/h            |
| 2+2   | 2,5 m³/h | 6 m³/h            |
| 3+1   | 2,5 m³/h | 6 m³/h            |

| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559221 | 125 mm                 | 1 | – |



**559**

**SEPCOLL 2.**

tech. broch. 01084

Hydraulic separator-manifold for heating systems. Steel body, PN 6.  
**With pre-formed insulation.**  
1" F main connections.  
Outlet connections: two 1 1/2" at the top with captive nut.  
Temperature range: 0–110 °C.  
Complete with mounting brackets.



**559**

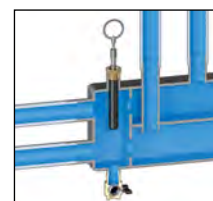
Pair of plugs with gaskets for unused outlets. For 559 and 550 series with 125 mm outlet centre distance.

| Code   |          |   |   |
|--------|----------|---|---|
| 559001 | 1 1/2" M | 1 | – |



**559**

Pocket with magnetic insert. For 559 series.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 559220 | 125 mm                 | 1 | – |

| Code   |        |   |   |
|--------|--------|---|---|
| 559003 | 1/2" M | 1 | – |



## COMPACT MANIFOLD - DN 25

### 550 2

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 1 1/2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.





| Code   | Outlet centre distance | Max. recommended flow rate m³/h |  |  |
|--------|------------------------|---------------------------------|---|---|
| 550220 | 125 mm                 | 4                               | 1   | –   |

### 550 2+1

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 1 1/2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.





| Code   | Outlet centre distance | Max. recommended flow rate m³/h |  |  |
|--------|------------------------|---------------------------------|---|---|
| 550221 | 125 mm                 | 4                               | 1   | –   |

### 550 3

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 1 1/2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.





| Code   | Outlet centre distance | Max. recommended flow rate m³/h |  |  |
|--------|------------------------|---------------------------------|---|---|
| 550230 | 125 mm                 | 4                               | 1   | –   |

### 550

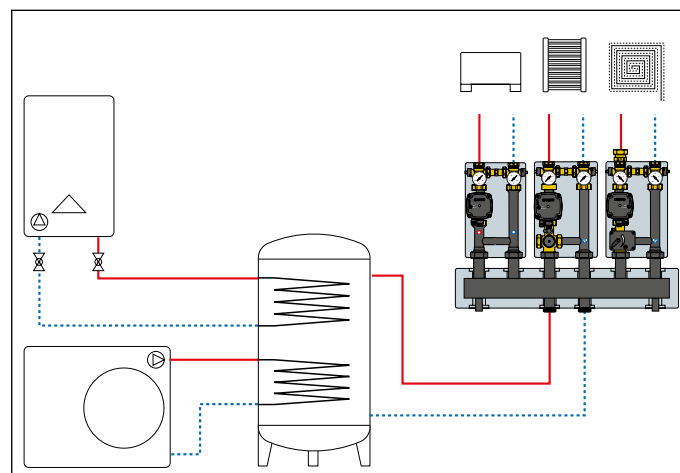
tech. broch. 01355

Hydraulic separator for heating systems.  
For manifolds 550 series DN 25.  
Steel body. **With pre-formed insulation.**  
Main connections: 1 1/2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance | Max. recommended flow rate m³/h |  |  |
|--------|------------------------|---------------------------------|---|---|
| 550205 | 125 mm                 | 4                               | 1   | –   |

#### Application diagram of manifold 550 series DN 25





### 550 4

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 1 1/2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.



| Code   | Outlet centre distance | Max. recommended flow rate m³/h |  |  |
|--------|------------------------|---------------------------------|---|---|
| 550240 | 125 mm                 | 4                               | 1   | –   |

## COMPACT MANIFOLD - DN 32

### 550 2

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.



| Code   | Outlet centre distance | Max. recommended flow rate m³/h |   |   |
|--------|------------------------|---------------------------------|---|---|
| 550320 | 125 mm                 | 9                               | 1 | – |

### 550 3

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.



| Code   | Outlet centre distance | Max. recommended flow rate m³/h |   |   |
|--------|------------------------|---------------------------------|---|---|
| 550330 | 125 mm                 | 9                               | 1 | – |

### 550 4

tech. broch. 01355

Manifold for heating systems.  
Steel body. **With pre-formed insulation.**  
Main connections: 2" M.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.  
Complete with steel mounting brackets.



| Code   | Outlet centre distance | Max. recommended flow rate m³/h |   |   |
|--------|------------------------|---------------------------------|---|---|
| 550340 | 125 mm                 | 9                               | 1 | – |

### 550

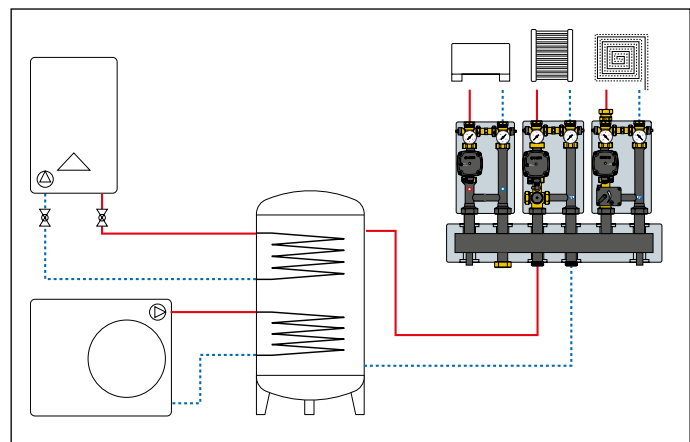
tech. broch. 01355

Hydraulic separator for heating systems.  
For manifolds 550 series DN 32.  
Steel body. **With pre-formed insulation.**  
Main connections: 2" M.  
Outlet connections: 2" F with captive nut.  
Max. working pressure: 6 bar.  
Temperature range: 5–110 °C.

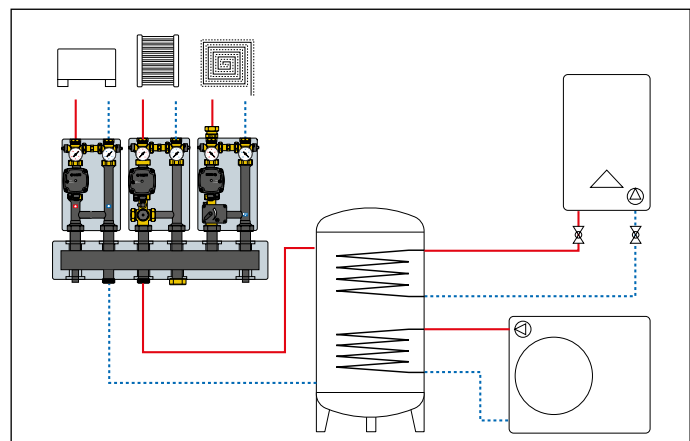


| Code   | Outlet centre distance | Max. recommended flow rate m³/h |   |   |
|--------|------------------------|---------------------------------|---|---|
| 550305 | 125 mm                 | 9                               | 1 | – |

#### Application diagrams of manifold 550 series DN 32 Primary connection from the left



#### Primary connection from the right



### 559

Pair of plugs with gaskets for unused outlets.  
For 559 and 550 series with  
125 mm outlet centre distance.



| Code   |          |   |   |  |
|--------|----------|---|---|--|
| 559001 | 1 1/2" M | 1 | – |  |

### 559

Pair of fittings with gaskets.  
For 559 and 550 series with  
125 mm outlet centre distance.



| Code   |                 |   |   |  |
|--------|-----------------|---|---|--|
| 559002 | 1 1/2" M x 1" M | 1 | – |  |

## MANIFOLD FOR CENTRAL HEATING SYSTEM

### 550 2

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.  
1 1/4" M main connections.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 550020 | 125 mm                 | 1 | – |

### 550 2+1

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.  
1 1/4" M main connections.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 550021 | 125 mm                 | 1 | – |

### 550 3

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.  
1 1/2" M main connections.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 550030 | 125 mm                 | 1 | – |

### 550 3+1

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.  
1 1/2" M main connections.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 550031 | 125 mm                 | 1 | – |

### 550 4

tech. broch. 01261

Manifold for heating and cooling systems. Steel body.  
1 1/2" M main connections.  
Outlet connections: 1 1/2" F with captive nut.  
Max. working pressure: 10 bar.  
Temperature range: 5–110 °C.



| Code   | Outlet centre distance |   |   |
|--------|------------------------|---|---|
| 550040 | 125 mm                 | 1 | – |

Insulation for manifolds for central heating system 550 series. For heating and cooling systems.



| Code      |                  |   |   |
|-----------|------------------|---|---|
| CBN550020 | for manifold 2   | 1 | – |
| CBN550021 | for manifold 2+1 | 1 | – |
| CBN550030 | for manifold 3   | 1 | – |
| CBN550031 | for manifold 3+1 | 1 | – |
| CBN550040 | for manifold 4   | 1 | – |

### 559

Pair of fittings with gaskets. For 559 and 550 series with 125 mm outlet centre distance.



| Code   |                 |   |   |
|--------|-----------------|---|---|
| 559002 | 1 1/2" M x 1" M | 1 | – |

### 550

Kit for 550 series manifold pipe connection to 548 series hydraulic separator.



| Code   |                 |   |   |
|--------|-----------------|---|---|
| 550001 | 1 1/4" x 1 1/4" | 1 | – |
| 550002 | 1 1/2" x 1 1/4" | 1 | – |
| 550003 | 1 1/2" x 1 1/2" | 1 | – |
| 550004 | 2" x 1 1/2"     | 1 | – |

## DIRECT SUPPLY UNITS

### DN 25



**165** 🔥 tech. broch. 01237  
 Direct supply unit for **heating systems**.  
 With pre-formed insulation.  
 Max. working pressure: 10 bar.  
 Max. working temperature: 100 °C.  
 Supply: 230 V - 50/60 Hz.  
 System side connection: 1" F.  
 Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible



**165** 🔥❄️ tech. broch. 01377  
 Direct supply unit for **heating and cooling systems**.  
 With pre-formed insulation.  
 Max. working pressure: 10 bar.  
 Primary inlet temperature range: 5–100 °C.  
 Supply: 230 V - 50/60 Hz.  
 System side connection: 1" F.  
 Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

| Code             | Pump             | Flow rate with residual head 4 m w.g. |   |   |
|------------------|------------------|---------------------------------------|---|---|
| <b>165600A2L</b> | UPM3S Auto 25-60 | 1,6 m³/h                              | 1 | – |

| Code             | Pump      | Flow rate with residual head 4 m w.g. |   |   |
|------------------|-----------|---------------------------------------|---|---|
| <b>165640HE3</b> | PARA 25/7 | 1,6 m³/h                              | 1 | – |

### DN 32



**NEW** **165** 🔥 tech. broch. 01237  
 Direct supply unit for **heating systems**.  
 With pre-formed insulation.  
 Max. working pressure: 10 bar.  
 Max. working temperature: 100 °C.  
 Supply: 230 V - 50/60 Hz.  
 System side connection: 1 1/4" F.  
 Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible



**NEW** **165** 🔥❄️ tech. broch. 01377  
 Direct supply unit for **heating and cooling systems**.  
 With pre-formed insulation.  
 Max. working pressure: 10 bar.  
 Primary inlet temperature range: 5–100 °C.  
 Supply: 230 V - 50/60 Hz.  
 System side connection: 1 1/4" F.  
 Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

| Code             | Pump        | Flow rate with residual head 4 m w.g. |   |   |
|------------------|-------------|---------------------------------------|---|---|
| <b>165601UPM</b> | UPML 25-105 | 3,4 m³/h                              | 1 | – |

| Code             | Pump      | Flow rate with residual head 4 m w.g. |   |   |
|------------------|-----------|---------------------------------------|---|---|
| <b>165641HE4</b> | PARA 25/9 | 2,7 m³/h                              | 1 | – |

For distribution units fitted for heat metering, refer to Section 12



## THERMOSTATIC REGULATING UNITS

### DN 25



**166** 🔥

tech. broch. 01238

Thermostatic regulating unit for **heating systems**.  
With pre-formed insulation.  
Max. working pressure: 10 bar.  
Max. primary inlet temperature: 5–100 °C.  
Supply: 230 V - 50/60 Hz.  
System side connection: 1" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible



**166** 🔥

tech. broch. 01378

Thermostatic regulating unit for **heating systems**.  
With pre-formed insulation.  
Max. working pressure: 10 bar.  
Max. primary inlet temperature: 5–100 °C.  
Supply: 230 V - 50/60 Hz.  
System side connection: 1" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

| Code             | Pump             | Temperature adjustment range | Flow rate with residual head 4 m w.g. |   |   |
|------------------|------------------|------------------------------|---------------------------------------|---|---|
| <b>166600A2L</b> | UPM3S Auto 25-60 | 25–50 °C                     | 1,4 m³/h                              | 1 | – |
| <b>166605A2L</b> | UPM3S Auto 25-60 | 40–70 °C                     | 1,4 m³/h                              | 1 | – |

| Code             | Pump      | Temperature adjustment range | Flow rate with residual head 4 m w.g. |   |   |
|------------------|-----------|------------------------------|---------------------------------------|---|---|
| <b>166600HE3</b> | PARA 25/7 | 25–50 °C                     | 1,4 m³/h                              | 1 | – |

### DN 32



**166** 🔥

tech. broch. 01238

Thermostatic regulating unit for **heating systems**.  
With pre-formed insulation.  
Max. working pressure: 10 bar.  
Max. primary inlet temperature: 5–100 °C.  
Supply: 230 V - 50/60 Hz.  
System side connection: 1 1/4" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

| Code             | Pump        | Temperature adjustment range | Flow rate with residual head 4 m w.g. |   |   |
|------------------|-------------|------------------------------|---------------------------------------|---|---|
| <b>166601UPM</b> | UPML 25-105 | 25–50 °C                     | 2,4 m³/h                              | 1 | – |

## MOTORISED REGULATING UNITS

### DN 25



**167** 🔥

tech. broch. 01351

Motorised regulating unit for **heating systems**.  
With pre-formed insulation.  
Regulation with sector three-way valve.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C  
System side connection: 1" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

**(\*) Actuator with 3-point control signal**

Supply: 230 V.

Operating time: 150 s (90° rotation).

Can be connected to digital regulators code 161010 and 1520 series.

| Code             | Pump             | Flow rate with residual head |   |   |
|------------------|------------------|------------------------------|---|---|
| <b>167652HE1</b> | UPM3S Auto 25-60 | 1,4 m³/h                     | 1 | – |

**(\*\*) Actuator with 0(2)–10 V control signal**

Supply: 24 V.

Operating time: 75 s (90° rotation).

Feedback signal: 0–10 V.

Can be connected to digital regulators code 161010 (for actuator electric supply use 230 V / 24 V transformer).

| Code             | Pump             | Flow rate with residual head |   |   |
|------------------|------------------|------------------------------|---|---|
| <b>167654HE1</b> | UPM3S Auto 25-60 | 1,4 m³/h                     | 1 | – |



**167** 🔥❄️

tech. broch. 01379

Motorised regulating unit for **heating and cooling systems**.  
With pre-formed insulation.  
Regulation with sector three-way valve.  
Max. working pressure: 10 bar.  
Primary inlet temperature range: 5–100 °C.  
System side connection: 1" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

**(\*) Actuator with 3-point control signal**

Supply: 230 V.

Operating time: 150 s (90° rotation).

Can be connected to digital regulators code 161010 and 1520 series.

| Code             | Pump      | Flow rate with residual head |   |   |
|------------------|-----------|------------------------------|---|---|
| <b>167652HE3</b> | PARA 25/7 | 1,4 m³/h                     | 1 | – |

**(\*\*) Actuator with 0(2)–10 V control signal**

Supply: 24 V.

Operating time: 75 s (90° rotation).

Feedback signal: 0–10 V.

Can be connected to digital regulators code 161010 (for actuator electric supply use 230 V / 24 V transformer).

| Code             | Pump      | Flow rate with residual head |   |   |
|------------------|-----------|------------------------------|---|---|
| <b>167654HE3</b> | PARA 25/7 | 1,4 m³/h                     | 1 | – |

### DN 32



NEW

**167** 🔥

tech. broch. 01351

Motorised regulating unit for **heating systems**.  
With pre-formed insulation.  
Regulation with sector three-way valve.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C  
System side connection: 1 1/4" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

**Actuator with 3-point control signal (\*)**

| Code             | Pump        | Flow rate with residual head |   |   |
|------------------|-------------|------------------------------|---|---|
| <b>167662HE2</b> | UPML 25-105 | 3,7 m³/h                     | 1 | – |

**Actuator with 0(2)–10 V control signal (\*\*)**

| Code             | Pump        | Flow rate with residual head |   |   |
|------------------|-------------|------------------------------|---|---|
| <b>167664HE2</b> | UPML 25-105 | 3,7 m³/h                     | 1 | – |



NEW

**167** 🔥❄️

tech. broch. 01379

Motorised regulating unit for **heating and cooling systems**.  
With pre-formed insulation.  
Regulation with sector three-way valve.  
With auxiliary microswitch.  
Max. working pressure: 10 bar.  
Primary inlet temperature range: 5–100 °C.  
System side connection: 1 1/4" F.  
Boiler side connection: 1 1/2" M.  
**Outlet centre distance: 125 mm**



RH to LH convertible

**Actuator with 3-point control signal (\*)**

| Code             | Pump      | Flow rate with residual head |   |   |
|------------------|-----------|------------------------------|---|---|
| <b>167662HE4</b> | PARA 25/9 | 2,2 m³/h                     | 1 | – |

**Actuator with 0(2)–10 V control signal (\*\*)**

| Code             | Pump      | Flow rate with residual head |   |   |
|------------------|-----------|------------------------------|---|---|
| <b>167664HE4</b> | PARA 25/9 | 2,2 m³/h                     | 1 | – |

## ACCESSORIES FOR UNITS 165 - 166 - 167 SERIES



### 165

Hydraulic separator kit  
for units 165, 166 and 167 series.

Code

**165010** 1 1/2" F x 1" F


1

-



### 165

Mounting bracket in stainless steel  
for units 165, 166 and 167 series.

Code

**165001**


1

-



### 519

Differential by-pass valve  
for units 165, 166 and 167 series.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

Code

Setting range  
m w.g.

**519006** 1-6


1

-



### 165

Safety thermostat kit  
for units 165, 166 and 167 series.  
Protection class: IP 65.  
M4 threading.

Code

Setting

**165004** Max. temperature safety thermostat 55 °C ± 3

**165007** Min. temperature safety thermostat 10 °C ± 3


1

-



### 165

Pair of eccentric tailpieces  
for units 165, 166 and 167 series.  
Centre distance: 105-145 mm.

Code

**165006** 1 1/2" F x 1" F


1

-



### 165

Sensor holder extension  
for units 165, 166 and 167 series.  
Side connections:  
M4 F x M4 F x 1/8" F x 1/4" F.

Code

**165003** 1" M x 1" F


1

-



### 165

Female union with captive nut  
complete with gasket  
for units 165, 166 and 167 series.

Code

**165002** 1 1/2" F x 1" F


1

-



## SPARE PARTS FOR REGULATING UNITS 165, 166 AND 167 SERIES

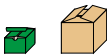


UPM3S Auto 25-60 spare part.



Code

**F0001252** UPM3S Auto 25-60 pump



1 -



UPML 25-105 spare part.



Code

**F19486** UPML 25-105 pump



1 -

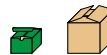


PARA 25/7 spare part.



Code

**F19441** PARA 25/7 pump



1 -



**NEW**

PARA 25/9 spare part.



Code

**F0001584** PARA 25/9 pump



1 -



### 166

Thermostatic mixing valve.  
Max. working pressure: 10 bar.  
Connections:  
1 1/2" M x 1 1/4" M x 1 1/2" F with captive nut.

Code Temperature adjustment range Kv (m³/h)

|               |          |     |   |   |
|---------------|----------|-----|---|---|
| <b>166001</b> | 25-50 °C | 4,1 | 1 | - |
| <b>166005</b> | 40-70 °C | 4,1 | 1 | - |



Three-way sector mixing valve,  
threaded. Brass body.  
PN 10.  
Max. working pressure: 10 bar.  
Max. Δp: 1 bar.  
Temperature range: 5-110 °C.

Code Kv (m³/h) Use

|                 |      |               |   |   |
|-----------------|------|---------------|---|---|
| <b>F0001334</b> | 6,3  | 16765.HE1/HE3 | 1 | - |
| <b>F0001335</b> | 10,0 | 16766.HE2/HE4 | 1 | - |



### 6370

tech. broch. 01353

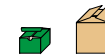
Actuator for unit 167 series.  
Supply: 230 V - 50 Hz or 24 V.  
Control signal: 3 points ou 0-10 V.  
Power consumption: 3 VA (code 637042)  
2 W (code 637044).

Protection class: IP 44.  
Rotation 90°.  
Operating time: 150 s (code 637044 - 75 s).  
Ambient temperature range: 0-55 °C.  
Storage temperature range: -10-70 °C.  
Supply cable length: 1,5 m.



Code Tension V Control signal Actuator torque (N·m)

|               |     |          |   |   |   |
|---------------|-----|----------|---|---|---|
| <b>637042</b> | 230 | 3 points | 5 | 1 | - |
| <b>637044</b> | 24  | 0-10 V   | 5 | 1 | - |



**NEW**

Spare probe pockets for 167 series.

Code

**F0001592**

## TEMPERATURE REGULATORS



**161**

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probes with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe, see accessories).  
Optional outside compensated probe.  
Temperature adjustment range: 5–95 °C.  
Supply: 230 V - 50/60 Hz.  
Control signal: 3-point, 0–10 V.  
Protection class: IP 20 / EN 60529.  
Probe cable length: 1,5 m.



Code

**161010**



1 -



**161**

Outside temperature probe.

Code

**161002**



1 -



**161**

Pressure switch with preconnected pin.  
Working range: 0,5–10 bar.  
Max. working temperature: 100 °C.  
Cable length: 1 m.

Code

**161003**



1 -



**161**

Dew point detector.  
Working range: 30–100 RH %.

Code

**161004**



1 -



**161**

Remote regulator.  
Functions:  
- translation of regulation curves from +15 K to -15 K  
- max. temperature  
- position OFF.

Code

**161005**



1 -

Accessories for regulator code 161010.

Code

**161012** Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m

**161013** immersion pocket for Pt1000 probe 1/2" M, 60 mm

**161014** immersion pocket for Pt1000 probe 1/2" M, 100 mm

**161015** Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m

**161006** Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m



**1520**

Outside compensated digital temperature regulator. Complete with contact flow probe and outside probe.  
Adjustment range: 20–90 °C.  
Supply: 230 V - 50/60 Hz.  
Control signal: 3-point.  
Protection class: IP 40.

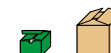


Code

**152001** 1 channel

**152002** 2 channels

**152003** 3 channels



1 -

1 -

1 -



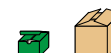
**1520**

Digital temperature controller for heating and cooling.  
Complete with flow probe, outside probe and max. relative humidity probe.  
Supply: 230 V - 50/60 Hz.  
Power consumption: 5,5 VA.  
Protection class: IP 40.



Code

**152021** 1 channel





1 -

## STRAINERS



### 577



Y-strainer.  
Bronze body,  
1/2"-2": PN 16,  
2 1/2" - 3": PN 10.  
Female connections.  
Temperature range: -20-110 °C.  
Max. percentage of glycol: 30 %.  
Strainer on stainless steel stretched plate.

| Code          |        | Mesh size<br>Ø (mm) | Kv (m³/h) |  |  |
|---------------|--------|---------------------|-----------|---|---|
| <b>577004</b> | 1/2"   | 0,40                | 2,5       | 1   | -   |
| <b>577005</b> | 3/4"   | 0,40                | 3,9       | 1   | -   |
| <b>577006</b> | 1"     | 0,40                | 7         | 1   | -   |
| <b>577007</b> | 1 1/4" | 0,47                | 16        | 1   | -   |
| <b>577008</b> | 1 1/2" | 0,47                | 24        | 1   | -   |
| <b>577009</b> | 2"     | 0,53                | 35        | 1   | -   |
| <b>577020</b> | 2 1/2" | 0,53                | 57        | 1   | -   |
| <b>577030</b> | 3"     | 0,53                | 73        | 1   | -   |

### 579

Y strainer for heating systems.  
Grey cast iron body, grey epoxy coating.  
Max. working pressure: 16 bar.  
Temperature range: -10-100 °C.  
Max. percentage of glycol: 50 %.  
Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
Filtering mesh in stainless steel AISI 304.



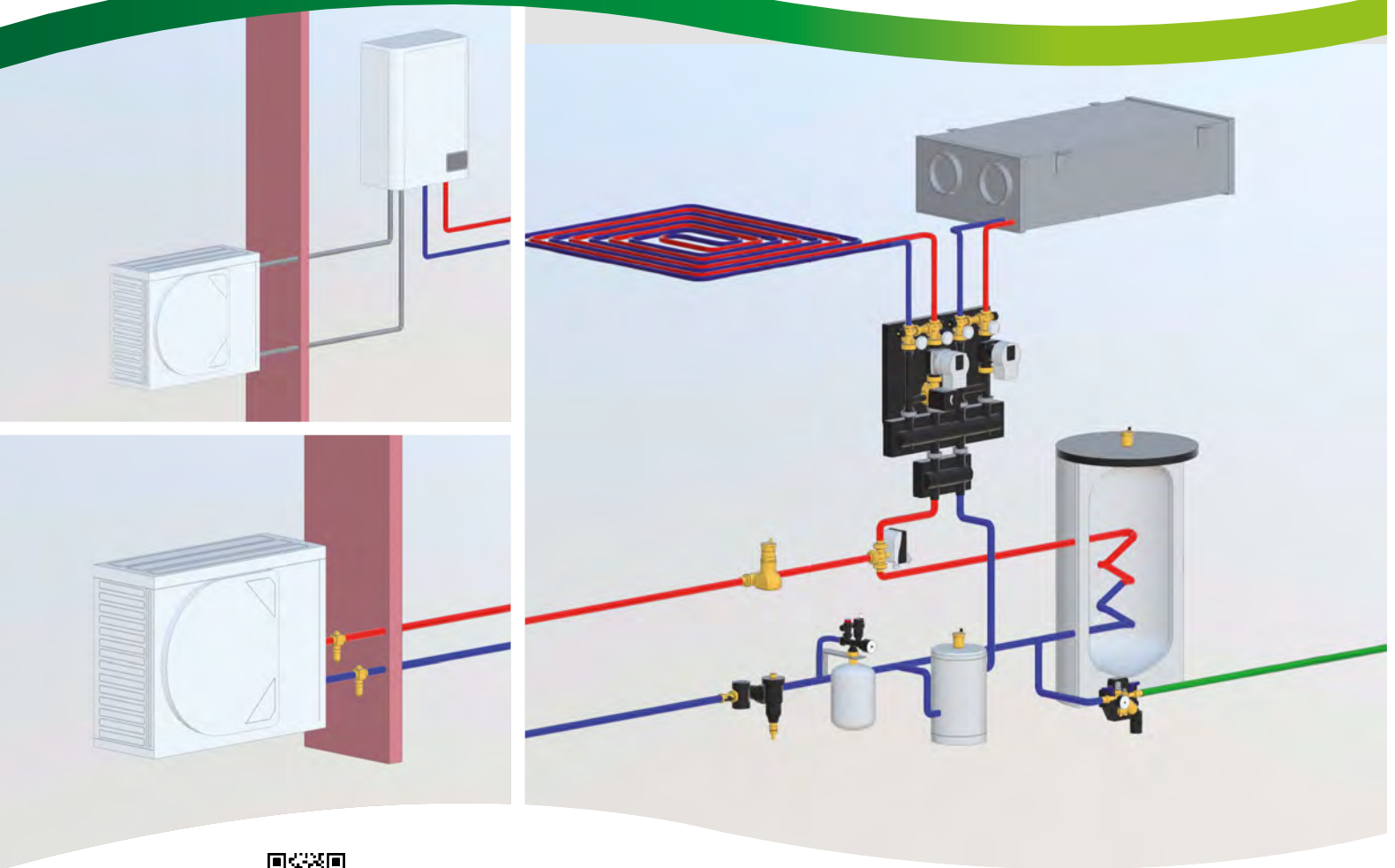
| Code            |        | Mesh size<br>Ø (mm) | Kv (m³/h) |  |  |
|-----------------|--------|---------------------|-----------|--|--|
| <b>579051</b>   | DN 50  | 0,87                | 54        | 1  | -  |
| <b>579061</b>   | DN 65  | 0,87                | 76        | 1  | -  |
| <b>579081</b>   | DN 80  | 1,55                | 108       | 1  | -  |
| <b>579101</b>   | DN 100 | 1,55                | 170       | 1  | -  |
| <b>579121</b>   | DN 125 | 1,55                | 295       | 1  | -  |
| <b>579151</b>   | DN 150 | 1,55 *              | 408       | 1  | -  |
| <b>579201**</b> | DN 200 | 1,55 *              | 725       | 1  | -  |
| <b>579251**</b> | DN 250 | 1,55 *              | 938       | 1  | -  |

\* Rhomboidal reinforcing mesh

\*\* Blue epoxy coating



## COMPONENTS FOR HEAT PUMP SYSTEMS



**BIM**  
bim.caleffi.com

**Antifreeze protection**

**Motorised three-way ball diverter valves**

**Semi-automatic self-cleaning magnetic filter CALEFFI XF**

**Deaerator**

**Multifunction device in composite with dirt separator and strainer**

**Deaerator-dirt separator with magnet**

**Differential by-pass valve**

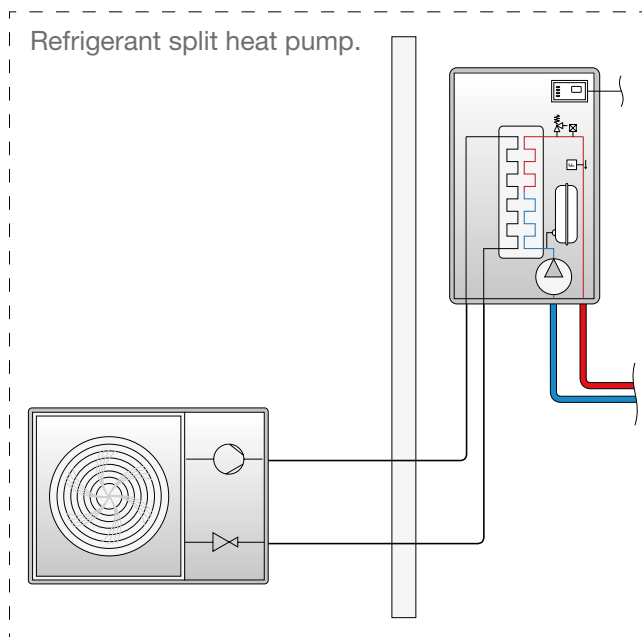
**Balancing valve with flow meter**

**Instrument holder in composite material**

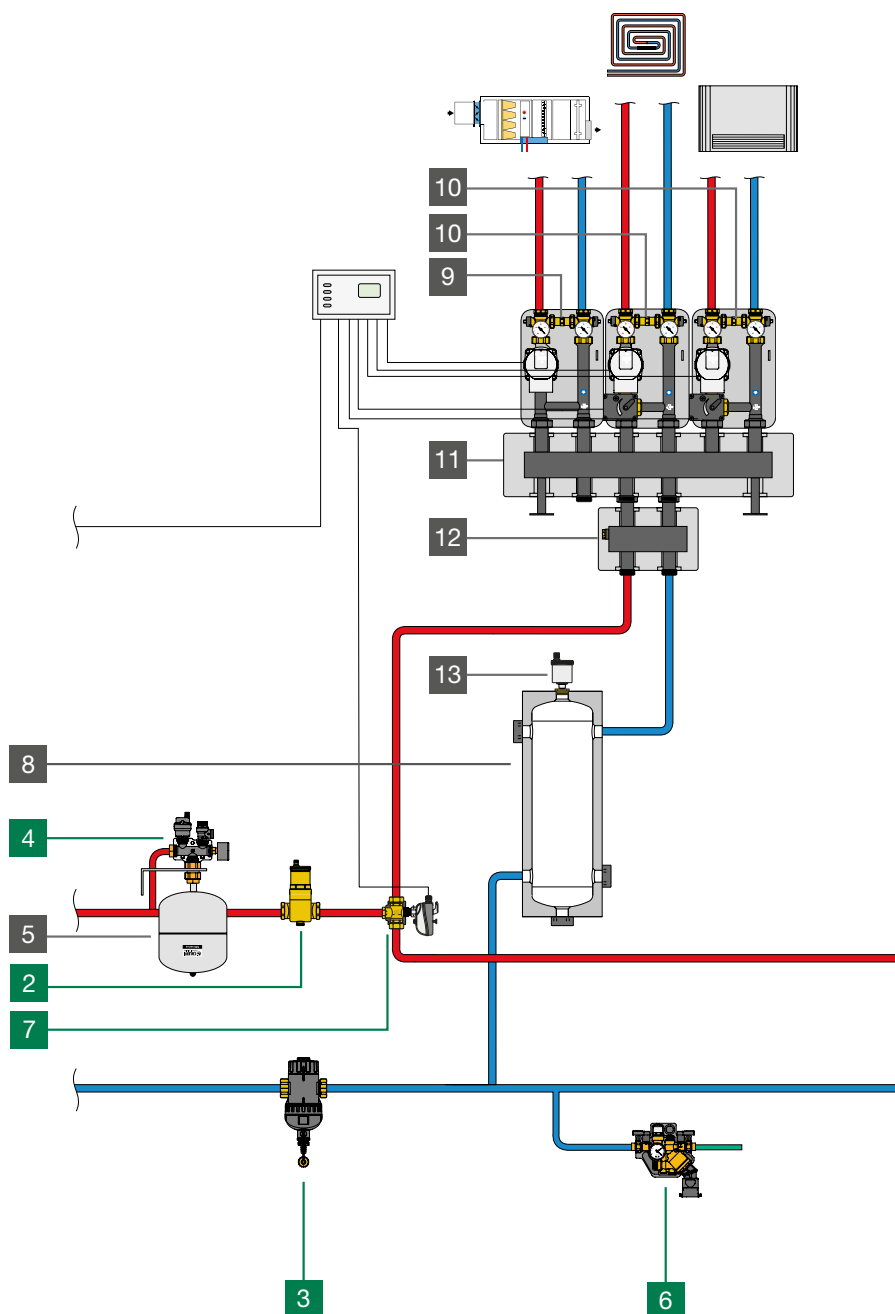
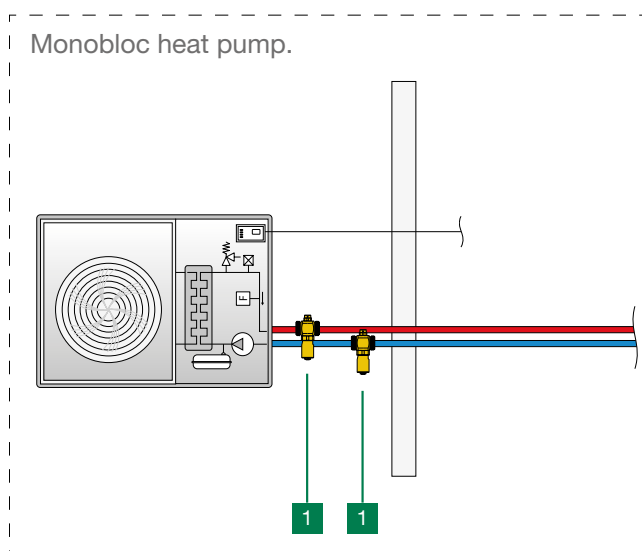
**Automatic compact charging unit**

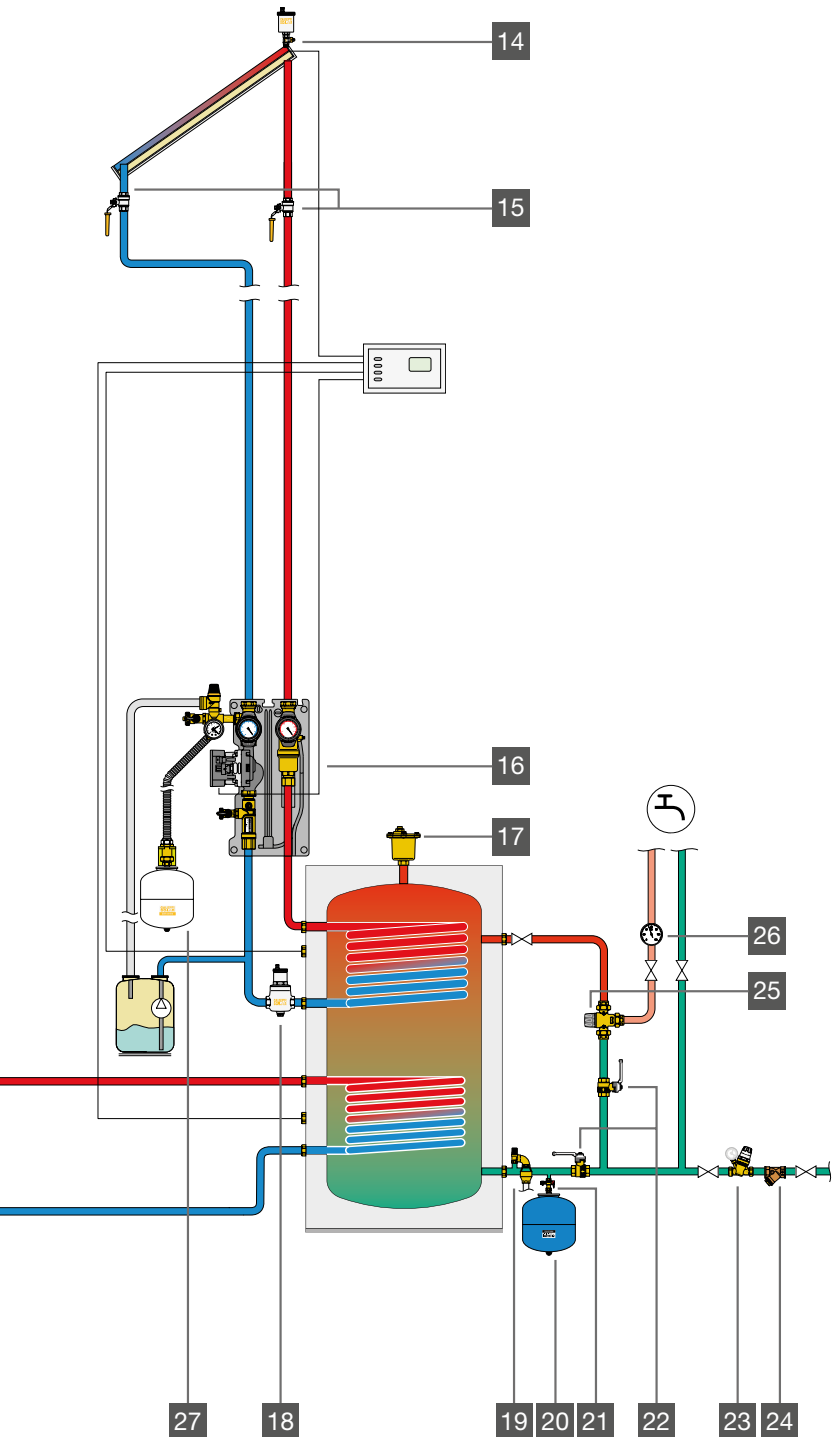


Refrigerant split heat pump.












Monobloc heat pump.





- 1 Series 108 Antifreeze valve
- 2 Series 551 DISCAL® deaerator
- 3 Series 577 CALEFFI XF semi-automatic self-cleaning magnetic filter
- 4 Series 305 Composite instrument holder manifold
- 5 Series 556 Welded expansion vessel for heating systems
- 6 Series 580 Automatic compact filling unit with BA type backflow preventer, shut-off valves, strainer, pressure test ports, pressure reducing valve
- 7 Series 638 3-way motorised ball valve
- 8 Series 569 Thermal flywheel for heat pump
- 9 Series 165 Direct supply unit
- 10 Series 167 Motorised regulating unit
- 11 Series 550 Manifold for central heating system
- 12 Series 550 Hydraulic separator
- 13 Series 5020 MINICAL® automatic air vent
- 14 Series 250 Automatic air vent for solar thermal systems, complete with shut-off cock
- 15 Series 240 Ball valve for solar thermal systems
- 16 Series 279 Circulation unit for solar heating systems
- 17 Series 501 MAXCAL® automatic air vent
- 18 Series 251 Deaerator for solar heating systems
- 19 Series 531 Safety relief valve for domestic water systems
- 20 Series 568 Welded expansion vessel for domestic systems
- 21 Series 5580 Shut-off ball valve for expansion vessels, with drain cock
- 22 Series 3230 Ball valve with check valve
- 23 Series 5350 Pressure reducing valve
- 24 Series 577 Oblique filter
- 25 Series 5231 Adjustable thermostatic mixing valve
- 26 Series 688 Temperature gauge
- 27 Series 259 Welded expansion vessel for solar thermal systems

| Nominal power             |   | [kW]  | 3   | 4    | 5               | 6    | 7    | 8                |
|---------------------------|---|-------|---|------|-----------------|------|------|------------------|
| Max flow rate [ΔT = 5 °C] |   | [l/h] | 516   | 688  | 860             | 1032 | 1204 | 1376             |
| Nominal pipe size         |   |       | 3/4"  | 3/4" | 1"              | 1"   | 1"   | 1"               |
| 1                         |    |       | n° 2 x <b>108601</b> / n° 2 x <b>108611</b> |      |                 |      |      |                  |
| 2                         |    |       | 551705 / 551005                             |      | 551706 / 551006 |      |      |                  |
| 3                         |    |       | 545375 / 577500                             |      | 545376 / 577600 |      |      | 545377<br>577600 |
| 4                         |    |       | 305663 / 305503                             |      |                 |      |      |                  |
| 6                         |   |       | 580011/010                                  |      |                 |      |      |                  |
| 7                         |  |       | 644562/ 66                                  |      |                 |      |      |                  |
| 11                        |  |       | 550220                                      |      |                 |      |      |                  |
| 11                        |  |       | 550230                                      |      |                 |      |      |                  |
| 12                        |  |       | 550205                                      |      |                 |      |      |                  |

| 9   | 10     | 11     | 12     | 14     | 16     | 18  | 22     | 25     |
|---|--------|--------|--------|--------|--------|---|--------|--------|
| 1548  | 1720   | 1892   | 2064   | 2408   | 2752   | 3096  | 3784   | 4300   |
| 1 1/4"                                      | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/4" | 1 1/2"                                      | 1 1/2" | 1 1/2" |
| n° 2 x <b>108701</b> / n° 2 x <b>108711</b> |        |        |        |        |        | n° 2 x <b>108801</b> / n° 2 x <b>108711</b> |        |        |
| 551706 / 551006                             |        |        |        | 551007 |        |   | 551008 |        |
| 545377 / 577700                             |        |        |        | 577700 |        | 577800                                      |        |        |
| 305663 / 305503                             |        |        |        |        |        |   |        |        |
| 580011                                      |        |        |        |        |        |   |        |        |
| 638373                                      |        |        |        |        |        | 638383                                      |        |        |
| 550220                                      |        |        |        |        |        |   | 550320 |        |
| 550230                                      |        |        |        |        |        |   | 550330 |        |
| 550205                                      |        |        |        |        |        |   | 550305 |        |

## ANTIFREEZE PROTECTION

### 108

tech. broch. 01376



Antifreeze valve. Brass body.  
Max. working pressure: 10 bar.  
Working temperature range: 0–65 °C.  
Ambient temperature range: -30–60 °C.  
Opening temperature: 3 °C.  
Closing temperature: 4 °C.

#### Threaded connections

Code

|        |        |   |    |
|--------|--------|---|----|
| 108601 | 1"     | 1 | 25 |
| 108701 | 1 1/4" | 1 | 20 |
| 108801 | 1 1/2" | 1 | 20 |

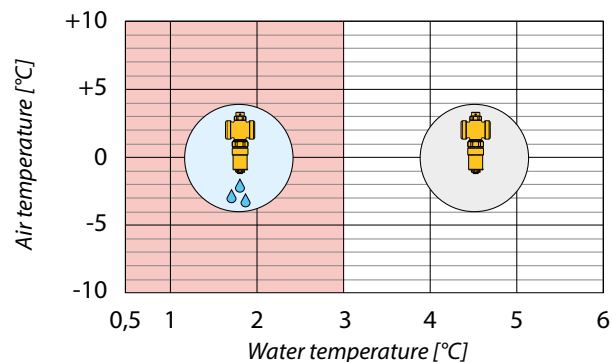
#### Compression ends

Code

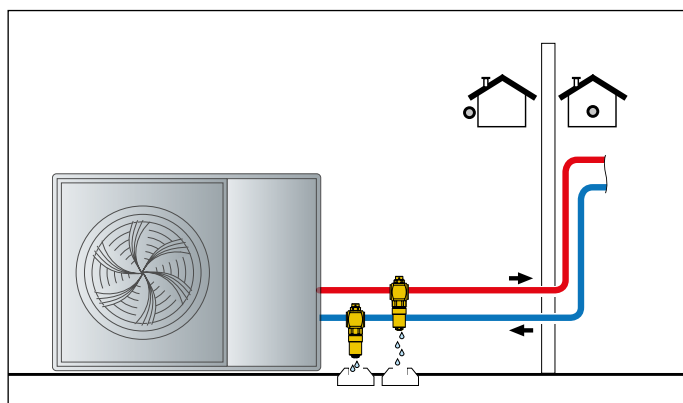
|        |      |   |    |
|--------|------|---|----|
| 108301 | Ø 28 | 1 | 20 |
|--------|------|---|----|

#### Function

The antifreeze valve 108 series allows drainage of the medium in the circuit when the circuit temperature reaches an average value of 3 °C.



Application diagrams of antifreeze valve 108 series



## ANTIFREEZE PROTECTION WITH AIR SENSOR

NEW

### 108

tech. broch. 01376



Antifreeze valve with air sensor.  
Brass body.  
Max. working pressure: 10 bar.  
Working temperature range: 0–65 °C.  
Ambient temperature range: -30–60 °C.

Antifreeze function (water sensor).  
Opening temperature: 3 °C.  
Closing temperature: 4 °C.

Enabling of antifreeze function with low outside air temperature < 5 °C.

PATENT PENDING.

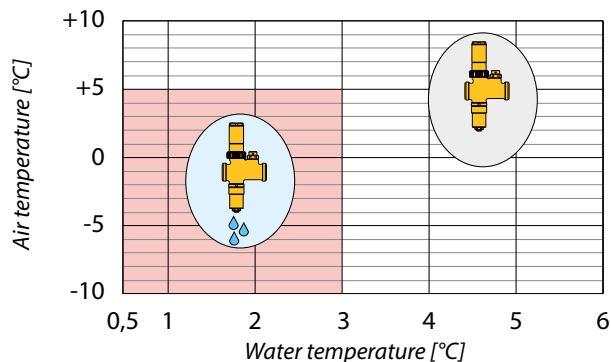
Code

|        |        |   |    |
|--------|--------|---|----|
| 108611 | 1"     | 1 | 25 |
| 108711 | 1 1/4" | 1 | 20 |

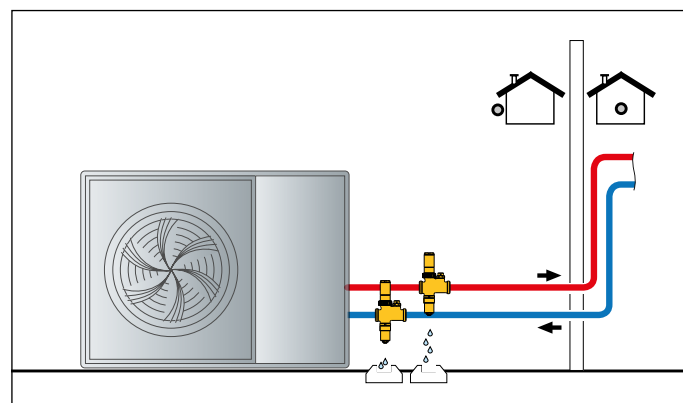
#### Operating principle

The 108 series antifreeze valve allows drainage of the medium in the circuit when the circuit temperature reaches a value of 3 °C.

In outside temperature conditions over 5 °C, antifreeze valve intervention is inhibited by the air temperature sensor. This prevents the valve from cutting in during operation in cooling mode during the summer.



Application diagrams of antifreeze valve with air sensor 108 series





## MOTORISED THREE-WAY BALL DIVERter VALVES

NEW

6445

tech. broch 01392



Motorised three-way ball valve.  
With insulation kit for **heating and conditioning systems**.  
With auxiliary microswitch.  
Supply: 230 V (AC).  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.  
Ambient temperature range: 0–55 °C.  
Power consumption: - 644562: 4 VA  
- 644566: 8 VA

Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Protection class: IP 44.  
**90° rotation**



| Code   | Operating time | Supply voltage V | Kv (m³/h) |   |     |
|--------|----------------|------------------|-----------|---|-----|
| 644562 | 1"             | 40 s             | 230       | 9 | 1 – |
| 644566 | 1"             | 10 s             | 230       | 9 | 1 – |

NEW

638

tech. broch. 01196



Motorised three-way ball valve.  
With insulation kit for **heating and conditioning systems**.  
Supply: 230 V (AC).  
Max. working pressure: 16 bar.  
Max. Δp: 10 bar.  
Temperature range: -10–110 °C.  
Ambient temperature range: -10–55 °C.  
**With auxiliary microswitch.**  
Power consumption: 6 VA.  
Auxiliary microswitch contact rating:  
6 (2) A - 230 V (AC).  
Protection class: IP 65.  
Operating time: 50 s (**90° rotation**).



| Code   | Operating time | Supply voltage V | Kv (m³/h) |      |     |
|--------|----------------|------------------|-----------|------|-----|
| 638373 | 1 1/4"         | 50 s             | 230       | 24,7 | 1 – |
| 638383 | 1 1/2"         | 50 s             | 230       | 47   | 1 – |

6440

tech. broch 01131

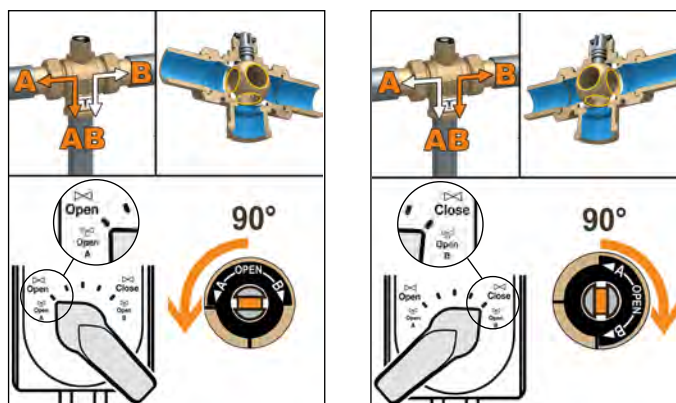


3-contact control spare actuator  
for motorised ball zone valves 6445 series.  
Supply: 230 V (AC).

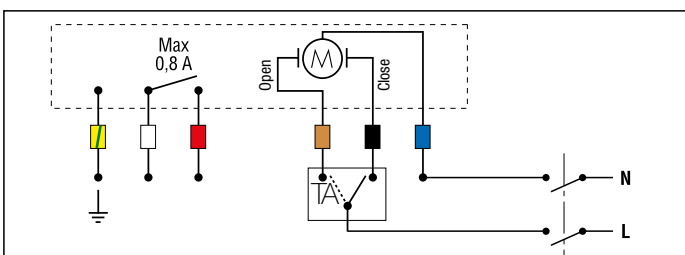


| Code   | Operating time | Supply voltage V |   |    |
|--------|----------------|------------------|---|----|
| 644002 | 40 s           | 230              | 1 | 10 |
| 644012 | 10 s           | 230              | 1 | 10 |

### Operating diagram for 6445 series valve - with "T" drilling



### Wiring diagram for valves 6445 series, with 3-contact actuator.



Spare actuator for motorised ball zone valves 638 series.  
90° rotation.



| Code   | Supply voltage V |   |   |
|--------|------------------|---|---|
| 638012 | 230              | 1 | – |



Insulation kit  
for heating and cooling systems.  
Medium temperature range: -10–110 °C.  
For motorised three-way ball valves 638 series.

| Code      | Use    |   |   |
|-----------|--------|---|---|
| CBN638173 | 1 1/4" | 1 | – |
| CBN638183 | 1 1/2" | 1 | – |

## SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

**NEW**

### 577 CALEFFI XF

tech. broch. 01391



Semi-automatic self-cleaning magnetic filter.  
Technopolymer body.  
**Female connections and compression end.**  
**Adjustable for horizontal and vertical pipes.**  
Drain cock with hose connection.

Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
Strainer mesh size Ø = 0,16 mm.

**PCT**  
INTERNATIONAL  
APPLICATION  
PENDING

#### Threaded connections

| Code          |        |   |   |
|---------------|--------|---|---|
| <b>577500</b> | 3/4"   | 1 | - |
| <b>577600</b> | 1"     | 1 | - |
| <b>577700</b> | 1 1/4" | 1 | - |

#### Compression ends

| Code          |      |   |   |
|---------------|------|---|---|
| <b>577200</b> | Ø 22 | 1 | - |
| <b>577300</b> | Ø 28 | 1 | - |



Insulation for semi-automatic self-cleaning magnetic filter.

| Code             | Use                    |   |   |
|------------------|------------------------|---|---|
| <b>CBN577500</b> | 577500/600/700/200/300 | 1 | - |

**NEW**

### 577 CALEFFI XF

tech. broch. 01391



Semi-automatic self-cleaning magnetic filter **complete with by-pass**.  
Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
Drain cock with hose connection.

Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
Strainer mesh size Ø = 0,16 mm.

**PCT**  
INTERNATIONAL  
APPLICATION  
PENDING

| Code          |        |   |   |
|---------------|--------|---|---|
| <b>577800</b> | 1 1/2" | 1 | - |
| <b>577900</b> | 2"     | 1 | - |



Insulation for semi-automatic self-cleaning magnetic filter.

| Code             | Use        |   |   |
|------------------|------------|---|---|
| <b>CBN577800</b> | 577800/900 | 1 | - |

#### Dual filter mesh

The CALEFFI XF magnetic filter has two filtering devices:

1. An internal mesh element, consisting of a set of concentric surfaces. On striking these surfaces the impurities in the water are separated out, dropping into the bottom of the body where they are collected.
2. A metal filter with a large surface area at the outlet, which separates off the impurities by means of the mechanical selection of particles according to their size (160 µm).



## DEAERATOR



### 551 DISCAL

Deaerator. Brass body.  
**Female and male connections and Ø 22 and Ø 28 mm with compression ends.**  
**Adjustable for horizontal and vertical pipes.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0–110 °C.

#### Threaded connections

| Code   |        |   |   |
|--------|--------|---|---|
| 551705 | 3/4" F | 1 | 5 |
| 551706 | 1" F   | 1 | 5 |
| 551716 | 1" M   | 1 | 5 |

#### Compression ends

| Code   |      |   |   |
|--------|------|---|---|
| 551702 | Ø 22 | 1 | 5 |
| 551703 | Ø 28 | 1 | 5 |

## MULTIFUNCTION DEVICE WITH DIRT SEPARATOR AND STRAINER



### 5453 DIRTMAGPLUS®

tech. broch. 01258

Multifunction device with dirt separator and strainer.  
Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.  
Technopolymer body.  
Dirt separator with tecnopolimer internal element, **with magnet**.  
Two inspectable strainers with stainless steel mesh:  
1 for initial cleaning (blue colour) already installed,  
1 for maintenance (grey colour) in package.  
Shut-off valves with nuts, brass body.  
**Female connections and Ø 22 and Ø 28 mm with compression ends.**  
**Adjustable for horizontal, vertical or 45° pipes.**  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.

#### Threaded connections

| Code   |        |   |   |
|--------|--------|---|---|
| 545375 | 3/4"   | 1 | 5 |
| 545376 | 1"     | 1 | 5 |
| 545377 | 1 1/4" | 1 | 5 |

#### Compression ends

| Code   |      |   |   |
|--------|------|---|---|
| 545372 | Ø 22 | 1 | 5 |
| 545373 | Ø 28 | 1 | 5 |

## DEAERATOR-DIRT SEPARATOR WITH MAGNET



NEW

### 5464 DISCALDIRTMAG

Deaerator-dirt separator **with magnet**.  
Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
With hygroscopic safety cap.  
Drain cock with hose connection.

Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

#### Threaded connections

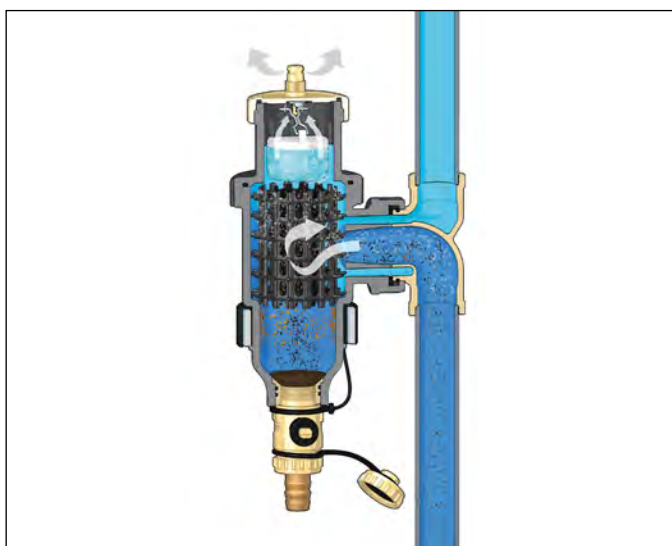
| Code   |        |   |   |
|--------|--------|---|---|
| 546405 | 3/4" F | 1 | 5 |
| 546406 | 1" F   | 1 | 5 |

#### Compression ends

| Code   |      |   |   |
|--------|------|---|---|
| 546402 | Ø 22 | 1 | 5 |
| 546403 | Ø 28 | 1 | 5 |

#### Problems caused by impurities in hydraulic circuits

The components of a heating and cooling system are exposed to degradation caused by the impurities contained in the system circuit. If the impurities in the thermal medium are not removed, they can impair operation of the units or components, such as heat generators or exchangers, especially in the system commissioning stage, already from the very first passage. This problem must not be underestimated because generator manufacturers will frequently reject warranty claims if their product is not adequately protected by a strainer from the time the product is commissioned onwards.



## DIFFERENTIAL BY-PASS VALVE



**519**

tech. broch. 01007

Differential by-pass valve,  
adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–110 °C.  
Max. percentage of glycol: 30 %.



### Threaded connections

| Code   |        | Setting range<br>m w.g. |   |    |
|--------|--------|-------------------------|---|----|
| 519500 | 3/4"   | 1–6                     | 1 | 50 |
| 519504 | 3/4"   | 10–40                   | 1 | 50 |
| 519700 | 1 1/4" | 1–6                     | 1 | 10 |
| 519703 | 1 1/4" | 5–25                    | 1 | 10 |

### Compression ends

| Code   |      | Setting range<br>m w.g. |   |    |
|--------|------|-------------------------|---|----|
| 519002 | Ø 22 | 1–6                     | 1 | 50 |



**NEW**

**519**

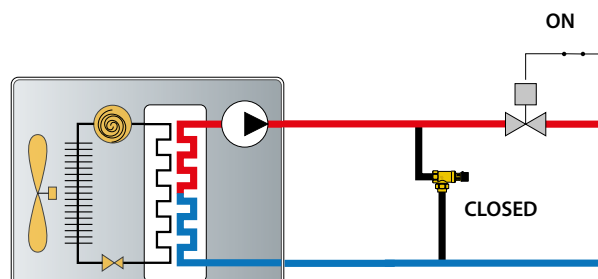
tech. broch. 01007

Differential by-pass valve,  
adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–110 °C.  
Max. percentage of glycol: 30 %.

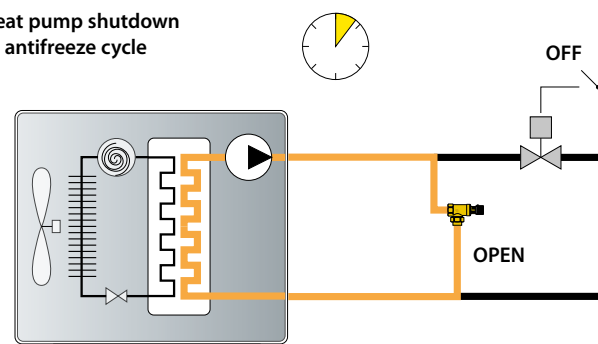
| Code   |      | Setting range<br>m w.g. |   |    |
|--------|------|-------------------------|---|----|
| 519015 | 3/4" | 1–6                     | 1 | 25 |

### Application diagrams of differential by-pass valve 519 series

#### Normal operation



#### Heat pump shutdown or antifreeze cycle



## BALANCING VALVE WITH FLOW METER



**132**

tech. broch. 01149

Balancing valve with flow meter.  
Direct reading of flow rate.  
Brass valve body and flow meter.  
Ball valve for flow rate adjustment.  
Graduated scale flow meter with  
magnetic movement flow rate indicator.

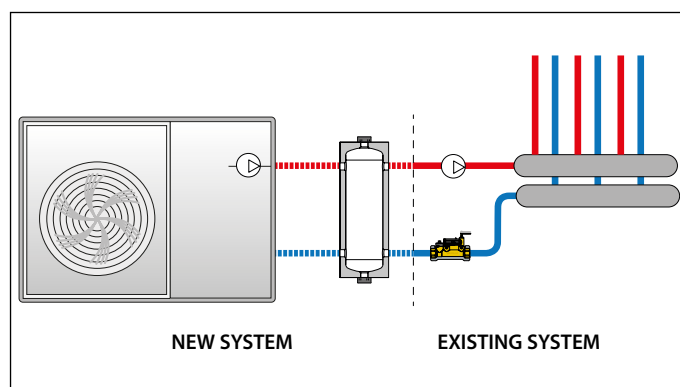
#### With insulation.

Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Max. percentage of glycol: 50 %.  
PATENT PENDING.



| Code   |        | Flow rate range (l/min) |   |   |
|--------|--------|-------------------------|---|---|
| 132512 | 3/4"   | 5–13                    | 1 | 5 |
| 132522 | 3/4"   | 7–28                    | 1 | 5 |
| 132602 | 1"     | 10–40                   | 1 | 5 |
| 132702 | 1 1/4" | 20–70                   | 1 | 5 |
| 132802 | 1 1/2" | 30–120                  | 1 | 5 |

### Application diagram



## INSTRUMENT HOLDER IN COMPOSITE MATERIAL

### 305



Instrument holder in composite material for heating systems. Equipped with air vent, safety relief valve in composite material and pressure gauge.  
**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.

Code

305663 1" 3 bar TÜV



1

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### 305



Instrument holder in composite material for heating systems. Equipped with air vent in composite material, safety relief valve and pressure gauge.  
**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.

Code

305572 3/4" 2,5 bar TÜV

305671 1" 1,8 bar

305673 1" 3 bar NF

305674 1" 4 bar without insulation



1

5

1

5

1

5

1

5

### 305



Instrument holder kit in composite material for heating systems. Equipped with air vent, safety relief valve in composite material, pressure gauge, automatic shut-off cock for expansion vessel and fixing bracket.  
**With insulation.**  
Temperature range: 5–90 °C.  
Up to 50 kW.

Code

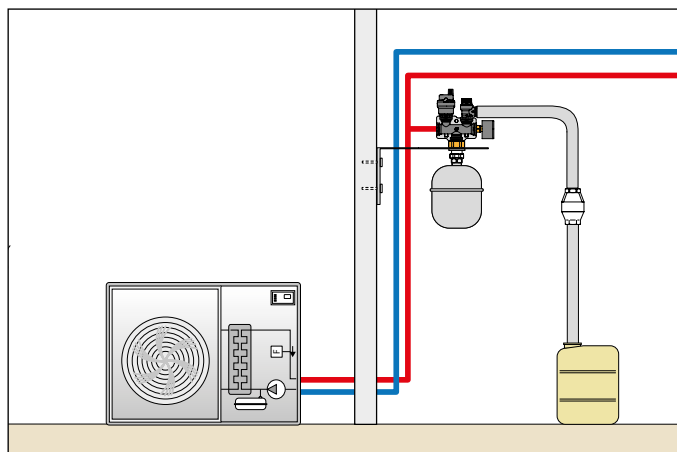
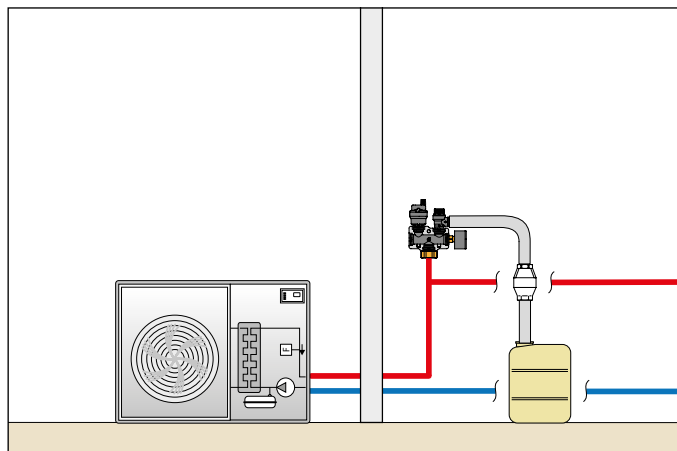
305503 3/4" 3 bar TÜV



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Application diagram for instrument holder 305 series





## AUTOMATIC COMPACT CHARGING UNIT

### 580010

tech. broch. 01333

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve. For horizontal or vertical installations.  
**CR** dezincification resistant alloy body.



#### With insulation.

Filling unit setting pressure range: 0,8–4 bar.  
 Max. working pressure: 10 bar.  
 Max. working temperature: 65 °C.  
 Backflow preventer certified to EN 12729 standard.  
 Pressure reducing valve certified to EN 1567 standard.  
 PATENT PENDING.



Code

**580010** 1/2"



1

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**NEW**

### 580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve. For horizontal or vertical installations.  
**CR** dezincification resistant alloy body.



#### With insulation.

Filling unit setting pressure range: 0,8–4 bar.  
 Max. working pressure: 10 bar.  
 Max. working temperature: 65 °C.  
 Backflow preventer certified to EN 12729 standard.  
 Pressure reducing valve certified to EN 1567 standard.  
 PATENT.



Code

**580011** 1/2"



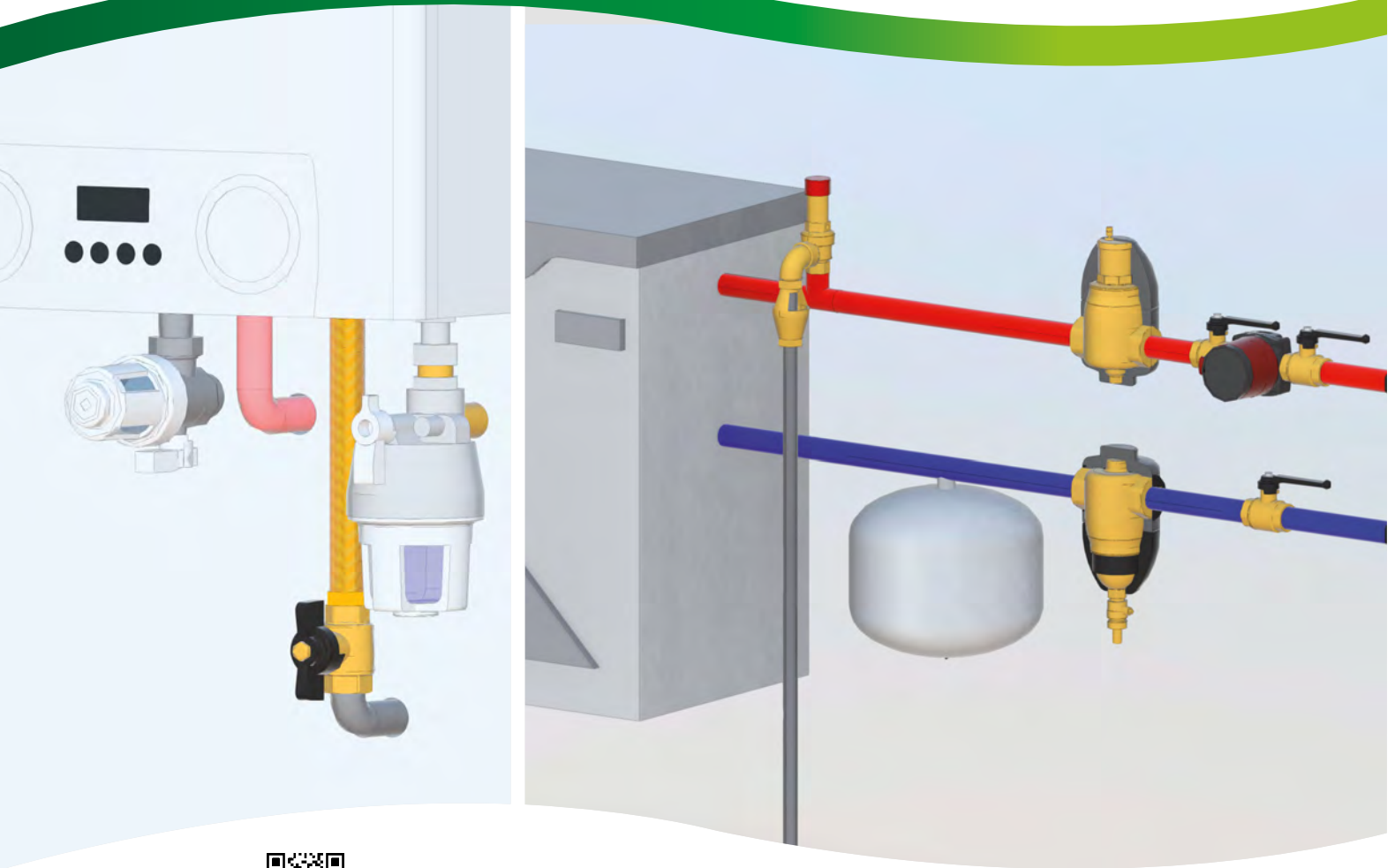
1

5

#### Backflow prevention reference standards

To avoid water backflow from the heating system, which is polluted and hazardous for human health, **it is indispensable to install an automatic charging unit with a backflow preventer.**

The correct use of hydraulic backflow preventers is governed by the European reference standard EN 1717: 2000 ("Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow").



**BIM**  
bim.caleffi.com

**Automatic air vents**

**End plug for radiators with automatic air vent, AERCAL**

**Manual air vents**

**Drain cocks**

**Under-boiler deaerators, DISCALSLIM®**

**Deaerators, DISCAL®**

**Deaerators-dirt separators, DISCALDIRT®/ DISCALDIRTMAG®**

**Dirt separators with magnet, DIRTMAG®**

**Dirt separators in composite with magnet, DIRTMAG®**

**Dirt separators in composite with double magnet for high flow rates, DIRTMAGPRO®**

**Multifunction device in composite with dirt separator and strainer, DIRTMAGPLUS®**

**Composite under-boiler dirt separators with magnet, DIRTMAGSLIM®**

**Under-boiler dirt separators strainer with magnet, DIRTMAGMINI®**

**Chemical additives**

**Semi-automatic self-cleaning magnetic filter CALEFFI XF**

**Under-boiler magnetic filter, CALEFFI XS®**

**Under-boiler polyphosphate dispenser CALEFFI XP**

**Automatic water treatment unit**

**Softening and demineralisation cartridges**

**Self-cleaning dirt separator filter with magnet, DIRTMAGCLEAN®**

## AUTOMATIC AIR VENTS



### 501 MAXCAL

tech. broch. 01031

Automatic air vent for heating, cooling and refrigeration. High discharge capacity. Brass body and cover, stainless steel internal components. Max. working pressure: 16 bar. Max. discharge pressure: 6 bar. Temperature range: -20–120 °C.



Code

501500 3/4" F x 3/8" F



1 5



### 5020 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. Chrome plated. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120 °C.



Code

502031 3/8" M



10 50

502041 1/2" M

10 50



### 551 DISCALAIR®

tech. broch. 01124

High performance automatic air vent. Brass body. **Female connection.** Max. working pressure: 10 bar. Max. discharge pressure: 10 bar. Temperature range: 0–110 °C.



Code

551004 1/2"



1 10



### 5020 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. Chrome plated. With hygroscopic safety cap. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120 °C.



Code

502051 3/4" M



2 50

502061 1" M

2 50



### 5020 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120 °C.



Code

502030 3/8" M



10 50

502040 1/2" M

10 50



### 5021 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. With automatic shut-off cock. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 110 °C.



Code

502130 3/8" M



10 100

502140 1/2" M

10 100



### 5020 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. With hygroscopic safety cap. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 120 °C.



Code

502050 3/4" M



2 50

502060 1" M

2 50



### 5021 MINICAL

tech. broch. 01054

Automatic air vent. In hot-stamped brass. Chrome plated. With automatic shut-off cock. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 110 °C.



Code

502131 3/8" M



10 100

502141 1/2" M

10 100

## AUTOMATIC AIR VENTS



### 5021 MINICAL

tech. broch. 01054

Automatic air vent.  
In hot-stamped brass.  
Chrome plated.  
With automatic shut-off cock and  
hygroscopic safety cap.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 2,5 bar.  
Max. working temperature: 110 °C.



Code

|        |        |    |     |
|--------|--------|----|-----|
| 502132 | 3/8" M | 10 | 100 |
| 502142 | 1/2" M | 10 | 100 |



NEW

### 5021 MINICAL®

tech. broch. 01054

Automatic air vent.  
With automatic shut-off cock  
and anti-vacuum cap.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 2,5 bar.  
Max. working temperature: 110 °C.

Code

|        |        |   |    |
|--------|--------|---|----|
| 502133 | 3/8" M | 1 | 10 |
|--------|--------|---|----|



### 5022 VALCAL

tech. broch. 01054

Automatic air vent.  
In hot-stamped brass.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 4 bar.  
Max. working temperature: 120 °C.

Code

|        |        |   |    |
|--------|--------|---|----|
| 502221 | 1/4" M | 1 | 25 |
| 502231 | 3/8" M | 1 | 25 |
| 502241 | 1/2" M | 1 | 25 |



### 5024 ROBICAL

tech. broch. 01033

Automatic air vent.  
In hot-stamped brass.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 4 bar.  
Max. working temperature: 115 °C.



Code

|        |        |     |    |
|--------|--------|-----|----|
| 502420 | 1/4" M | 112 | -  |
| 502430 | 3/8" M | 1   | 50 |



### 5025 ROBICAL

tech. broch. 01033

Automatic air vent.  
In hot-stamped brass.  
With automatic shut-off cock.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 4 bar.  
Max. working temperature: 110 °C.



Code

|        |        |    |     |
|--------|--------|----|-----|
| 502533 | 3/8" M | 10 | 100 |
| 502543 | 1/2" M | 10 | 100 |



### 5026 ROBICAL

tech. broch. 01033

Automatic air vent.  
In hot-stamped brass.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 6 bar.  
Max. working temperature: 115 °C.



Code

|        |        |                     |        |
|--------|--------|---------------------|--------|
| 502630 | 3/8" M | 10                  | 50     |
| 502640 | 1/2" M | Without O-Ring seal | 10 100 |
| 502641 | 3/8" M | Chrome plated       | 10 100 |



### 5027 ROBICAL

tech. broch. 01033

Automatic air vent.  
In hot-stamped brass.  
With automatic shut-off cock.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 6 bar.  
Max. working temperature: 110 C.



Code

|        |        |    |     |
|--------|--------|----|-----|
| 502730 | 3/8" M | 10 | 100 |
|--------|--------|----|-----|

## END PLUG FOR RADIATORS WITH AUTOMATIC AIR VENT



### 507 AERCAL

tech. broch. 01032

End plug for radiators with automatic air vent.  
In hot-stamped brass.  
Chrome plated.  
With hygroscopic safety cap.  
With rubber seal.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 6 bar.  
Max. working temperature: 100 °C.

Code

| 507611 | 1" M right     | 1 | 25 |
|--------|----------------|---|----|
| 507621 | 1" M left      | 1 | 25 |
| 507711 | 1 1/4" M right | 1 | 25 |
| 507721 | 1 1/4" M left  | 1 | 25 |



### 504 AERCAL

tech. broch. 01055

Automatic air vent for radiators.  
In hot-stamped brass.  
Chrome plated.  
With hygroscopic safety cap.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 2,5 bar.  
Max. working temperature: 100 °C.

Code

| 504401 | 1/2" M     | 1 | 25 |
|--------|------------|---|----|
| 504501 | 3/4" M     | 1 | 25 |
| 504611 | 1" M right | 1 | 25 |
| 504621 | 1" M left  | 1 | 25 |

## ACCESSORIES



### 561

tech. broch. 01054

Automatic shut-off cock.  
For automatic air vents 502. series.  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 110 °C.

Code

| 561230 | 1/4" x 3/8" M                             | 50 | 500 |
|--------|---|----|-----|
| 561300 | 3/8" x 3/8" M                             | 10 | -   |
| 561340 | 3/8" x 1/2" M                             | 10 | -   |
| 561400 | 1/2" x 1/2" M without PTFE seal on thread | 10 | -   |



### R59681 AQUASTOP

tech. broch. 01054

Hygroscopic safety cap.  
For automatic air vents 5020 and 5021 series.

Code

| R59681 |  | 1 | - |
|--------|--|---|---|



### 5620 AQUASTOP

tech. broch. 01054

Hygroscopic safety cap.  
For automatic air vents 5020, 5021, 5022 and 504 series.  
Chrome plated.

Code

| 562000 |  | 50 | - |
|--------|--|----|---|



### 561

tech. broch. 01054

Automatic shut-off cock.  
For automatic air vents 5020 and 5022 series.  
Chrome plated.  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 110 °C.

Code

| 561301 | 3/8" x 3/8" M                             | 10 | - |
|--------|---|----|---|
| 561401 | 1/2" x 1/2" M without PTFE seal on thread | 10 | - |



### 5621

tech. broch. 01054

Anti-vacuum cap.  
For automatic air vents 5020, 5021 and 5022 series.

Code

| 562100 |  | 100 | - |
|--------|--|-----|---|



### R59720 AQUASTOP

tech. broch. 01032

Hygroscopic safety cap.  
For end plugs 507 series.  
Chrome plated.

Code

| R59720 |  | 1 | - |
|--------|--|---|---|



### 5622

tech. broch. 01033

Anti-vacuum cap.  
For automatic air vents 5026 and 5027 series.

Code

| 562200 |  | 100 | - |
|--------|--|-----|---|



## MANUAL AIR VENTS



### 505

tech. broch. 01056

Manual air vent for radiators.  
Chrome plated.  
White POM (acetal resin) knob.  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

Code

|        |        |    |     |
|--------|--------|----|-----|
| 505111 | 1/8" M | 50 | –   |
| 505121 | 1/4" M | 50 | 500 |
| 505131 | 3/8" M | 50 | 500 |



### 5055

tech. broch. 01056

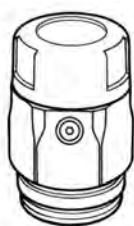
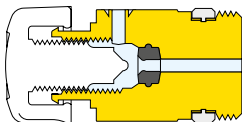
Manual air vent for radiators.  
Rubber seal.  
Chrome plated.  
White POM (acetal resin) knob.  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
PATENT.

Code

|        |        |    |     |
|--------|--------|----|-----|
| 505511 | 1/8" M | 10 | 100 |
| 505521 | 1/4" M | 10 | 100 |
| 505531 | 3/8" M | 10 | 100 |
| 505541 | 1/2" M | 10 | 50  |

#### Manual air vent for radiators 5055 series

The identifying detail of this valve is an internal seal in a special elastic material which provides a tight seal in relation to limited tightening of the knob and possible temperature changes.



The knob of the valve is shaped so as to be similar in appearance to Caleffi thermostatic valve heads, which enhances the uniformity of the radiator component range.

For all the radiator air vents, the knob should be tightened with the system still cold.

### 5054

tech. broch. 01056

Manual air vent for radiators.  
Chrome plated.  
White POM (acetal resin) knob.  
**Adjustable outlet.**  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

Code

|        |        |    |   |
|--------|--------|----|---|
| 505411 | 1/8" M | 50 | – |
| 505421 | 1/4" M | 50 | – |
| 505431 | 3/8" M | 50 | – |
| 505441 | 1/2" M | 50 | – |



### 5080

tech. broch. 01056

Automatic hygroscopic air vent for radiators. Chrome plated.  
White POM (acetal resin) knob.  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

Code

|        |        |    |   |
|--------|--------|----|---|
| 508011 | 1/8" M | 25 | – |
| 508021 | 1/4" M | 25 | – |
| 508031 | 3/8" M | 25 | – |
| 508041 | 1/2" M | 25 | – |



### 5081

tech. broch. 01056

Spare hygroscopic cartridge for 5080 series.

Code

|        |          |    |   |
|--------|----------|----|---|
| 508100 | 12 p.1,5 | 25 | – |
|--------|----------|----|---|

## DRAIN COCKS



### 337

Drain cock.  
**Adjustable outlet.**  
PTFE seal on thread.  
Max. working pressure: 6 bar.  
Max. working temperature: 85 °C.  
Medium: water, glycol solutions.  
Max. percentage of glycol: 30 %.



Code

|        |      |    |     |
|--------|------|----|-----|
| 337121 | 1/4" | 50 | 200 |
| 337131 | 3/8" | 50 | 200 |



### 337

Drain cock with metal seal.  
**Adjustable outlet.**  
PTFE seal on thread.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



Code

|        |      |    |     |
|--------|------|----|-----|
| 337221 | 1/4" | 80 | 400 |
| 337231 | 3/8" | 50 | 250 |



### 560

tech. broch. 01056

Drain cock for radiators and wall-mounted boilers.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

Code

|        |                      |    |   |
|--------|----------------------|----|---|
| 560421 | 1/2"                 | 10 | – |
| 560000 | extractor drain hose | 25 | – |

♦ One extractor drain hose code 560000 is included in each 10-item package

## UNDER-BOILER DEAERATOR



### 551 DISCALSLIM®

tech. broch. 01337

Deaerator. Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
With hygroscopic safety cap.  
Max. working pressure: 3 bar.  
Max. working temperature: 110 °C.  
PATENT PENDING.

Code

|        |        |   |    |
|--------|--------|---|----|
| 551805 | 3/4" F | 1 | 10 |
| 551806 | 1" F   | 1 | 10 |



### 551 DISCALSLIM®

tech. broch. 01337

Deaerator. Technopolymer body.  
**Ø 18 and Ø 22 mm with compression ends.**  
**Adjustable for horizontal and vertical pipes.**  
With hygroscopic safety cap.  
Max. working pressure: 3 bar.  
Max. working temperature: 110 °C.  
PATENT PENDING.

Code

|        |      |   |    |
|--------|------|---|----|
| 551801 | Ø 18 | 1 | 10 |
| 551802 | Ø 22 | 1 | 10 |



Insulation for deaerators  
DISCALSLIM® 551 series.

Code

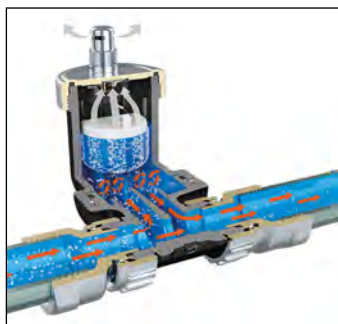
|           |  |   |   |
|-----------|--|---|---|
| CBN551805 |  | 1 | - |
|-----------|--|---|---|

### Operating principle

Thanks to its special internal configuration, DISCALSLIM® has a very low pressure drop.

The internal shape deviates a part of flow in the deaeration chamber. In the above mentioned chamber the flow slows down and is subdivided by the fins present in secondary chambers which cause appropriate turbulences. Thanks to these mini-vortices, the micro bubbles of air present

in the flow are separated, collected in the lower part of the chamber, and after aggregating into larger bubbles, they rise upwards through the drain ducts located aside the float. Once the top of the valve is reached, the aggregate bubbles push the float downwards, causing the air vent to open and therefore to discharge the air.



## DEAERATOR



### 551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.  
**Female and male connections and Ø 22 and Ø 28 mm with compression ends.**  
**Adjustable for horizontal and vertical pipes.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0-110 °C.

### Threaded connections

Code

|        |        |   |   |
|--------|--------|---|---|
| 551705 | 3/4" F | 1 | 5 |
| 551706 | 1" F   | 1 | 5 |
| 551716 | 1" M   | 1 | 5 |

### Compression ends

Code

|        |      |   |   |
|--------|------|---|---|
| 551702 | Ø 22 | 1 | 5 |
| 551703 | Ø 28 | 1 | 5 |



### 551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.  
**Female connections and Ø 22 mm with compression ends.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0-110 °C.

### Threaded connections

Code

|        |        |   |   |
|--------|--------|---|---|
| 551003 | 3/4" F | 1 | 5 |
|--------|--------|---|---|

### Compression ends

Code

|        |      |   |   |
|--------|------|---|---|
| 551002 | Ø 22 | 1 | 5 |
|--------|------|---|---|



### 551 DISCAL®

tech. broch. 01060

Deaerator. Brass body.  
**Female connections.**  
**With drain.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0-110 °C.

Code

|        |          |   |   |
|--------|----------|---|---|
| 551005 | 3/4" F   | 1 | 6 |
| 551006 | 1" F     | 1 | 6 |
| 551007 | 1 1/4" F | 1 | 6 |
| 551008 | 1 1/2" F | 1 | 6 |
| 551009 | 2" F     | 1 | - |

Insulation for deaerators  
DISCAL® 551 series.

Code

Use

|           |               |   |   |
|-----------|---------------|---|---|
| CBN551005 | 551005-551006 | 1 | - |
| CBN551007 | 551007-551008 | 1 | - |
| CBN551009 | 551009        | 1 | - |

## DEAERATOR



### 551 DISCAL®

tech. broch. 01060

Deaerator.  
Epoxy resin coated steel body.  
**Flanged connections PN 16.**  
To be coupled with flat counterflanges EN 1092-1.  
**With insulation.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range:  
0–105 °C (DN 50–DN 100),  
0–100 °C (DN 125–DN 150),  
0–110 °C (without insulation).

Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>551052</b> | DN 50  | 1 | – |
| <b>551062</b> | DN 65  | 1 | – |
| <b>551082</b> | DN 80  | 1 | – |
| <b>551102</b> | DN 100 | 1 | – |
| <b>551122</b> | DN 125 | 1 | – |
| <b>551152</b> | DN 150 | 1 | – |



### 551 DISCAL®

tech. broch. 01060

Deaerator.  
Epoxy resin coated steel body.  
**Flanged connections PN 10.**  
To be coupled with flat counterflanges EN 1092-1.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range:  
0–110 °C.  
Temperature probe connection: 1/2" F.

Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>551200</b> | DN 200 | 1 | – |
| <b>551250</b> | DN 250 | 1 | – |
| <b>551300</b> | DN 300 | 1 | – |



### 551 DISCAL®

tech. broch. 01060

Deaerator.  
Epoxy resin coated steel body.  
**Weld ends.**  
**With insulation.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range:  
0–105 °C (DN 50–DN 100),  
0–100 °C (DN 125–DN 150),  
0–110 °C (without insulation).

Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>551053</b> | DN 50  | 1 | – |
| <b>551063</b> | DN 65  | 1 | – |
| <b>551083</b> | DN 80  | 1 | – |
| <b>551103</b> | DN 100 | 1 | – |
| <b>551123</b> | DN 125 | 1 | – |
| <b>551153</b> | DN 150 | 1 | – |



## DEAERATOR-DIRT SEPARATOR





### 546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.  
Brass body.  
**Female connections and Ø 22 mm with compression ends.**  
Drain cock with hose connection.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0–110 °C.  
Particle separation rating down to 5 µm.

#### Threaded connections



| Code   |        |  |  |
|--------|--------|---|---|
| 546005 | 3/4"   | 1   | –   |
| 546006 | 1"     | 1   | 5   |
| 546007 | 1 1/4" | 1   | –   |

#### Compression ends

| Code   |      |  |  |
|--------|------|---|---|
| 546002 | Ø 22 | 1   | –   |



Insulation  
for deaerators-dirt separators 546 series.



| Code      | Use                  |  |  |
|-----------|----------------------|---|---|
| CBN546002 | 546002-546005-546006 | 1   | –   |
| CBN546007 | 546007               | 1   | –   |



### 546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.  
Epoxy resin coated steel body.  
**Flanged connections PN 16.**  
To be coupled with flat counterflanges EN 1092-1.  
**With insulation.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range:  
0–105 °C (DN 50–DN 100),  
0–100 °C (DN 125–DN 150),  
0–110 °C (without insulation).  
Particle separation rating down to 5 µm.



| Code   |        |  |  |
|--------|--------|---|---|
| 546052 | DN 50  | 1   | –   |
| 546062 | DN 65  | 1   | –   |
| 546082 | DN 80  | 1   | –   |
| 546102 | DN 100 | 1   | –   |
| 546122 | DN 125 | 1   | –   |
| 546152 | DN 150 | 1   | –   |



### 546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.  
Epoxy resin coated steel body.  
**Weld ends.**  
**With insulation.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range:  
0–105 °C (DN 50–DN 100),  
0–100 °C (DN 125–DN 150),  
0–110 °C (without insulation).  
Particle separation rating down to 5 µm.



| Code   |        |  |  |
|--------|--------|---|---|
| 546053 | DN 50  | 1   | –   |
| 546063 | DN 65  | 1   | –   |
| 546083 | DN 80  | 1   | –   |
| 546103 | DN 100 | 1   | –   |
| 546123 | DN 125 | 1   | –   |
| 546153 | DN 150 | 1   | –   |



### 546 DISCALDIRT®

tech. broch. 01123

Deaerator-dirt separator.  
Epoxy resin coated steel body.  
**Flanged connections PN 16.**  
To be coupled with flat counterflanges EN 1092-1.  
**With insulation.**  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0–110 °C.  
Particle separation rating down to 5 µm.

| Code   |        |  |  |
|--------|--------|---|---|
| 546200 | DN 200 | 1   | –   |
| 546250 | DN 250 | 1   | –   |
| 546300 | DN 300 | 1   | –   |



## DEAERATORS-DIRT SEPARATORS WITH MAGNET





NEW

### 5464 DISCALDIRTMAG



Deaerator-dirt separator **with magnet**.  
Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
With hygroscopic safety cap.  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

#### Threaded connections

| Code   |      |  |  |
|--------|------|---|---|
| 546405 | 3/4" | 1   | 5   |
| 546406 | 1"   | 1   | 5   |

#### Compression ends

| Code   |      |  |  |
|--------|------|---|---|
| 546402 | Ø 22 | 1   | –   |
| 546403 | Ø 28 | 1   | –   |





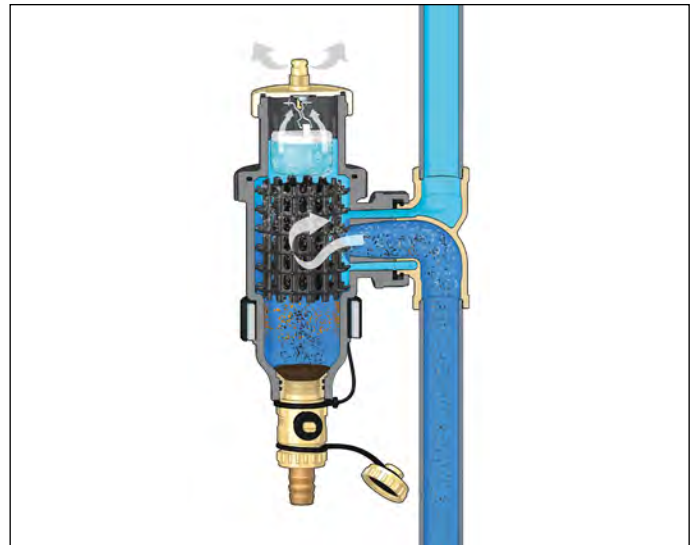
### 5461 DISCALDIRTMAG

tech. broch. 01123

Deaerator-dirt separator **with magnet**.  
Brass body.  
**Female connections.**  
Drain cock with hose connection.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0–110 °C.  
Particle separation rating down to 5 µm.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   |        |  |  |
|--------|--------|---|---|
| 546105 | 3/4"   | 1   | –   |
| 546106 | 1"     | 1   | –   |
| 546107 | 1 1/4" | 1   | –   |





### 5461 DISCALDIRTMAG

tech. broch. 01123

Deaerator-dirt separator **with magnet**.  
Epoxy resin coated steel body.  
**Female union connections.**  
**With insulation.**  
Drain cock with hose connection.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
Temperature range: 0–100 °C.  
Particle separation rating down to 5 µm.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   |        |  |  |
|--------|--------|---|---|
| 546118 | 1 1/2" | 1   | –   |
| 546119 | 2"     | 1   | –   |





#### Operating principle

The deaerator-dirt separator uses the combined action of several physical principles. The active part consists of an assembly of concentric metal mesh surfaces. These elements create the whirling movement required to facilitate the release of micro-bubbles and their adhesion to these surfaces. The bubbles, fusing with each other, increase in volume until the hydrostatic thrust is such as to overcome the adhesion force to the structure. They rise towards the top of the unit from which they are released through a float-operated automatic air release valve. The impurities in the water, colliding with the metal surfaces of the internal element, are separated out and fall to the bottom of the valve body.













## UNDER-BOILER

| DIRT SEPARATOR  |   | DIRT SEPARATOR WITH STRAINER  |  | MAGNETIC FILTER   |   |
|---|---|---|--|---|---|
|  | <b>DIRTMAGSLIM®</b><br><b>5451 - 5452 - 5454</b><br>3/4" M x 3/4" F<br>3/4" M x Ø18<br>3/4" M x Ø22 |  | <b>DIRTMAGMINI®</b><br><b>5450</b><br>3/4" F captive nut x 3/4" M        |  | <b>CALEFFI XS®</b><br><b>5459</b><br>3/4" M X 3/4 F captive nut |
|   |   |  | <b>DIRTMAGMINI®</b><br><b>5450</b><br><i>with shut-off valves</i><br>Ø22 |   |   |

## SMALL - MEDIUM SYSTEMS

| BRASS<br>DIRT SEPARATOR   |   | COMPOSITE<br>DIRT SEPARATOR   |  | COMPOSITE<br>DIRT SEPARATOR<br>WITH STRAINER  |  |
|---|---|---|--|---|--|
|  | <b>5463<br/>DIRTMAG®</b><br><br>3/4" – 2"                     | STANDARD FLOW RATE  |  | MANUAL CLEANING   |  |
|   |   |    | <b>5453<br/>DIRTMAG®</b><br><br>3/4" – 1"<br>Ø22 - Ø28                       |  | <b>5453<br/>DIRTMAGPLUS®</b><br><br>3/4" – 1 1/4"<br>Ø22 - Ø28 |
|   |   |    | <b>5453<br/>DIRTMAG®</b><br><i>with shut-off valves</i><br><br>3/4" – 1 1/4" |   |  |
|   |   | HIGH FLOW RATE  |  | SEMI-AUTOMATIC CLEANING   |  |
|  | <b>5457<br/>DIRTMAGPRO®</b><br><br>3/4" – 1 1/4"<br>Ø22 - Ø28 |  | <b>577<br/>CALEFFI XF</b><br><br>3/4" – 2"<br>Ø22 - Ø28                      |   |  |

## LARGE SYSTEMS

| STEEL DIRT SEPARATOR  |  | DIRT SEPARATOR FILTER WITH MAGNET   |                                     |
|---|--|---|-------------------------------------|
|  | <b>DIRTMAG®</b><br><b>5466</b><br>DN 50-DN 300 |  | <b>DIRTMAGCLEAN®</b><br><b>5790</b> |

## DIRT SEPARATORS WITH MAGNET



### 5463 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**.  
Brass body.

**Female connections.**

Drain cock with hose connection.

Top connection with plug.

**With insulation.**

Max. working pressure: 10 bar.

Temperature range: 0–110 °C.

Particle separation rating down to 5 µm.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

Code

|        |                           |   |   |
|--------|---------------------------|---|---|
| 546315 | 3/4"                      | 1 | – |
| 546316 | 1"                        | 1 | 8 |
| 546317 | 1 1/4"                    | 1 | – |
| 546318 | 1 1/2"                    | 1 | – |
| 546319 | 2"                        | 1 | – |
| 546305 | 3/4" without insulation   | 1 | 6 |
| 546306 | 1" without insulation     | 1 | 6 |
| 546307 | 1 1/4" without insulation | 1 | 5 |
| 546308 | 1 1/2" without insulation | 1 | 5 |
| 546309 | 2" without insulation     | 1 | 5 |



### 5468 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**  
for vertical pipes.

Brass body.

**Female connections and**

**Ø 22 and Ø 28 mm with compression ends.**

Drain cock with hose connection.

Max. working pressure: 10 bar.

Temperature range: 0–110 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

#### Threaded connections

Code

|        |      |   |   |
|--------|------|---|---|
| 546805 | 3/4" | 1 | 5 |
| 546806 | 1"   | 1 | 5 |

#### Compression ends

Code

|        |      |   |   |
|--------|------|---|---|
| 546802 | Ø 22 | 1 | 5 |
| 546803 | Ø 28 | 1 | 5 |



### 5466 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**.  
Epoxy resin coated steel body.

**Flanged connections PN 16.**

To be coupled with flat counterflanges  
EN 1092-1.

**With insulation.**

Max. working pressure: 10 bar.

Temperature range: 0–100 °C.

Particle separation rating down to 5 µm.



### 5466 DIRTMAG®

tech. broch. 01137

Dirt separator **with magnet**.  
Epoxy resin coated steel body.

**Flanged connections PN 10.**

To be coupled with flat  
counterflanges EN 1092-1.

Max. working pressure: 10 bar.

Temperature range: 0–100 °C.

Temperature probe connection: 1/2" F.

Particle separation rating down to 5 µm.

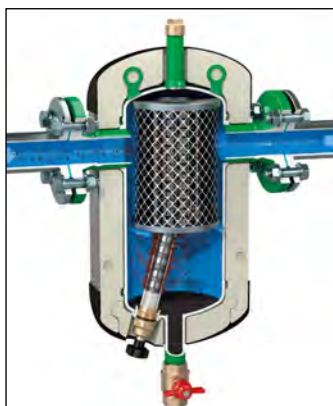
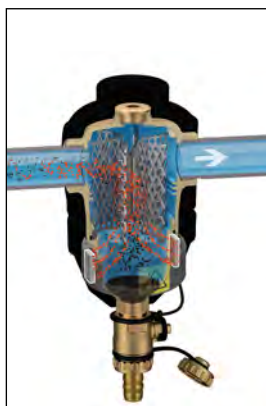
Code

|        |        |   |   |
|--------|--------|---|---|
| 546620 | DN 200 | 1 | – |
| 546625 | DN 250 | 1 | – |
| 546630 | DN 300 | 1 | – |

#### Operating principle

The magnetic dirt separator, in addition to the traditional dirt separation function, is equipped with a patented device to collect ferrous impurities contained within the system water. For the threaded version a specific ring, featuring two slots for housing the magnets, is placed outside the body in the part for collecting the impurities while, for the flanged version, the magnet is inserted in a specific pocket positioned inside the body, extractable for cleaning from magnetic dirt particles.

The ferrous particles are trapped in this way in the collection zone, thus avoiding they return in circulation.



## DIRT SEPARATOR IN COMPOSITE WITH MAGNET



### 5453 DIRTMAG®

tech. broch. 01240

Dirt separator **with magnet**.  
Technopolymer body.  
**Female connections** and  
**Ø 22 and Ø 28 mm with compression ends**.  
**Adjustable for horizontal  
and vertical pipes**.  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.



#### Threaded connections

| Code   |                      | Max<br>recommended<br>flow rate<br>[m³/h] |   |   |
|--------|----------------------|---|---|---|
| 545305 | 3/4"                 | 1,3                                       | 1 | 5 |
| 545306 | 1"                   | 1,3                                       | 1 | 5 |
| 545325 | 3/4" with insulation | 1,3                                       | 1 | 5 |
| 545326 | 1" with insulation   | 1,3                                       | 1 | 5 |

#### Compression ends

| Code   |      |   |   |
|--------|------|---|---|
| 545302 | Ø 22 | 1 | 5 |
| 545303 | Ø 28 | 1 | 5 |



Insulation  
for dirt separators 5453 series.

| Code      | Use        |   |   |
|-----------|------------|---|---|
| CBN545305 | 545305/306 | 1 | – |



### 5453 DIRTMAG®

tech. broch. 01240

Dirt separator with **shut-off valves and magnet**.  
Technopolymer body.  
**Female connections**.  
**Adjustable for horizontal, vertical  
or 45° pipes**.  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.



| Code   |        | Max<br>recommended<br>flow rate<br>[m³/h] |   |   |
|--------|--------|---|---|---|
| 545345 | 3/4"   | 1,3                                       | 1 | 5 |
| 545346 | 1"     | 1,3                                       | 1 | 5 |
| 545347 | 1 1/4" | 2,1                                       | 1 | 5 |



Insulation  
for dirt separators 5453 series.

| Code      | Use            |   |   |
|-----------|----------------|---|---|
| CBN545345 | 545345/346/347 | 1 | – |



### Protection pack

Package consisting of:  
- dirt separator with **shut-off valves  
and magnet**;  
- C3 CLEANER;  
- C1 INHIBITOR.

#### Threaded connections

| Code      |                          |   |   |
|-----------|--------------------------|---|---|
| KIT545345 | with dirt separator 3/4" | 1 | – |
| KIT545346 | with dirt separator 1"   | 1 | – |

#### Compression ends

| Code      | Conn.                    |   |   |
|-----------|--------------------------|---|---|
| KIT545342 | with dirt separator Ø 22 | 1 | – |



#### Additives dosing

The dirt separator can be used as  
an access point to inject chemical  
additives into the circuit for the  
cleaning and the protection of  
the system.

## DIRT SEPARATOR WITH DOUBLE MAGNET FOR HIGH FLOW RATES

NEW

5457

tech. broch. 01388

### DIRTMAGPRO®

Dirt separator with double magnet

For high flow rates.

Technopolymer body.

Female connections.

Adjustable for horizontal and vertical pipes.

Drain cock with hose connection.

Max. working pressure: 3 bar.

Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Insulation  
for dirt separators 5457 series.

Code

Use

CBN545305



545705-545706-545702-545703





1

–

### Threaded connections

| Code   |        | Max<br>recommended<br>flow rate<br>[m³/h] |  |  |
|--------|--------|---|---|---|
| 545705 | 3/4"   | 1,6                                       | 1   | 5   |
| 545706 | 1"     | 1,8                                       | 1   | 5   |
| 545707 | 1 1/4" | 2,6                                       | 1   | 5   |

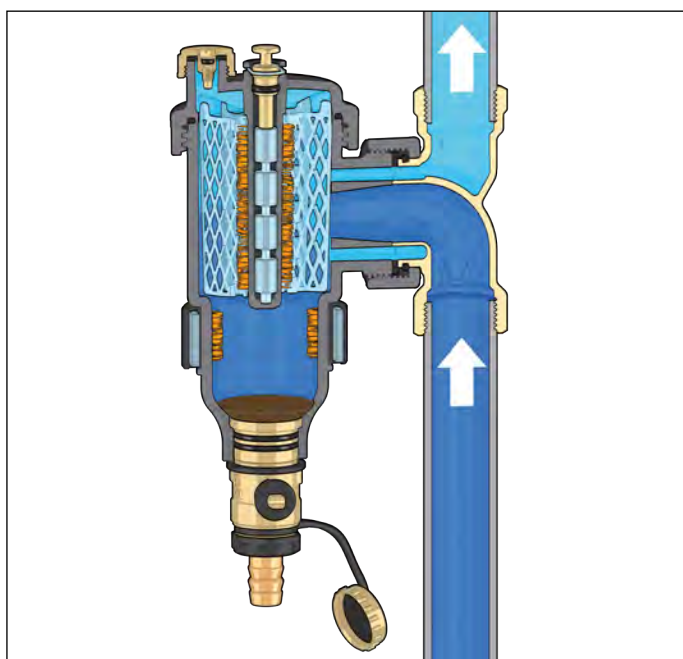
### Compression ends

| Code   |      | Max<br>recommended<br>flow rate<br>[m³/h] |  |  |
|--------|------|---|--|--|
| 545702 | Ø 22 | 1,6                                       | 1  | 5  |
| 545703 | Ø 28 | 1,8                                       | 1  | 5  |

### Operating principle

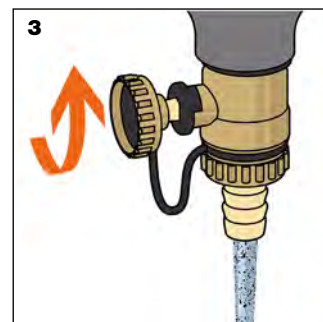
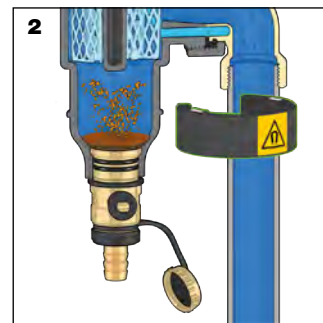
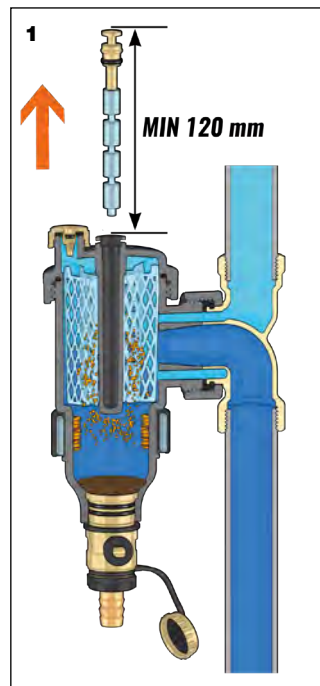
The impurities circulating within the closed circuits of systems, consisting of some sand and dirt particles but mostly ferrous material such as magnetite, are collected in a large collection chamber that does not require frequent cleaning.

The ferrous impurities are captured by the removable magnetic ring and the four magnets positioned in the centre of the flow. These magnets allow greater velocity of the medium, up to 1.6 m/s and, as a result, help to achieve a higher flow rate. Made using a composite material specifically designed for use in air-conditioning systems, this dirt separator is especially versatile as it can be installed on both horizontal and vertical pipes.



### Sludge drain

Switch off the circulator, remove the stem holding the magnets from the top cover (1), remove the ring in which the magnets are housed (2) and drain the impurities, using the special key provided (3).





## SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

NEW

### 577 CALEFFI XF

tech. broch. 01391



Semi-automatic self-cleaning magnetic filter.  
Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
Mesh sized Ø = 0,16 mm.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

#### Threaded connections

| Code   |        |   |   |
|--------|--------|---|---|
| 577500 | 3/4"   | 1 | – |
| 577600 | 1"     | 1 | – |
| 577700 | 1 1/4" | 1 | – |

#### Compression ends

| Code   |      |   |   |
|--------|------|---|---|
| 577200 | Ø 22 | 1 | – |
| 577300 | Ø 28 | 1 | – |



Insulation for semi-automatic self-cleaning magnetic filter.

| Code      | Use                    |   |   |
|-----------|------------------------|---|---|
| CBN577500 | 577500/600/700/200/300 | 1 | – |

NEW

### 577 CALEFFI XF

tech. broch. 01391



Semi-automatic self-cleaning magnetic filter **complete with by-pass**.  
Technopolymer body.  
**Female connections.**  
**Adjustable for horizontal and vertical pipes.**  
Drain cock with hose connection.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
Mesh sized Ø = 0,16 mm.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

Code

|        |        |   |   |
|--------|--------|---|---|
| 577800 | 1 1/2" | 1 | – |
| 577900 | 2"     | 1 | – |



Insulation for semi-automatic self-cleaning magnetic filter.

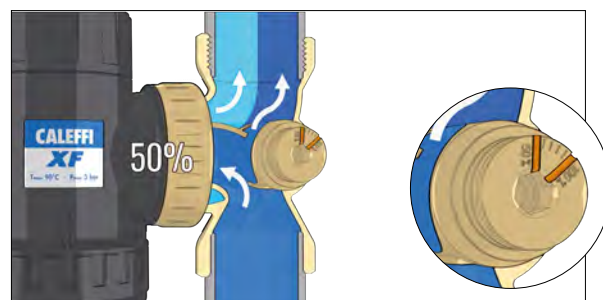
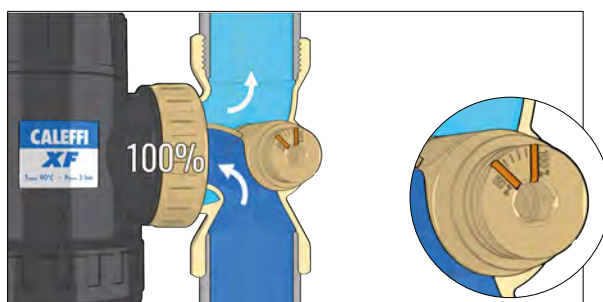
Code

Use

|           |            |   |   |
|-----------|------------|---|---|
| CBN577800 | 577800/900 | 1 | – |
|-----------|------------|---|---|

#### Adjustable by-pass

Sizes DN 40 (code 577800, 1 1/2") and DN 50 (code 577900, 2") are equipped with a by-pass that allows the limitation of the flow rate passing through the device by up to 50%, thereby increasing the Kv value.  
We recommend 100% filtration during filling and for the first weeks of system operation. Then, during the "maintenance" phase, the device can be set to function as a by-pass to achieve a higher Kv.

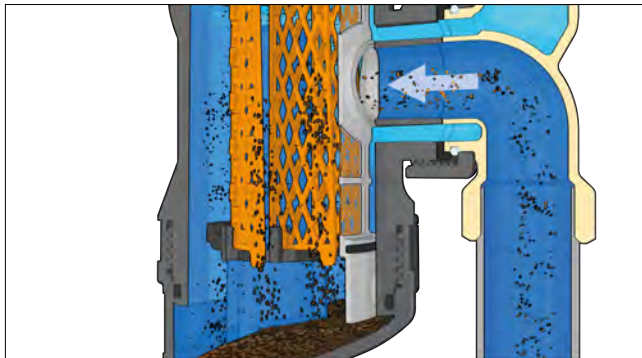




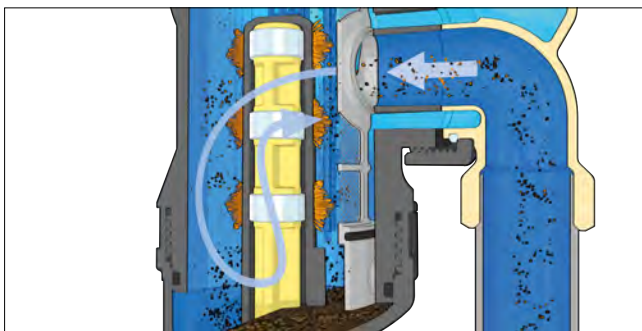
## SEMI-AUTOMATIC SELF-CLEANING MAGNETIC FILTER

### Operating principle

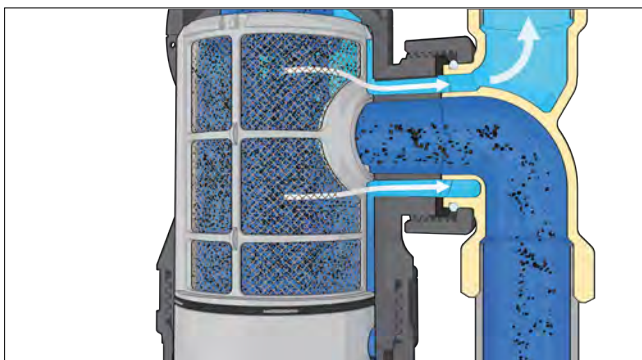
Water treatment in the system takes place in three separate stages:  
The water enters the device centrally and comes into contact with the internal element, which consists of a set of concentric mesh surfaces. On striking these surfaces the impurities in the water are separated out, dropping into the bottom of the body where they are collected.



A magnetic probe in the central zone captures the smallest particles of magnetite and ferrous impurities.



On exiting the treatment chamber, the medium passes through a filter, which mechanically blocks all remaining impurities in the medium. The filter captures impurities through the mechanical selection of particles according to size, using a special 160 µm metal filter mesh. The large surface area of the filter mesh makes it less susceptible to clogging.



### Dual filter mesh

The CALEFFI XF magnetic filter has two filtering devices:

1. An internal mesh element, consisting of a set of concentric surfaces. On striking these surfaces the impurities in the water are separated out, dropping into the bottom of the body where they are collected.
2. A metal filter with a large surface area at the outlet, which separates off the impurities by means of the mechanical selection of particles according to their size (160 µm).

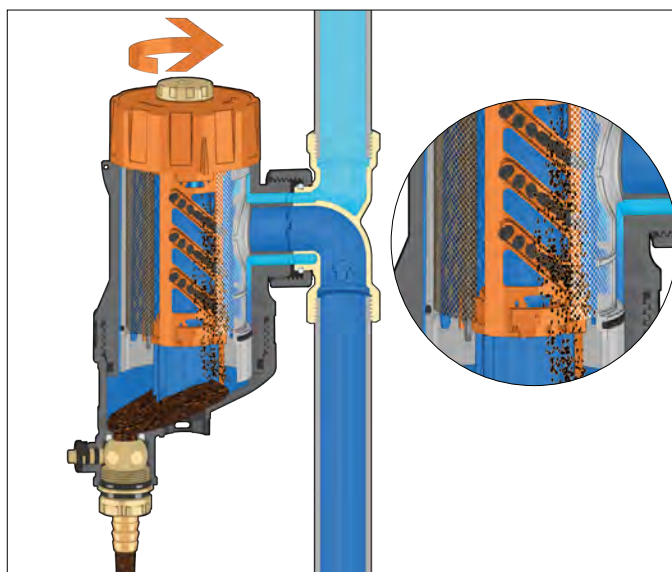


### Cleaning the filter mesh

No component disassembly is required to clean the CALEFFI XF magnetic filter. Simply:

1. Stop the flow by switching off the circulation pump.
2. Remove the magnet so the magnetic impurities attached to the central probe fall into the collection chamber.
3. Open the drain cock.
4. Turn the knob at the top of the device to clean the filter mesh using the internal brush mechanism.

This removes all the impurities captured by the filter.



## UNDER-BOILER MAGNETIC FILTER



### 5459 CALEFFI XS®

tech. broch. 01357

Under-boiler magnetic filter.  
Brass body. Chrome plated.  
Connections: 3/4" M x 3/4" F.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
PATENT PENDING.

Code

545900 3/4" M x 3/4" F captive nut



1 10



Connection fitting  
with nut and gasket.  
Chrome plated.

Code

F0001297 3/4" F x 3/4" F



1 -



Flushing kit and additives addition.

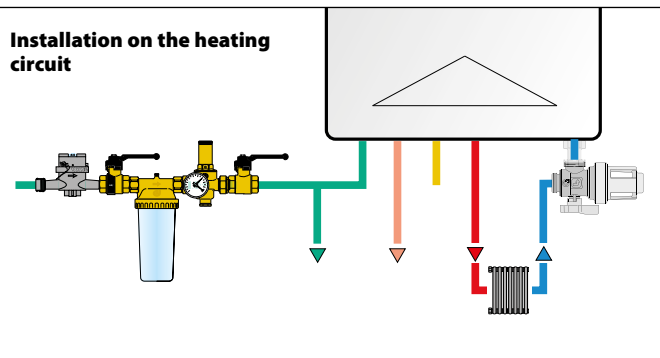
Code

F0001037



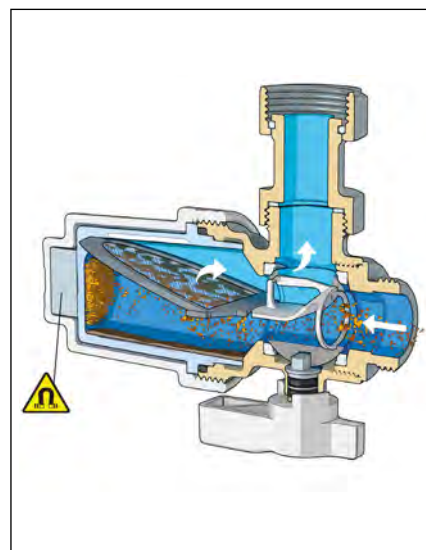
1 -

### Installation on the heating circuit

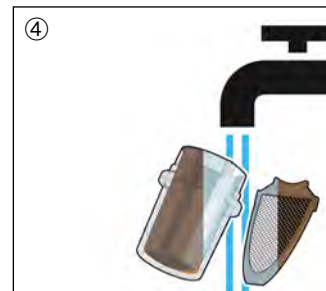
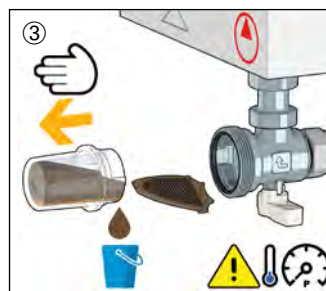
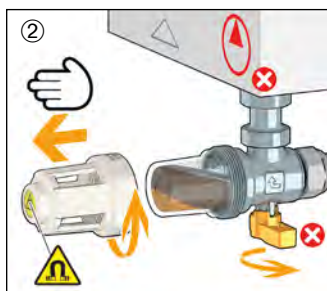
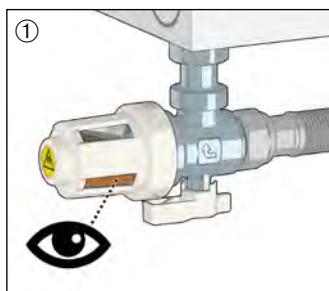


### Operating principle

The under-boiler magnetic filter mechanically separates the impurities in heating systems using a triple effect: a steel mesh strainer (mesh size Ø 0,80 mm) for light non-ferrous particles, a powerful neodymium magnet for the ferrous components, and a large calming chamber to collect the heavier particles. The chamber has transparent windows, allowing the user to check whether the internal elements need to be cleaned.



### Maintenance



### Protection pack

Package consisting of:  
- Under-boiler magnetic filter;  
- C3 FAST CLEANER;  
- C1 FAST INHIBITOR.

To be used with kit code F0001037



Code

KIT545900



1 -



## UNDER-BOILER POLYPHOSPHATE DISPENSER

NEW

### 5459 CALEFFI XP

tech. broch. 01375



Under-boiler polyphosphate dispenser.  
**For the treatment of potable water.**  
Brass body. Chrome plated.  
Connections: 1/2" M x 1/2" F captive nut.  
Max. working pressure: 6 bar.  
Working temperature range: 5–40 °C.  
Ambient temperature range: 40 °C.  
Maximum crystal refill contents: 140 g.  
Average crystal refill shelf life:  
35–40 m³ domestic hot water (\*)

Only use genuine refills code F0001503.  
Complete with polyphosphate crystal refill.  
PATENT PENDING.

(\*) data referring to water with an average hardness of 12°F, pH 7, temperature 20 °C and average domestic hot water usage.

Code

|        |                 |                        |   |   |
|--------|-----------------|------------------------|---|---|
| 545950 | 1/2" M x 1/2" F |                        | 1 | 5 |
| 545951 | 1/2" M x 1/2" F | without crystal refill |   |   |



Polyphosphate crystal refill.  
Complete with spare internal strainer.  
For dispenser code 545950, 545951.

Code

|          |       |  |   |    |
|----------|-------|--|---|----|
| F0001503 | 140 g |  | 1 | 10 |
|----------|-------|--|---|----|



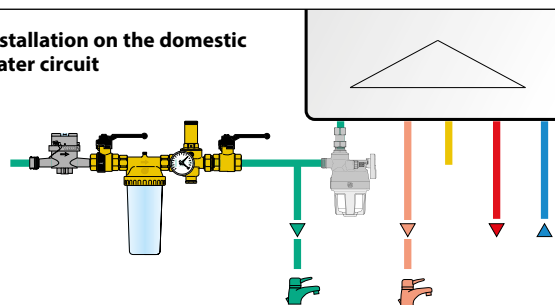
Insulation  
for polyphosphate dispenser 5459 series.

Code

|           |  |  |   |   |
|-----------|--|--|---|---|
| CBN545950 |  |  | 1 | - |
|-----------|--|--|---|---|

Check current national regulations for polyphosphate water treatment.

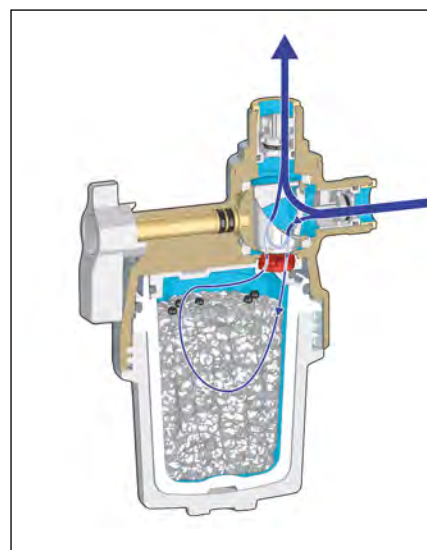
#### Installation on the domestic water circuit



#### Operating principle

The polyphosphates dispenser, installed directly at the domestic cold water inlet in the boiler, reduces the effects of limescale in the domestic hot water circuit.

The sodium and potassium polyphosphates create a shield which prevents the precipitation of calcium and magnesium and stops limescale deposits from forming. The dosage of polyphosphates in the water is proportional to the amount of cold water passing through the device.



#### Polyphosphate refill

Polyphosphate crystals are mixed with dark-coloured rubber granules, useful for checking the level of crystals directly through the device's transparent windows. One refill is sufficient to fill the dispenser completely. Refill the device when the dark granules can be seen on the bottom of the glass and the crystals are no longer visible.



NEW

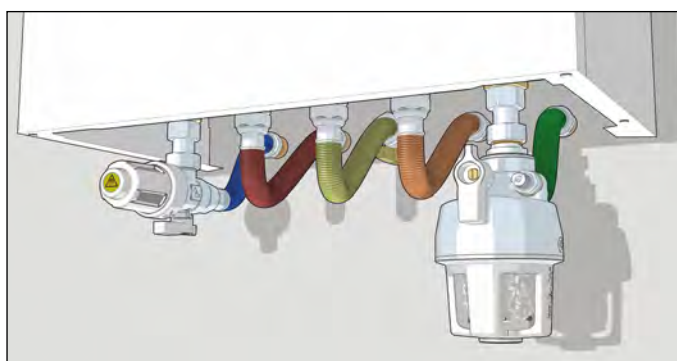
### Double X protection

Package consisting of:  
- Under-boiler magnetic filter;  
- Under-boiler polyphosphate dispenser.



Code

|         |  |  |   |   |
|---------|--|--|---|---|
| KIT5459 |  |  | 1 | - |
|---------|--|--|---|---|





## MULTIFUNCTION DEVICE IN COMPOSITE WITH DIRT SEPARATOR AND STRAINER



PCT  
INTERNATIONAL  
APPLICATION  
PENDING

### 5453 DIRTMAGPLUS®

tech. broch. 01258

Multifunction device with dirt separator and strainer. Specific for the complete cleaning of the hydraulic circuit, to protect continuously generator and components.

Technopolymer body.

Dirt separator with tecnopolimer internal element, **with magnet.**

Two inspectable strainers with stainless steel mesh: 1 for initial cleaning (blue colour) already installed, 1 for maintenance (grey colour) in package.

Shut-off valves with nuts, brass body.

**Female connections and Ø 22 and Ø 28 mm with compression ends.**



**Adjustable for horizontal, vertical or 45° pipes.**

Drain cock with hose connection.



Max. working pressure: 3 bar.

Temperature range: 0–90 °C.

#### Threaded connections



| Code          |        |  |  |
|---------------|--------|---|---|
| <b>545375</b> | 3/4"   | 1   | 5   |
| <b>545376</b> | 1"     | 1   | 5   |
| <b>545377</b> | 1 1/4" | 1   | 5   |

#### Compression ends

| Code          |      |  |  |
|---------------|------|---|---|
| <b>545372</b> | Ø 22 | 1   | 5   |
| <b>545373</b> | Ø 28 | 1   | 5   |



Accessory kit for circuit filling and flushing and strainer accessories for device DIRTMAGPLUS® 5453 series.

| Code             |                                       |  |  |
|------------------|---------------------------------------|---|---|
| <b>F49476</b>    | accessory kit                         | 1   | 10  |
| <b>F49474/BL</b> | first cleaning strainer (blue colour) | 1   | 10  |
| <b>F49474/GR</b> | maintenance strainer (grey colour)    | 1   | 10  |

#### Operating principle

The multifunction device is obtained by coupling a dirt separator and a cartridge strainer arranged in series.

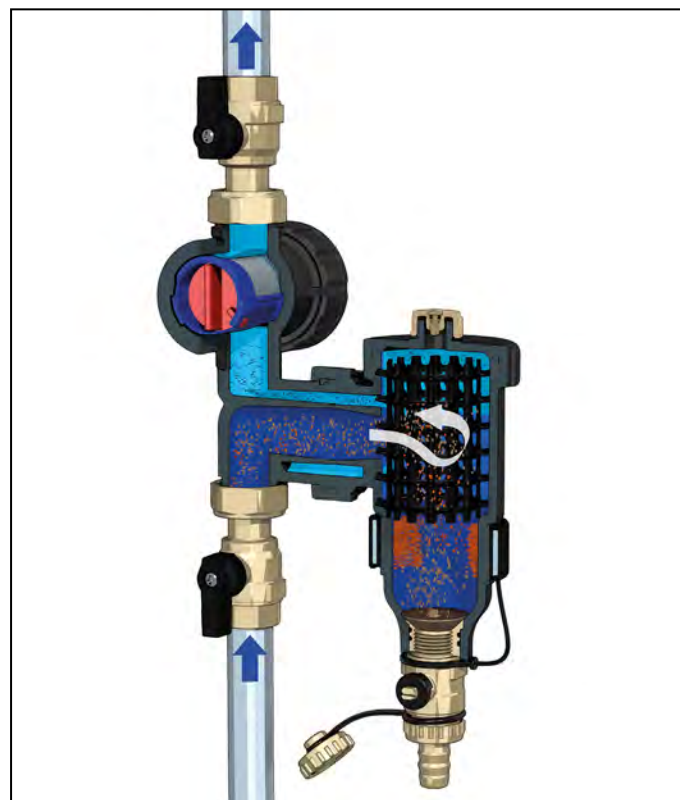
The water circulating in the system flows, in sequence, first through the dirt separator and then through the cartridge strainer.

The dirt separator separates the impurities contained in the water by means of the action of the internal element.

Ferrous impurities are also trapped inside the body of the device thanks to the action of the two magnets inserted in a special removable outer ring.

The first passage through the dirt separator makes it possible to separate a high percentage of the impurities in the circulating water, down to minimal particle sizes. The cartridge strainer separates impurities by means of mechanical selection of the particles in accordance with their size, by means of a special metal mesh.

All the particles with diameter bigger than the mesh size are automatically stopped and separated, **with maximum separation efficiency at the first passage.**



## CHEMICAL ADDITIVES



### 5709 C3 CLEANER

tech. broch. 01345

Removes sludge, limescale and debris.

Dose:

**0,5 litres of product every 150 litres of water in the system.**



Code

570911 0,5 litres

6

—



### 5709 C1 INHIBITOR

tech. broch. 01345

Protects against corrosion and limescale.

Dose:

**0,5 litres of product every 150 litres of water in the system.**



Code

570912 0,5 litres

6

—



### 5709 C7 BIOCIDES

tech. broch. 01345

Prevents bacterial and fungal growth.

Dose:

**0,5 litres of product every 150 litres of water in the system.**



Code

570913 0,5 litres

6

—



### 5709 C4 LEAK SEALER

tech. broch. 01345

Liquid sealer.

Dose:

**0,5 litres of product every 150 litres of water in the system.**



Code

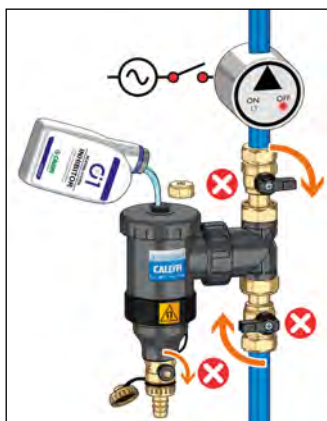
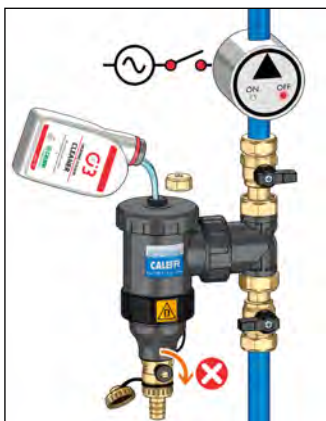
570914 0,5 litres

6

—

#### Additives dosing

The dirt separator can be used as an access point to inject chemical additives into the circuit for the cleaning and the protection of the system.



### 5709 C3 FAST CLEANER

tech. broch. 01345

Removes sludge, limescale and debris.

Dose:

**0,4 litres of product every 150 litres of water in the system.**



Code

570915 0,4 litres

1

10



### 5709 C1 FAST INHIBITOR

tech. broch. 01345

Protects against corrosion and limescale.

Dose:

**0,4 litres of product every 150 litres of water in the system.**



Code

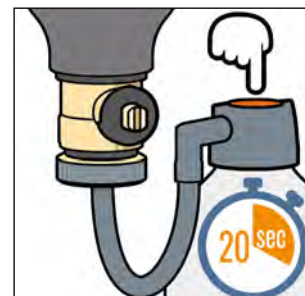
570916 0,4 litres

1

10

#### Additives dosing, FAST version

The dirt separator can be used as an access point to inject chemical additives into the circuit for the cleaning and the protection of the system.





## COMPOSITE UNDER-BOILER DIRT SEPARATORS WITH MAGNET



### 5451 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for connection pipe: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545105 3/4" M x 3/4" F

1 6



### 5451 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for copper pipe Ø 18 mm and Ø 22 mm. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545101 3/4" M - Ø 18

1 6



### 5451 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. Suitable for non-linear installations. Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for flexible pipe: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545155 3/4" M x 3/4" F captive nut

1 6



NEW

### 5452 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. Off-centre connections. Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for boiler connection: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545205 3/4" M x 3/4" F captive nut

1 6

## COMPOSITE UNDER-BOILER DIRT SEPARATORS WITH MAGNET SPECIFIC FOR VAILLANT BOILERS



### 5454 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. **Specific configuration for installation with Vaillant boilers with horizontal connections in new line template.** Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for boiler connection: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545455 3/4" M x 3/4" F

1 6



### 5452 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. **Specific configuration for installation with Vaillant boilers with horizontal connections in old W inverted template.** Technopolymer body. Drain cock with hose connection. Fitting for wall connection: 3/4" M. Fitting for boiler connection: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545255 3/4" M x 3/4" F

1 6



NEW

### 5452 DIRTMAGSLIM®

tech. broch. 01327

Dirt separator **with magnet** for under-boiler installation. **Specific configuration for installation with Vaillant boilers.** Technopolymer body. Drain cock with hose connection. Fitting for wall connection: Ø 22 . Fitting for boiler connection: 3/4" F. Max. working pressure: 3 bar. Temperature range: 0–90 °C.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING



Code

545252 Ø 22 x 3/4" F

1 6

## UNDER-BOILER DIRT SEPARATOR STRAINER WITH MAGNET

### 5450 DIRTMAGMINI®

tech. broch. 01348

Under-boiler dirt separator strainer with magnet.  
Technopolymer body.  
Drain cock with hose connection, chrome plated.  
Boiler side connection: 3/4" F with captive nut.  
System return side connection: 3/4" M.

Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
PATENT PENDING.



Code

545000 3/4" F captive nut x 3/4" M



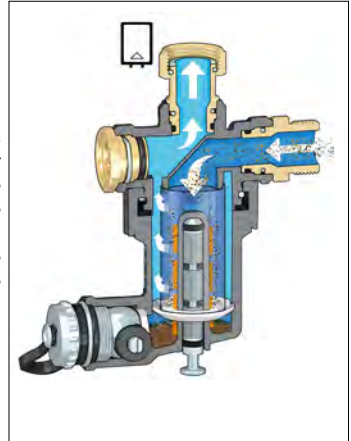
1 5

#### Operating principle

DIRTMAGMINI® magnetic dirt separator filter separates and captures impurities in the system thanks to the combined action of the strainer and dirt separator.

Ferrous impurities are also captured inside the body, thanks to the action of a removable magnet. Opening a dedicated cock drains the captured impurities.

The medium from the system is slowed down, so that the smaller particles that are not stopped by the filter separate and deposit, and are thereby removed from circulation. The special profile of the bottom allows the impurities to be captured and drained effectively.



### 5450 DIRTMAGMINI®

tech. broch. 01348

Under-boiler dirt separator strainer with magnet and shut-off valves.  
Technopolymer body.

Drain cock with hose connection.

Connections: Ø 22 mm.  
Max. working pressure: 3 bar.  
Temperature range: 0–90 °C.  
PATENT PENDING.



Code

545022 Ø 22



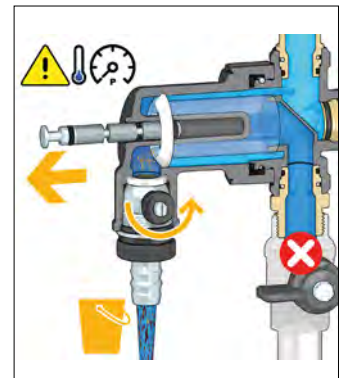
1 5

#### Filtration, dirt separation and self-cleaning

The high performance of the dirt separator is based on the combined action of the filter and dirt separation function. With its mesh size of 800 µm, the filter mesh can capture non-magnetic residues such as sand, soldering residues and residues of sealants such as hemp or PTFE. The magnet, which is not in direct contact with the medium, separates and captures magnetic particles.

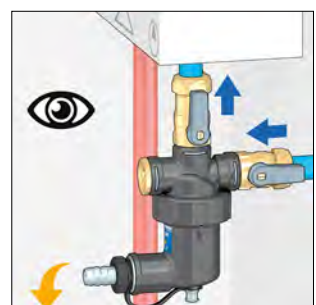
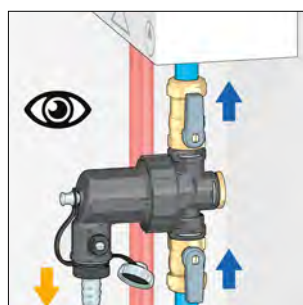
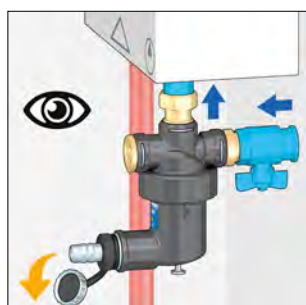
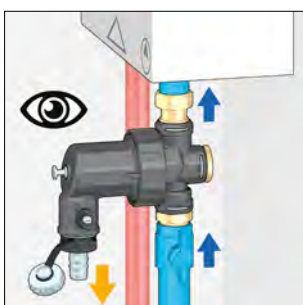
It is possible to drain the impurities without disassembling the body, just by removing the magnet and opening the dedicated cock. Only perform this operation when the system is not in operation.

A self-cleaning function activates during draining, using the same system water (which is then collected in a dedicated container and disposed of in accordance with the regulations in force) to clean the filter. For this reason, there is normally no need to open the filter body to clean it manually, although this may be required during extraordinary maintenance.



#### Installation

The magnetic dirt separator filter should be installed in the return circuit to protect the boiler from all the impurities in the system, especially during the start-up phase. It may be installed either vertically or horizontally, with the drain cock always in a suitable position, in accordance with the flow direction indicated by the arrows on the valve body.



## AUTOMATIC WATER TREATMENT UNIT

### 580020

tech. broch. 01360

Automatic water treatment unit for softening and demineralisation. It includes a positive displacement meter with built-in conductivity measuring cell, by-pass regulator, downstream ball shut-off valve, drain cock and air vent cock.

**With insulation.**

Working temperature range: 4–30 °C.

Max. working pressure: 4 bar.

Max. working temperature: 30 °C.



Code

580020 1/2"



1

-

#### Function

The automatic water treatment unit, installed on the inlet pipe, is used to treat water in the closed circuits of heating and cooling systems.

It is complete with a by-pass regulator to adjust the outlet water hardness at the softening treatment.



#### Electronic controller

The unit is equipped with an electronic controller, which is capable of handling water demineralisation and softening treatments alike. It is possible to set parameters and data relating to a specific treatment, directly from the front panel of the controller.

The software will automatically calculate all parameters for correct operation (refer to instruction sheet H0007428).



### 580011

tech. broch. 01361

Automatic compact charging unit to EN 1717 standard with **BA type** backflow preventer, shut-off valve, strainer, pressure test ports for controlling the backflow preventer, pressure reducing valve.

For horizontal or vertical installations. Brass body.

**With insulation.**

Filling unit setting pressure range: 0,8–4 bar.

Max. working pressure: 10 bar.

Max. working temperature: 65 °C.

Backflow preventer certified to EN 12729 standard.

Pressure reducing valve certified to EN 1567 standard.

PATENT.



Code

580011 1/2"



1

5

#### Backflow prevention reference standards

To avoid water backflow from the heating system, which is polluted and hazardous for human health, **it is indispensable to install an automatic charging unit with a backflow preventer.**

The correct use of hydraulic backflow preventers is governed by the European reference standard EN 1717: 2000 ("Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow").



Connection fitting with nut and gasket. For codes 580020 and 580011.

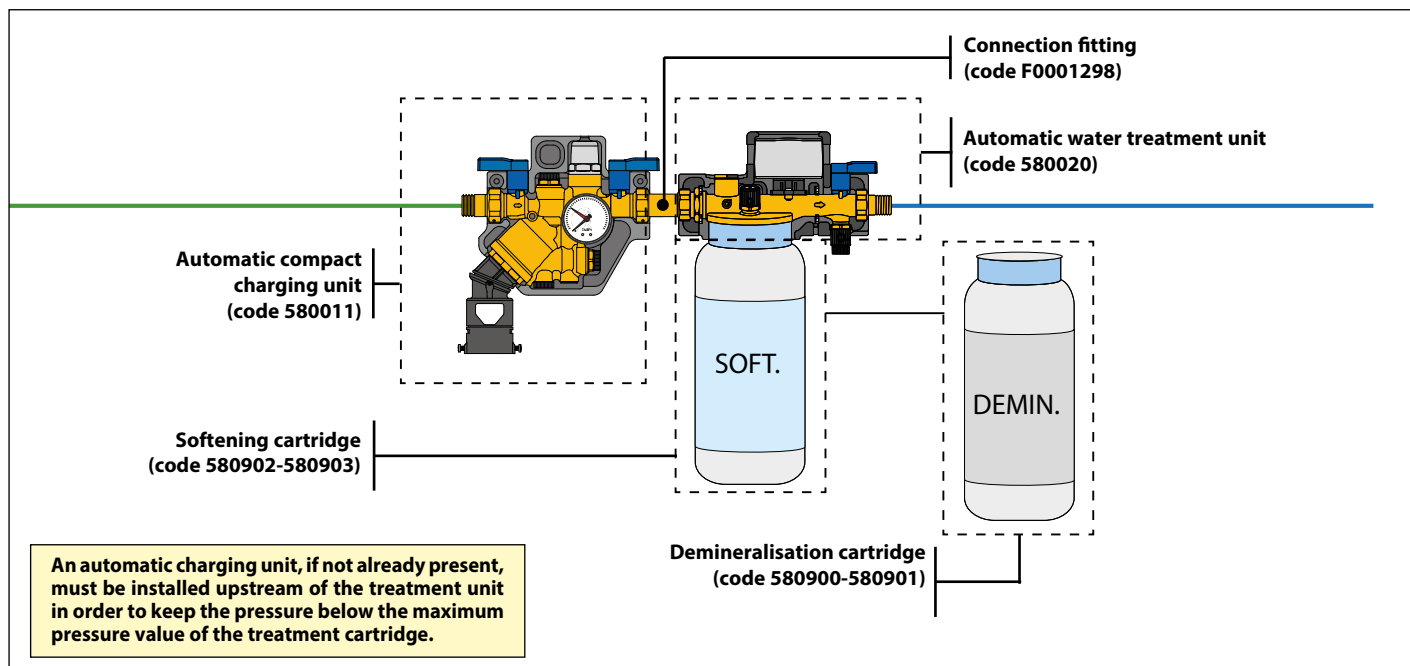
Code

F0001298 3/4" F x 3/4" F



1

-





## SOFTENING CARTRIDGE

### 580

tech. broch. 01360



Disposable softening cartridge.  
Max. working pressure: 4 bar.  
Working temperature range: 4–30 °C.  
Warehouse storage temperature range: 0–40 °C.  
Nominal flow rate: 2 l/min (code 580902),  
4 l/min (code 580903).

| Code   | Dimensioning coefficient<br>(hardness °f) | Dimensioning coefficient<br>(hardness °dH) |  |  |
|--------|---|--|---|---|
| 580902 | 26  | 14   | 1   | –   |
| 580903 | 43  | 24   | 1   | –   |

### 5750

Hardness measurement kit.  
Accuracy: 1°f / 1°dH.



| Code   |  |  |
|--------|---|---|
| 575003 | 1   | –   |

#### Softening cartridge sizing

The volume of treatable water depends on the hardness of the filling water and must be calculated as follows:

$$\text{Volume of treatable water (m}^3\text{)} = \frac{\text{Dimensioning coefficient}}{\text{hardness IN} - \text{hardness OUT}}$$

hardness IN = raw water hardness (°f/°dH)

hardness OUT = treated water hardness (°f/°dH)



## DEMINEALISATION CARTRIDGE

### 580

tech. broch. 01360



Disposable demineralisation cartridge.  
Max. working pressure: 4 bar.  
Working temperature range: 4–30 °C.  
Warehouse storage temperature range: 0–40 °C.  
Nominal flow rate: 2 l/min (code 580900),  
4 l/min (code 580901).

| Code   | Dimensioning coefficient<br>(residual el. conductivity<br>< 10 µS/cm) | Dimensioning coefficient<br>(residual el. conductivity<br>< 50 µS/cm) (*) |  |  |
|--------|---|---|---|---|
| 580900 | 140   | 220   | 1   | –   |
| 580901 | 180   | 280   | 1   | –   |

(\*) If a full demineralisation treatment is not required (residual conductivity < 10 µS/cm), it is preferable to use the sizing coefficient for residual conductivity < 50 µS/cm.

#### Demineralisation cartridge sizing

The volume of treatable water depends on the electrical conductivity of the filling water, and must be calculated as follows:

$$\text{Volume of treatable water (m}^3\text{)} = \frac{\text{Sizing coefficient}}{\text{Electrical conductivity (µS/cm)}}$$



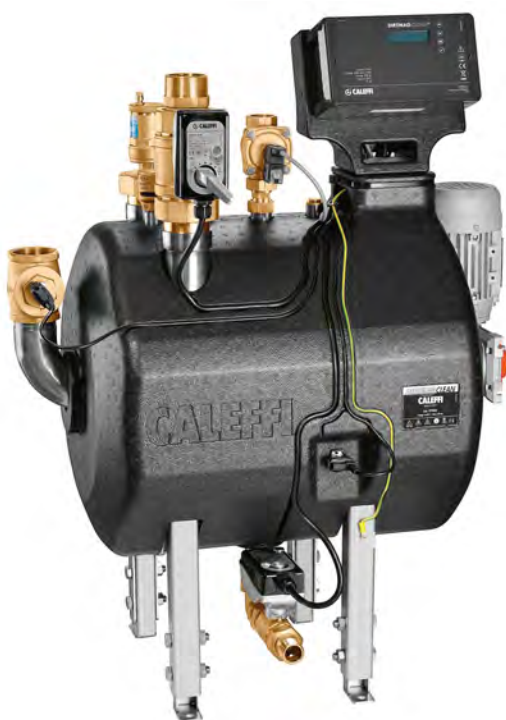


## SELF-CLEANING DIRT SEPARATOR FILTER WITH MAGNET

### 5790 DIRTMAG<sup>CLEAN</sup>®

tech. broch. 01358

Self-cleaning dirt separator filter with magnet.  
Body and support feet in stainless steel AISI 304.  
Connections: inlet 2" F, outlet 2" F,  
drain 1" M with union,  
flushing 1" F.  
Max working pressure: 10 bar.  
Temperature range: 5–85 °C.  
Supply: 230 V.  
Particle separation rating down to 2 µm.  
Fitted for inserting chemical additives.  
Fitted for MODBUS-RTU management.  
PATENT PENDING.



| Code   | Kv (m³/h) |   |   |
|--------|-----------|---|---|
| 579000 | 45        | 1 | – |

## MANUAL CLEANING DIRT SEPARATOR FILTER WITH MAGNET

### 5790 DIRTMAG<sup>CLEAN</sup>®

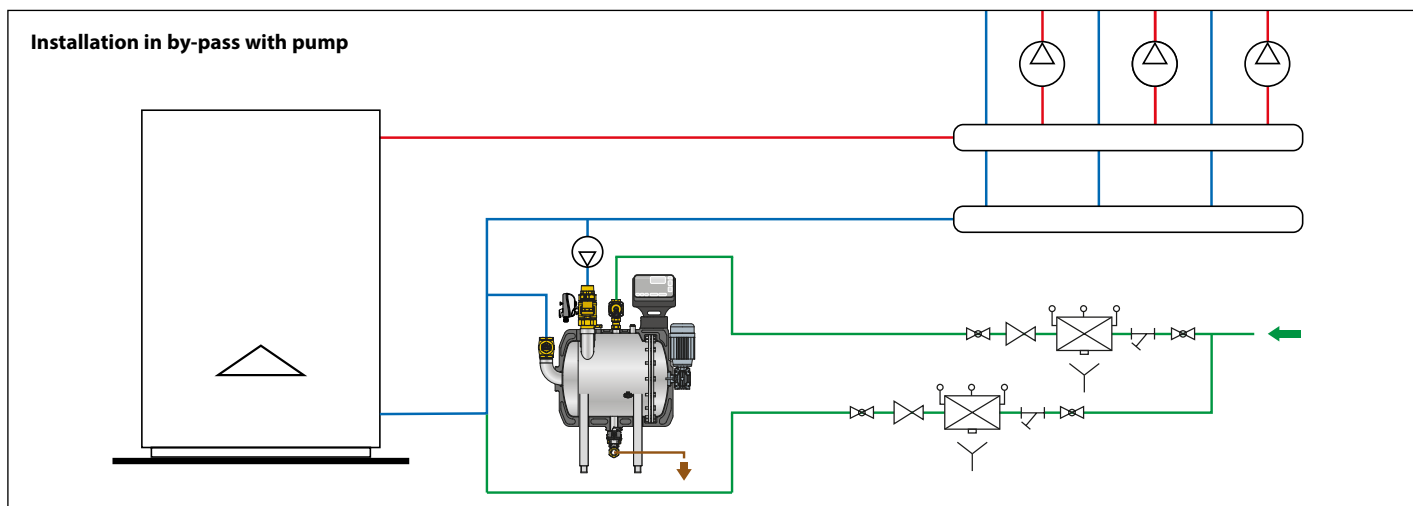
tech. broch. 01358

Manual cleaning dirt separator filter with magnet.  
Body and support feet in stainless steel AISI 304.  
Connections: inlet 2" F, outlet 2" F,  
drain 1" M with union,  
flushing 1" F.  
Max working pressure: 10 bar.  
Temperature range: 5–85 °C.  
Particle separation rating down to 2 µm.  
PATENT PENDING.

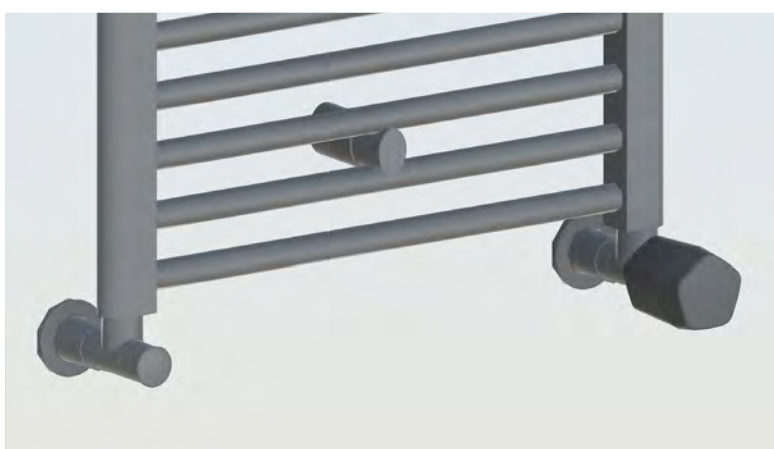
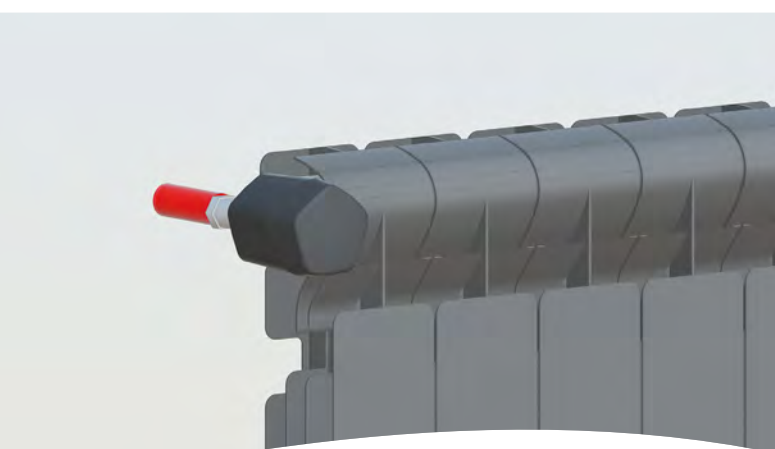
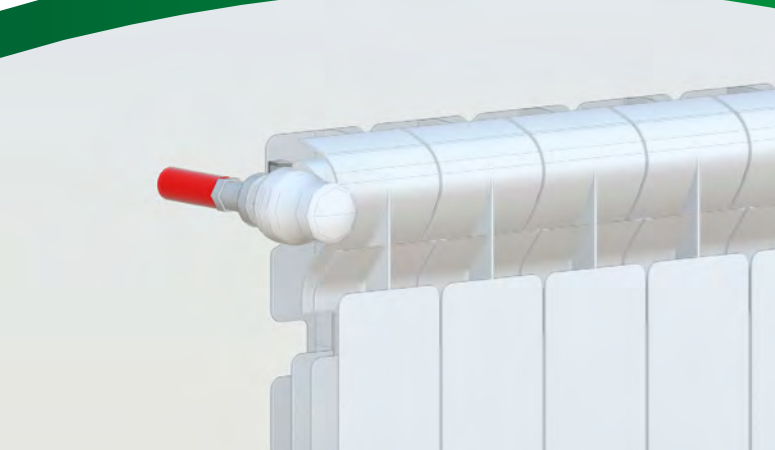


| Code   | Kv (m³/h) |   |   |
|--------|-----------|---|---|
| 579001 | 45        | 1 | – |

#### Application diagrams 579000/579001 code







**BIM**  
bim.caleffi.com

- Convertible radiator and lockshield valves**
- Convertible radiator valves with pre-setting**
- Convertible radiator valves for designer heating systems**
- Dynamic thermostatic radiator valves**
- Thermostatic radiator valves**
- Double-angled thermostatic radiator and lockshield valves**
- Thermostatic control heads**
- Wall-covering plates**
- Thermo-electric actuators**
- Remote thermal regulation system for radiators**
- Manual radiator and lockshield valves**
- One-pipe and two-pipe radiator valves**
- Drain cock**
- Fittings**
- Calibrator for multilayer pipes**
- Valves for panel radiators**



## CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES



### 338

tech. broch. 01009

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |  |  |
|--------|---------------------|-----------------|-----------|---|---|
| 338302 | 3/8"                | 23 p.1,5        | 2,22      | 10  | 50  |
| 338402 | 1/2"                | 23 p.1,5        | 2,70      | 10  | 50  |
| 338452 | 1/2"                | 3/4"            | 2,70      | 10  | 50  |



### 342

tech. broch. 01009

Angled lockshield valve. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|---|
| 342302 | 3/8"                | 23 p.1,5        | 2,42                 | 10  | 50  |
| 342402 | 1/2"                | 23 p.1,5        | 3,99                 | 10  | 50  |
| 342452 | 1/2"                | 3/4"            | 3,99                 | 10  | 50  |



### 339

tech. broch. 01009

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |  |  |
|--------|---------------------|-----------------|-----------|---|--|
| 339302 | 3/8"                | 23 p.1,5        | 1,35      | 10  | 50   |
| 339402 | 1/2"                | 23 p.1,5        | 1,79      | 10  | 50   |
| 339452 | 1/2"                | 3/4"            | 1,79      | 10  | 50   |



### 343

tech. broch. 01009

Straight lockshield valve. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|--|
| 343302 | 3/8"                | 23 p.1,5        | 1,32                 | 10  | 50   |
| 343402 | 1/2"                | 23 p.1,5        | 2,17                 | 10  | 50   |
| 343452 | 1/2"                | 3/4"            | 2,17                 | 10  | 50   |



### 401

tech. broch. 01009

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection     | Kv (m³/h) |  |  |
|--------|---------------------|---------------------|-----------|---|---|
| 401302 | 3/8"                |                     | 2,22      | 10  | 50  |
| 401402 | 1/2"                |                     | 2,70      | 10  | 50  |
| 401500 | 3/4"                | without rubber seal | 3,36      | 5   | 25  |
| 401603 | 1"                  | without rubber seal | 4,47      | 5   | 25  |



### 431

tech. broch. 01009

Angled lockshield valve. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection     | Kv (m³/h) fully open |  |  |
|--------|---------------------|---------------------|----------------------|---|---|
| 431302 | 3/8"                |                     | 2,42                 | 10  | 50  |
| 431402 | 1/2"                |                     | 3,99                 | 10  | 50  |
| 431503 | 3/4"                | without rubber seal | 4,52                 | 5   | 25  |
| 431603 | 1"                  | without rubber seal | 5,64                 | 5   | 25  |



### 402

tech. broch. 01009

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection     | Kv (m³/h) |  |  |
|--------|---------------------|---------------------|-----------|---|---|
| 402302 | 3/8"                |                     | 1,35      | 10  | 50  |
| 402402 | 1/2"                |                     | 1,79      | 10  | 50  |
| 402500 | 3/4"                | without rubber seal | 2,58      | 5   | 25  |
| 402603 | 1"                  | without rubber seal | 4,43      | 5   | 25  |



### 432

tech. broch. 01009

Straight lockshield valve. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection     | Kv (m³/h) fully open |  |  |
|--------|---------------------|---------------------|----------------------|---|---|
| 432302 | 3/8"                |                     | 1,32                 | 10  | 50  |
| 432402 | 1/2"                |                     | 2,17                 | 10  | 50  |
| 432503 | 3/4"                | without rubber seal | 2,58                 | 5   | 25  |
| 432603 | 1"                  | without rubber seal | 4,81                 | 5   | 25  |

## CONVERTIBLE RADIATOR VALVES WITH PRE-SETTING



### 425

tech. broch. 01195

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.



**With pre-setting.**

Chrome plated.

For copper, single and multilayer plastic pipes.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection |  |  |
|--------|---------------------|-----------------|---|---|
| 425302 | 3/8"                | 23 p.1,5        | 1   | 50  |
| 425402 | 1/2"                | 23 p.1,5        | 1   | 50  |



### 426

tech. broch. 01195

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.



**With pre-setting.**

Chrome plated.

For copper, single and multilayer plastic pipes.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection |  |  |
|--------|---------------------|-----------------|---|---|
| 426302 | 3/8"                | 23 p.1,5        | 1   | 50  |
| 426402 | 1/2"                | 23 p.1,5        | 1   | 50  |



### 421

tech. broch. 01195

Angled convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.



**With pre-setting.**

Chrome plated.

For steel pipe.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection     |  |  |
|--------|---------------------|---------------------|---|---|
| 421302 | 3/8"                |                     | 1   | 50  |
| 421402 | 1/2"                |                     | 1   | 50  |
| 421500 | 3/4"                | without rubber seal | 1   | 25  |



### 422

tech. broch. 01195

Straight convertible radiator valve fitted for thermostatic control heads and thermo-electric actuators.



**With pre-setting.**

Chrome plated.

For steel pipe.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection     |  |  |
|--------|---------------------|---------------------|---|---|
| 422302 | 3/8"                |                     | 1   | 50  |
| 422402 | 1/2"                |                     | 1   | 50  |
| 422500 | 3/4"                | without rubber seal | 1   | 25  |

#### Pre-setting device

The convertible radiator valves are equipped with an internal device for pre-setting the head loss hydraulic characteristics.

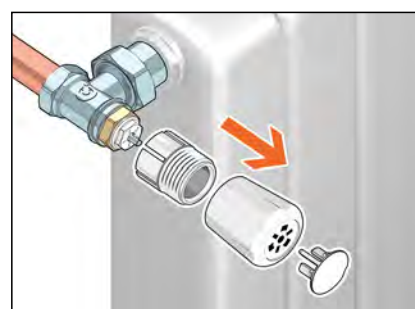
Specific passage cross sections can be selected by means of the control nut, in order to generate the required resistance to the motion of the medium.

Each passage cross section determines a specific Kv value for the creation of the head loss, which corresponds to a setting position on a graduated scale.

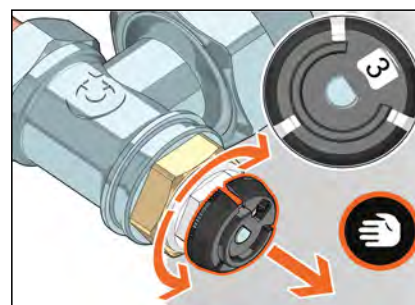
Depending on the position in the system, the valve can be pre-set so as to obtain an immediate balancing of the hydraulic circuit, valid for both manual and thermostatic operation.

#### Pre-setting operation

Remove the valve knob.



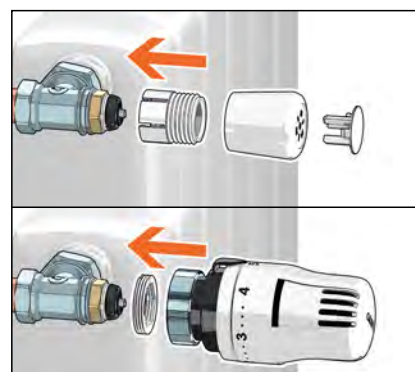
Lift the special control ring nut (supplied in package) of the pre-setting device and turn the control stem to select the required position on the graduated scale.



Lower the ring nut again.



Position the manual knob, thermostatic control head or thermo-electric actuator on the valve.



## HIGH-STYLE CONVERTIBLE RADIATOR VALVES

### 4001

tech. broch. 01140

- Pair consisting of:
- angled-convertible radiator valve fitted for thermostatic control head code 200015;
  - angled lockshield valve;
  - two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

**White colour.**

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400101 | 1/2"                | 23 p.1,5        | 2,0             | 1,92                              | 1 | 5 |

### 4003

tech. broch. 01140

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
  - lockshield valve, double-angled connections;
  - two pipe-covering/wall-covering shells and allen key.

**Right-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

**White colour.**

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400301 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1 | 5 |

### 4004

tech. broch. 01140

- Pair consisting of:
- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
  - lockshield valve, double-angled connections;
  - two pipe-covering/wall-covering shells and allen key.

**Left-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

**White colour.**

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400401 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1 | 5 |

### 200

tech. broch. 01140

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003, 4004 and 3380 series.

**White colour.**

Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. With adapter, tamper-proof cap and special key for tamper-proof cap.



Code

205005

1

5

### 200

tech. broch. 01140

Thermostatic control head for designer heating system valves. Built-in sensor with liquid-filled element. For valves 4001, 4003, 4004 and 3380 series.

**White colour.**

Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. With adapter.



Code

205000

1

10

### 209

tech. broch. 01140

Tamper-proof anti-theft cap for use in public places. For thermostatic control heads 200 series.

**High chrome colour.**

To be used with special allen key code 209001.



Code

209000

1

10

### 209

tech. broch. 01140

Special allen key for tamper-proof anti-theft cap. To be used with tamperproof cap 209 series.



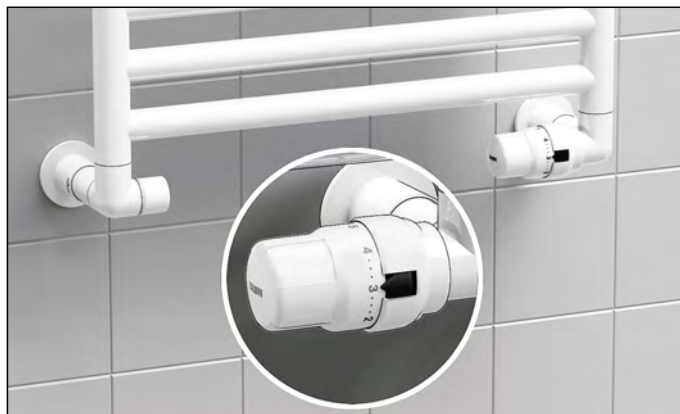
Code

209001

1

10

**Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head**





## HIGH-STYLE CONVERTIBLE RADIATOR VALVES WITH CENTRAL CONNECTION

### 4003

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

**Central connections.**



**Right-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

**White colour.**

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400311 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

### 215

**Comfort control**

Wireless electronic control for thermostatic or convertible radiator valves. Operates through Gateway, Gateway PRO, APP Caleffi CODE® and front buttons.

Built-in temperature sensor.

Radio communication: RF 868 MHz.

Quick-coupling installation with adapter.

Battery electric supply: 2 x AA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

White colour **RAL 9003**.

REGISTERED DESIGN.



Code

215510

1

–

For other CALEFFI CODE® components, refer to page 90

### 4004

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.

**Central connections.**



**Left-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

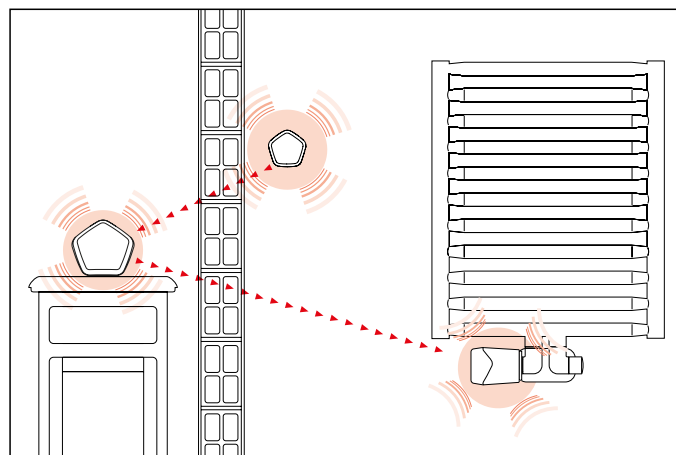
**White colour.**

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

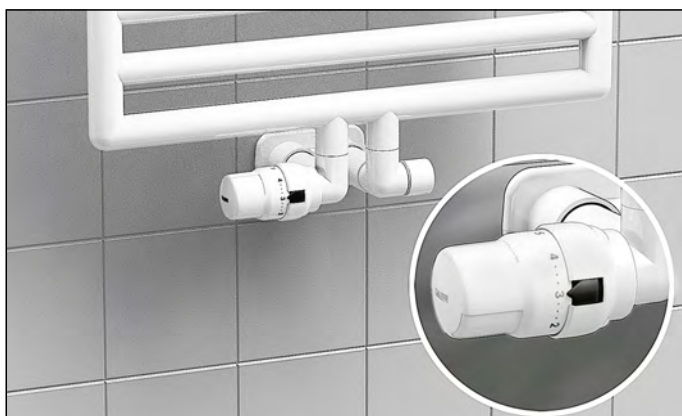


| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400411 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

### CALEFFI CODE® connected thermal regulation system



Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head.



Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with electronic control.





## HIGH-STYLE CONVERTIBLE RADIATOR VALVE

### 4001

tech. broch. 01140

NEW

Pair consisting of:

- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.



To be used with fittings 437, 447, 681 and 679 series.

**Black colour RAL 9005.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400103 | 1/2"                | 23 p.1,5        | 2,0             | 1,92                              | 1   | 5   |

### 4004

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

**Left-hand version.**



To be used with fittings 437, 447, 681 and 679 series.

**Black colour RAL 9005.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400403 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

### 4003

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

**Right-hand version.**



To be used with fittings 437, 447, 681 and 679 series.

**Black colour RAL 9005.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400303 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

**Example of HIGH-STYLE valve installation for designer heating systems right-hand version, with electronic control.**



## HIGH-STYLE CONVERTIBLE RADIATOR VALVES WITH CENTRAL CONNECTION

**4003**

**NEW**

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.



**Central connections.**

**Right-hand version.**



To be used with fittings 437, 447, 681 and 679 series.

**Black colour RAL 9005.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code          | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|---------------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| <b>400313</b> | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

**215**

tech. broch. 013006

**Comfort control**

Wireless electronic control for thermostatic or convertible radiator valves. Operates through Gateway, Gateway PRO, APP Caleffi **CODE®** and front buttons.

Built-in temperature sensor.

Radio communication: RF 868 MHz.

Quick-coupling installation with adapter.

Battery electric supply: 2 x AA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.



Ambient temperature range: 0–55 °C.

**Black colour RAL 9005.**

REGISTERED DESIGN.



CE

| Code             |  |  |
|------------------|---|---|
| <b>21510 BLK</b> | 1   | -   |

For other CALEFFI **CODE®** components, refer to page 91

**4004**

**NEW**

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head **205 series**;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.



**Central connections.**

**Left-hand version.**

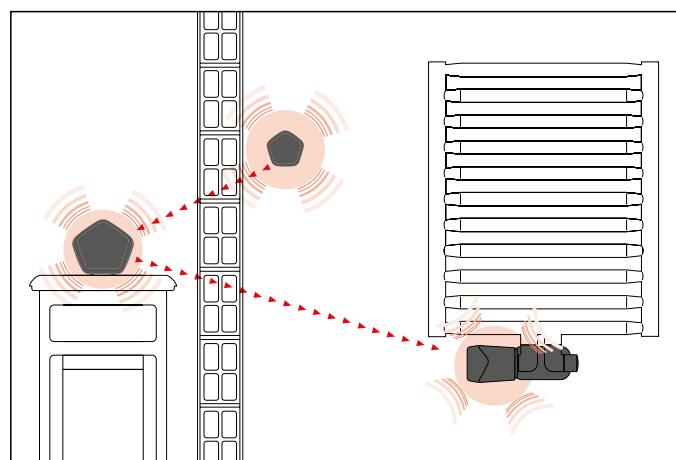


To be used with fittings 437, 447, 681 and 679 series.

**Black colour RAL 9005.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code          | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|---------------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| <b>400413</b> | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

**CALEFFI CODE® connected thermal regulation system**



**Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with electronic control.**



## HIGH-STYLE CONVERTIBLE RADIATOR VALVES

### 4001

tech. broch. 01140

Pair consisting of:

- angled-convertible radiator valve fitted for thermostatic control head code 200015;
- angled lockshield valve;
- two pipe-covering/wall-covering shells and allen key.

To be used with fittings 437, 447, 681 and 679 series.

**High chrome finish.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400100 | 1/2"                | 23 p.1,5        | 2,0             | 1,92                              | 1 | 5 |

### 4003

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

**Right-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

**High chrome finish.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400300 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1 | 5 |

### 4004

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- two pipe-covering/wall-covering shells and allen key.

**Left-hand version.**

To be used with fittings 437, 447, 681 and 679 series.

**High chrome finish.**

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |   |   |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400400 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1 | 5 |

### 200

tech. broch. 01140

Thermostatic control head

for designer heating system valves.

Built-in sensor with liquid-filled element.

For valves 4001, 4003, 4004 and 3380 series.

**High chrome finish.**

Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.

With adapter, tamper-proof cap and special key for tamper-proof cap.



Code

200015



1 5

### 200

tech. broch. 01140

Thermostatic control head

for designer heating system valves.

Built-in sensor with liquid-filled element.

For valves 4001, 4003, 4004 and 3380 series.

**High chrome finish.**

Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.

With adapter.



Code

200013



1 10

### 209

tech. broch. 01140

Tamper-proof anti-theft cap for use in public places.

For thermostatic control heads 200 series.

**High chrome finish.**

To be used with special allen key code 209001.



Code

209004



1 10

### 209

tech. broch. 01140



Special allen key for tamper-proof anti-theft cap.

To be used with tamperproof cap 209 series.

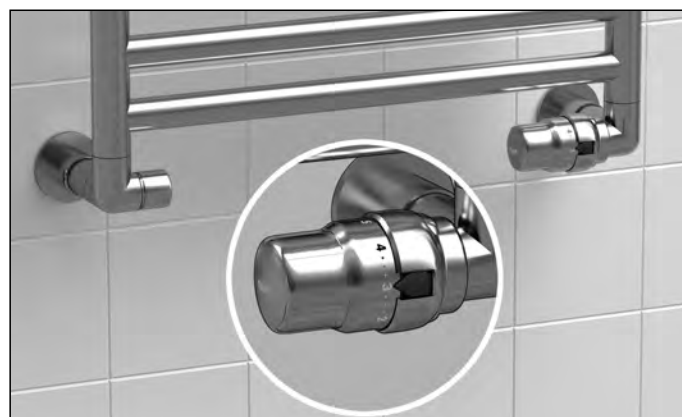
Code

209001



1 10

**Example of HIGH-STYLE valve installation for designer heating systems, right-hand version, with thermostatic control head**



## HIGH-STYLE CONVERTIBLE RADIATOR VALVES

### 4003

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.



**Central connections.**

**Right-hand version.**

To be used with fittings 437, 447, 681 and 679 series.



**High chrome finish.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400310 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

### 4004

tech. broch. 01140

Pair consisting of:

- double-angled convertible radiator valve fitted for thermostatic control head code 200015;
- lockshield valve, double-angled connections;
- pipe-covering/wall-covering shell, connections: 50 mm centre distance.



**Central connections.**

**Left-hand version.**

To be used with fittings 437, 447, 681 and 679 series.



**High chrome finish.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 400410 | 1/2"                | 23 p.1,5        | 1,27            | 1,37                              | 1   | 5   |

**Example of HIGH-STYLE valve installation for designer heating systems with central connection, left-hand version, with thermostatic control head**



## CONVERTIBLE RADIATOR VALVES



### 3380

Pair consisting of:

- convertible radiator valve fitted for thermo-electric actuators and thermostatic control heads;
- lockshield valve.





Angled connections.  
**High chrome finish.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m³/h) valve | Kv (m³/h) lockshield valve (f.o.) |  |  |
|--------|---------------------|-----------------|-----------------|-----------------------------------|---|---|
| 338040 | 1/2" M              | 23 p.1,5        | 2,70            | 3,99                              | 1   | 5   |

### 437

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal. **High chrome finish.**  
Max. working pressure: 10 bar.  
Temperature range : -25–120 °C.





| Code   |                 |  |  |
|--------|-----------------|---|---|
| 437112 | 23 p.1,5 - Ø 12 | 1   | 50  |
| 437114 | 23 p.1,5 - Ø 14 | 1   | 50  |
| 437115 | 23 p.1,5 - Ø 15 | 1   | 50  |
| 437116 | 23 p.1,5 - Ø 16 | 1   | 50  |

### 681 DARGAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
**High chrome finish.**  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).



| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |  |  |
|--------|----------|---------------------|----------------------|---|---|
| 681101 | 23 p.1,5 | 9,5–10              | 12–14                | 1   | 50  |
| 681124 | 23 p.1,5 | 11,5–12             | 14–16                | 1   | 50  |

### 383

Fitting for conversion from copper to steel connection.



| Code   |                     |  |  |
|--------|---------------------|---|---|
| 383231 | 23 p.1,5 F x 3/8" F | 1   | 10  |
| 383241 | 23 p.1,5 F x 1/2" F | 1   | 10  |



## CONVERTIBLE RADIATOR AND LOCKSHIELD VALVES WITH PUSH FIT CONNECTION



### 338

Angled convertible radiator valve fitted for thermostatic control head and thermo-electric actuators. Chrome plated.

Push fit connection for Ø 15 hard and annealed copper pipes or for extension code 936415. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |  |  |
|--------|---------------------|-----------------|-----------|---|---|
| 338415 | 1/2"                | Ø 15            | 2,70      | 1   | 50  |



### 342

Angled lockshield valve. Chrome plated.

Push fit connection for Ø 15 hard and annealed copper pipes or for extension code 936415. Max. working pressure: 10 bar. Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|---|
| 342415 | 1/2"                | Ø 15            | 3,99                 | 1   | 50  |

### 936

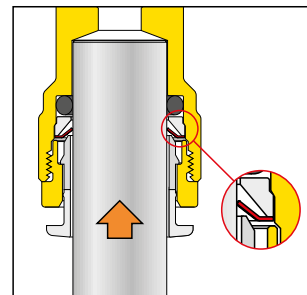
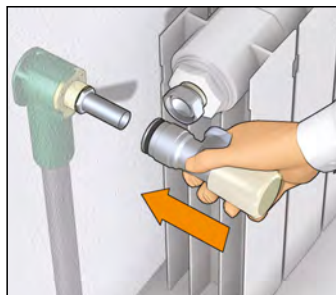
Extension for convertible radiator valves with push fit connection to wall connection fitting.

In polished stainless steel. With shaped rubber seal. Length: 100 mm (useful 88 mm).

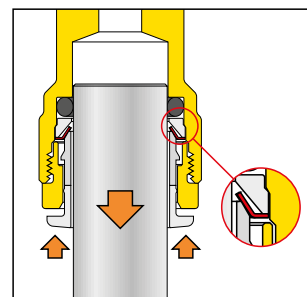
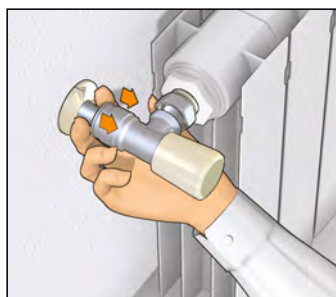


| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|---|
| 936415 | 1/2" x Ø 15         |                 |                      | 1   | 10  |

#### Installation of the valve on the pipe and locking with suitable clamps



#### Release by pressing on the outer ring





## DYNAMIC THERMOSTATIC RADIATOR VALVES



### 230 DYNAMICAL®

tech. broch. 01330

Angled dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   |      | Flow rate range (l/h)      |    |    |
|--------|------|----------------------------|----|----|
| 230302 | 3/8" | 20–120                     | 10 | 50 |
| 230312 | 3/8" | 10–80                      | 10 | 50 |
| 230402 | 1/2" | 20–120                     | 10 | 50 |
| 230412 | 1/2" | 10–80                      | 10 | 50 |
| 230500 | 3/4" | 20–120 without rubber seal | 5  | 25 |



### 231 DYNAMICAL®

tech. broch. 01330

Straight dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   |      | Flow rate range (l/h)      |    |    |
|--------|------|----------------------------|----|----|
| 231302 | 3/8" | 20–120                     | 10 | 50 |
| 231312 | 3/8" | 10–80                      | 10 | 50 |
| 231402 | 1/2" | 20–120                     | 10 | 50 |
| 231412 | 1/2" | 10–80                      | 10 | 50 |
| 231500 | 3/4" | 20–120 without rubber seal | 5  | 25 |



### 232 DYNAMICAL®

tech. broch. 01330

Angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   | Radiator connection | Pipe connection | Flow rate range (l/h) |    |    |
|--------|---------------------|-----------------|-----------------------|----|----|
| 232302 | 3/8"                | 23 p.1,5        | 20–120                | 10 | 50 |
| 232402 | 1/2"                | 23 p.1,5        | 20–120                | 10 | 50 |
| 232412 | 1/2"                | 23 p.1,5        | 10–80                 | 10 | 50 |



### 233 DYNAMICAL®

tech. broch. 01330

Straight dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   | Radiator connection | Pipe connection | Flow rate range (l/h) |    |    |
|--------|---------------------|-----------------|-----------------------|----|----|
| 233302 | 3/8"                | 23 p.1,5        | 20–120                | 10 | 50 |
| 233402 | 1/2"                | 23 p.1,5        | 20–120                | 10 | 50 |
| 233412 | 1/2"                | 23 p.1,5        | 10–80                 |    |    |



### 234 DYNAMICAL®

tech. broch. 01330

Reverse dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   |      | Flow rate range (l/h) |   |    |
|--------|------|-----------------------|---|----|
| 234302 | 3/8" | 20–120                | 5 | 25 |
| 234402 | 1/2" | 20–120                | 5 | 25 |



### 237 DYNAMICAL®

tech. broch. 01330

Reverse dynamic thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–95 °C. PATENT.

PCT  
INTERNATIONAL  
APPLICATION  
PENDING

| Code   | Radiator connection | Pipe connection | Flow rate range (l/h) |   |    |
|--------|---------------------|-----------------|-----------------------|---|----|
| 237302 | 3/8"                | 23 p.1,5        | 20–120                | 5 | 25 |
| 237402 | 1/2"                | 23 p.1,5        | 20–120                | 5 | 25 |



### 230

Kit for measuring  $\Delta p$  in the circuits with dynamic valves.

| Code   |   |   |
|--------|---|---|
| 230100 | 1 | – |



## THERMOSTATIC RADIATOR VALVES

### 220

tech. broch. 01034



Angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   |                          | Kvs (m³/h)* |  |  |
|--------|--------------------------|-------------|---|---|
| 220302 | 3/8"                     | 2,29        | 10  | 50  |
| 220402 | 1/2"                     | 2,39        | 10  | 50  |
| 220500 | 3/4" without rubber seal | 3,19        | 5   | 25  |

### 224

tech. broch. 01034



Reverse thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   |      | Kvs (m³/h)* |  |  |
|--------|------|-------------|---|---|
| 224302 | 3/8" | 0,93        | 1   | 20  |
| 224402 | 1/2" | 1,39        | 1   | 20  |

### 221

tech. broch. 01034



Straight thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For steel pipe. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   |                          | Kvs (m³/h)* |  |  |
|--------|--------------------------|-------------|---|---|
| 221302 | 3/8"                     | 1,05        | 10  | 50  |
| 221402 | 1/2"                     | 1,52        | 10  | 50  |
| 221500 | 3/4" without rubber seal | 2,20        | 5   | 25  |

### 227

tech. broch. 01034



Reverse thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kvs (m³/h)* |  |  |
|--------|---------------------|-----------------|-------------|---|---|
| 227402 | 1/2"                | 23 p.1,5        | 1,39        | 1   | 20  |

### 222

tech. broch. 01034



Angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.

| Code    | Radiator connection | Pipe connection | Kvs (m³/h)* |  |  |
|---------|---------------------|-----------------|-------------|---|---|
| 222302* | 3/8"                | 23 p.1,5        | 2,29        | 10  | 50  |
| 222402  | 1/2"                | 23 p.1,5        | 2,39        | 10  | 50  |

\* Without EN 215 certification

### 4490

Knob for thermostatic radiator valves. For valves 220, 221, 222, 223, 224, 225, 226, 227 series.





| Code   |  |  |
|--------|---|---|
| 449010 | 1   | 100   |

### 223

tech. broch. 01034



Straight thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators. Chrome plated. For copper, single and multilayer plastic pipes. Max. working pressure: 10 bar. Temperature range: 5–100 °C.

| Code    | Radiator connection | Pipe connection | Kvs (m³/h)* |  |  |
|---------|---------------------|-----------------|-------------|---|---|
| 223302* | 3/8"                | 23 p.1,5        | 1,05        | 10  | 50  |
| 223402  | 1/2"                | 23 p.1,5        | 1,52        | 10  | 50  |

\* Without EN 215 certification

\*Kvs: flow rate for the valve equipped with thermostatic control head at the maximum open position.



The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

## DOUBLE-ANGLED THERMOSTATIC RADIATOR AND LOCKSHIELD VALVES





**225**

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

**Right-hand version.**

Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   |      | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|------|--------------------------|---|---|
| 225312 | 3/8" | 0,96                     | 1   | 20  |
| 225412 | 1/2" | 1,40                     | 1   | 20  |



**225**



tech. broch. 01034

Double-angled lockshield valve.

**Right-hand version.**

Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   |      | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|------|--------------------------|---|---|
| 225352 | 3/8" | 1,05                     | 1   | 20  |
| 225452 | 1/2" | 1,40                     | 1   | 20  |





**225**

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

**Left-hand version.**

Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   |      | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|------|--------------------------|--|--|
| 225322 | 3/8" | 0,96                     | 1  | 20   |
| 225422 | 1/2" | 1,40                     | 1  | 20   |



**225**



tech. broch. 01034

Double-angled lockshield valve.

**Left-hand version.**

Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   |      | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|------|--------------------------|--|--|
| 225362 | 3/8" | 1,05                     | 1  | 20   |
| 225462 | 1/2" | 1,40                     | 1  | 20   |





**226**

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

**Right-hand version.**

Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|---------------------|-----------------|--------------------------|---|---|
| 226412 | 1/2"                | 23 p.1,5        | 1,40                     | 1   | 20  |



**226**



tech. broch. 01034

Double-angled lockshield valve.

**Right-hand version.**

Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|---------------------|-----------------|--------------------------|---|---|
| 226452 | 1/2"                | 23 p.1,5        | 1,40                     | 1   | 20  |





**226**

tech. broch. 01034

Double-angled thermostatic radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

**Left-hand version.**

Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|---------------------|-----------------|--------------------------|---|---|
| 226422 | 1/2"                | 23 p.1,5        | 1,40                     | 1   | 20  |



**226**



tech. broch. 01034

Double-angled lockshield valve.

**Left-hand version.**

Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kvs (m <sup>3</sup> /h)* |  |  |
|--------|---------------------|-----------------|--------------------------|---|---|
| 226462 | 1/2"                | 23 p.1,5        | 1,40                     | 1   | 20  |

\*Kvs: flow rate for the valve equipped with thermostatic control head at the maximum open position.



The EN 215 certification covers the combination of codes 200000/200001 and 201, 204 series thermostatic control heads with valves 220, 221, 222, 223, 224, 225, 226 and 227 series.

## THERMOSTATIC CONTROL HEADS

### Thermostatic control heads in I Class

EUnited Valves (The European Valve Manufacturers Association set up in Brussels) has prepared a classification system for products that manage home comfort and water responsibly in the residential field and, more specifically, for thermostatic valves.

Caleffi thermostatic control heads were included in the list of **TELL**-approved (Thermostatic Efficiency Label) products and were placed in the **I Efficiency Class**.

This classification guarantees that thermostatic valves are able to contribute to the energy saving of heating systems.

**TELL**  
Thermostatic Efficiency Label

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Manufacturer: **Caleffi S.p.A.**  
Model: **200000**  
Registration number: **10564-20150319**

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**I**

**II**

**III**

**IV**

**V**

**VI**

**I**

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Information: [www.tell-online.eu](http://www.tell-online.eu)

A Label of EUnited Valves  
European Valve Manufacturers Association



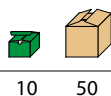
### 200

tech. broch. 01034

Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series. Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. With adapter.

Code

**200000**



10 50



### 200

tech. broch. 01034

Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 220, 221, 222, 223, 224, 225, 226 and 227 series. Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.

Code

**200001**



1 10

### 201

tech. broch. 01034

Thermostatic control head for thermostatic and convertible radiator valves. With remote sensor.

For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.

Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C.

Capillary length: 2 m.  
With adapter.



Code

**201000**



1 10



### 209

tech. broch. 01034

Tamper-proof anti-theft cap for use in public places.

For thermostatic control heads 200, 204, 202 and 205 series.

To be used with speciale allen key code 209001.

Code

**209000**



1 10



### 209

tech. broch. 01034

Special allen key for tamper-proof anti-theft cap. To be used with tamperproof cap 209 series.

Code

**209001**



1 10

## THERMOSTATIC CONTROL HEADS

### 204

tech. broch. 01242

Thermostatic control head for convertible radiator valves. Built-in sensor with liquid-filled element. For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series. Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. With adapter.



Code

204000



10 50

### 204

tech. broch. 01242

Thermostatic control head for thermostatic and convertible radiator valves. With remote sensor. For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series. Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. Capillary length: 2 m. With adapter.



Code

204100



1 10

### 202

tech. broch. 01009

Thermostatic control head for radiator valves. Built-in sensor with liquid-filled element. With LCD type ambient temperature indicator. For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series. Graduated scale from \* to 5 corresponding to a temperature adjustment range from 7 °C to 28 °C. Room temperature indicator range: 16–26 °C. With adapter. PATENT.



Visibility with sufficient lighting

#### Room temperature indicator

The room temperature indicator is a LCD type. It gets green coloured in correspondence with the actual room temperature reading. A particular pivoting system keeps the indicator always in vertical position, thus allowing its optimal visualization.

Code

202000



1 5

### 203

tech. broch. 01034

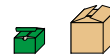
Thermostatic control head for thermostatic and convertible radiator valves; with contact probe, for medium temperature limiting. For valves 220, 221, 222, 223, 224, 225, 226, 227, 338, 339, 401, 402 and 455 series. Pre-set temperature scale. Capillary length: 2 m.



Code Temperature range

203502 20–50 °C

203702 40–90 °C



1 25

1 –

### 475

Contact probe mounting bracket. For thermostatic control heads 203 series.



Code

475001



1 –

### 475

Probe pocket. For thermostatic control heads 203 series.



Code

475002 for code 203502

475003 for code 203702



1 –

1 –

### 472

Thermostatic control head with remote adjusting knob, liquid-filled element. For valves 220, 221, 222, 223, 224, 225, 226, 227 series (direct coupling). For valves 338, 339, 401, 402, 455 series (coupling with adapter). Temperature range: 6–28 °C. Capillary length: 2 m.



Code

472000



1 5



## WALL-COVERING PLATES



### 4499

Single wall-covering plate.  
White colour RAL 9010.  
For pipes with external diameter  
from 12 to 20 mm.

Code

**449900**



1



40



### 4499

Single wall-covering plate.  
Chrome plated.  
For pipes with external diameter  
from 12 to 20 mm.

Code

**449910**



1



40



### 4499

Double wall-covering plate.  
White colour RAL 9010.  
For pipes with external diameter  
from 12 to 20 mm.

Code

**449901**

Outlet centre  
distance

35 mm



1



50

**449902**

40 mm

1

50



### 4499

Double wall-covering plate.  
Chrome plated.  
For pipes with external diameter  
from 12 to 20 mm.

Code

**449911**

Outlet centre  
distance

35 mm



1



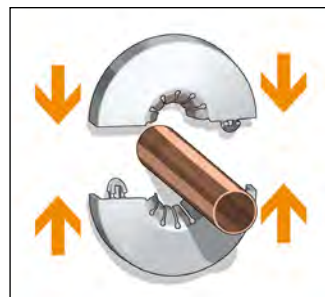
50

**449912**

40 mm

1

50



## THERMO-ELECTRIC ACTUATORS

### 6563

tech. broch. 01142



Thermo-electric actuator.  
With manual opening and position indicator.  
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.  
Normally closed. **With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Starting current (656344/54):  $\leq 250$  mA.  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Ambient temperature range: 0–50 °C.  
Protection class: IP 40.  
Cable length: 80 cm.  
PATENT.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656312 | 230                 | 1                             | 10   |
| 656314 | 24                  | 1                             | 10   |
| 656302 | 230                 | without auxiliary microswitch | 1 10 |
| 656304 | 24                  | without auxiliary microswitch | 1 10 |

#### With low power consumption

| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656354 | 24                  | 1                             | 10   |
| 656344 | 24                  | without auxiliary microswitch | 1 10 |

### 6561

tech. broch. 01042



Thermo-electric actuator.  
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.  
Normally closed. **With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 44 (vertical stem).  
Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656112 | 230                 | 1                             | 10   |
| 656114 | 24                  | 1                             | 10   |
| 656102 | 230                 | without auxiliary microswitch | 1 10 |
| 656104 | 24                  | without auxiliary microswitch | 1 10 |

### 6562

tech. broch. 01198



Thermo-electric actuator.  
With opening position indicator.  
**Quick-coupling installation, with a clip adapter.**  
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.  
Normally closed. **With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 54.  
Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656212 | 230                 | 1                             | 10   |
| 656214 | 24                  | 1                             | 10   |
| 656202 | 230                 | without auxiliary microswitch | 1 10 |
| 656204 | 24                  | without auxiliary microswitch | 1 10 |

### 6564

tech. broch. 01198



Thermo-electric actuator  
with low power consumption.  
With opening position indicator.  
**Quick-coupling installation, with a clip adapter.**  
For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 455 and 456 series.  
Normally closed. **With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 250$  mA.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 54.  
Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656412 | 230                 | 1                             | 10   |
| 656414 | 24                  | 1                             | 10   |
| 656402 | 230                 | without auxiliary microswitch | 1 10 |
| 656404 | 24                  | without auxiliary microswitch | 1 10 |



Adapter for installing thermostatic and thermo-electric actuator with valves 338, 339, 401, 402, 425, 426, 421, 422, 455 and 456 series.

| Code   |   |    |
|--------|---|----|
| F36077 | 1 | 50 |

## REMOTE THERMAL REGULATION SYSTEM FOR RADIATORS

### 215

#### Comfort control

Wireless electronic control for thermostatic or convertible radiator valves. Operates through Gateway, Gateway PRO, APP Caleffi CODE® and front buttons.

Built-in temperature sensor.

Radio communication: RF 868 MHz.

Quick-coupling installation with adapter.

Battery electric supply: 2 x AA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

White colour RAL 9003.

REGISTERED DESIGN.



Code

215510



1

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### 215

#### Sensor

Wireless ambient temperature sensor.

Operates through Gateway, Gateway PRO and APP Caleffi CODE®.

Radio communication: RF 868 MHz.

Battery electric supply: 2 x AAA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.

Ambient temperature range: 0–45 °C.

White colour RAL 9003.

REGISTERED DESIGN.



Code

215001



1

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### 215

#### Sensor PRO

Wireless ambient temperature sensor **with boiler contact**.

Operates through Gateway, Gateway PRO and APP Caleffi CODE®.

Radio communication: RF 868 MHz.

Battery electric supply: 2 x AAA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Boiler contact, max. 24 V (DC) 1 A.

Protection class: IP 30.

Ambient temperature range: 0–45 °C.

White colour RAL 9003.

REGISTERED DESIGN.



Code

215002



1

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Accessories for thermal regulation electronic system  
215 series.

Code

210005

tamper-proof kit for actuators



1

10

### 215

#### Gateway

Wireless multi-zone temperature regulation gateway.

Operation through Caleffi CODE® APP (Wi-Fi or Ethernet network connectivity required). Weekly programmable clock.

Settable time bands: up to 8 per day. Settable zones: up to 64.

Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.

Boiler contact, max. 24 V (DC) 1 A.

Compatible with OpenTherm connectivity.

Radio communication: RF 868 MHz, Wi-Fi, BLE.

Powered from USB type C power supply, (supplied in package),

input: 100–240 V (AC) - 0,5 A 50/60 Hz, output: 5 V (DC), 2 A.

**Class:** IV-VIII [Ecodesign Directive].

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

White colour RAL 9003.

REGISTERED DESIGN.



Code

215100



1

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### 215

#### Gateway PRO

Wireless multi-zone temperature regulation gateway, **with built-in GSM, UMTS, LTE modem**. Operation through Caleffi CODE® APP.

**It works with micro SIM** (not supplied).

**Compatible with MODBUS-RTU connectivity.**

Weekly programmable clock.

Settable time bands: up to 8 per day. Settable zones: up to 64.

Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.

Boiler contact, max. 24 V (DC) 1 A.

Compatible with OpenTherm connectivity.

Radio communication: RF 868 MHz, Wi-Fi, BLE.

Powered from USB type C power supply, (supplied in package),

input: 100–240 V (AC) - 0,5 A 50/60 Hz, output: 5 V (DC), 2 A.

**Class:** IV-VIII [Ecodesign Directive].

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

White colour RAL 9003.

REGISTERED DESIGN.



Code

215015



1

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Adapters for thermostatic and convertibles valves not  
produced by our company.

For RBM - Heimeier - Tiemme - Watts thermostatic valves  
with M30x1.5mm connection, use the adapter provided.

Code

210051

for Giacomini valves



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210052

for FAR valves

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F0001597

for Danfoss valves

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## REMOTE THERMAL REGULATION SYSTEM FOR RADIATORS

### 215

#### Comfort control

Wireless electronic control for thermostatic or convertible radiator valves. Operates through Gateway, Gateway PRO, APP Caleffi CODE® and front buttons.

Built-in temperature sensor.

Radio communication: RF 868 MHz.

Quick-coupling installation with adapter.

Battery electric supply: 2 x AA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

Black colour RAL 9005.

REGISTERED DESIGN.



Code

21510 BLK



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### 215

#### Sensor

Wireless ambient temperature sensor.

Operates through Gateway, Gateway PRO and APP Caleffi CODE®.

Radio communication: RF 868 MHz.

Battery electric supply: 2 x AAA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Protection class: IP 30.

Ambient temperature range: 0–45 °C.

Black colour RAL 9005.

REGISTERED DESIGN.



Code

215001 BLK



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### 215

#### Sensor PRO

Wireless ambient temperature sensor **with boiler contact**.

Operates through Gateway, Gateway PRO and APP Caleffi CODE®.

Radio communication: RF 868 MHz.

Battery electric supply: 2 x AAA batteries 1,5 V (in package).

Compatible with rechargeable batteries.

Boiler contact, max. 24 V (DC) 1 A.

Protection class: IP 30.

Ambient temperature range: 0–45 °C.

Black colour RAL 9005.

REGISTERED DESIGN.



Code

215002 BLK



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Accessories for thermal regulation electronic system 215 series.

Code

210005 tamper-proof kit for actuators



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### 215

#### Gateway

Wireless multi-zone temperature regulation gateway.

Operation through Caleffi CODE® APP (Wi-Fi or Ethernet network connectivity required). Weekly programmable clock.

Settable time bands: up to 8 per day. Settable zones: up to 64.

Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.

Boiler contact, max. 24 V (DC) 1 A.

Compatible with OpenTherm connectivity.

Radio communication: RF 868 MHz, Wi-Fi, BLE.

Powered from USB type C power supply, (supplied in package),

input: 100–240 V (AC) - 0,5 A 50/60 Hz,

output: 5 V (DC), 2 A.

**Class:** IV-VIII [Ecodesign Directive].

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

Black colour RAL 9005.

REGISTERED DESIGN.



Code

215100 BLK



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### 215

#### Gateway PRO

Wireless multi-zone temperature regulation gateway, **with built-in GSM, UMTS, LTE modem**. Operation through Caleffi CODE® APP.

**It works with micro SIM** (not supplied).

**Compatible with MODBUS-RTU connectivity.**

Weekly programmable clock.

Settable time bands: up to 8 per day. Settable zones: up to 64.

Quick functions: Auto - Eco Mode - Holiday - Manual - OFF - Boost - Clean.

Boiler contact, max. 24 V (DC) 1 A.

Compatible with OpenTherm connectivity.

Radio communication: RF 868 MHz, Wi-Fi, BLE.

Powered from USB type C power supply,

(supplied in package),

input: 100–240 V (AC) - 0,5 A 50/60 Hz,

output: 5 V (DC), 2 A.

**Class:** IV-VIII [Ecodesign Directive].

Protection class: IP 30.

Ambient temperature range: 0–55 °C.

Black colour RAL 9005.

REGISTERED DESIGN.



Code

215015 BLK



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Knob for lockshields.

Code

449300 BLK black colour



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Adapters for thermostatic and convertibles valves not produced by our company.

For RBM - Heimeier - Tiemme - Watts thermostatic valves with M30x1.5mm connection, use the adapter provided.

Code

210051 for Giacomini valves

210052 for FAR valves

F0001597 for Danfoss valves



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## MANUAL RADIATOR AND LOCKSHIELD VALVES



### 340

tech. broch. 01030

Angled manual radiator valve.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |  |  |
|--------|---------------------|-----------------|-----------|---|---|
| 340302 | 3/8"                | 23 p.1,5        | 2,42      | 10  | 50  |
| 340402 | 1/2"                | 23 p.1,5        | 3,99      | 10  | 50  |
| 340452 | 1/2"                | 3/4"            | 3,99      | 10  | 50  |



### 342

tech. broch. 01030

Angled lockshield valve.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|---|
| 342302 | 3/8"                | 23 p.1,5        | 2,42                 | 10  | 50  |
| 342402 | 1/2"                | 23 p.1,5        | 3,99                 | 10  | 50  |
| 342452 | 1/2"                | 3/4"            | 3,99                 | 10  | 50  |



### 341

tech. broch. 01030

Straight manual radiator valve.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |  |  |
|--------|---------------------|-----------------|-----------|---|---|
| 341302 | 3/8"                | 23 p.1,5        | 1,32      | 10  | 50  |
| 341402 | 1/2"                | 23 p.1,5        | 2,17      | 10  | 50  |



### 343

tech. broch. 01030

Straight lockshield valve.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) fully open |  |  |
|--------|---------------------|-----------------|----------------------|---|---|
| 343302 | 3/8"                | 23 p.1,5        | 1,32                 | 10  | 50  |
| 343402 | 1/2"                | 23 p.1,5        | 2,17                 | 10  | 50  |



### 411

tech. broch. 01030

Angled manual radiator valve.  
Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code     | Radiator connection | Pipe connection     | Kv (m³/h) |  |  |
|----------|---------------------|---------------------|-----------|---|---|
| 411302   | 3/8"                |                     | 2,42      | 10  | 50  |
| 411402   | 1/2"                |                     | 3,99      | 10  | 50  |
| 411422*  | 1/2"                |                     | 3,99      | 10  | 50  |
| 401500** | 3/4"                | without rubber seal | 3,36      | 5   | 25  |
| 401603** | 1"                  | without rubber seal | 4,47      | 5   | 25  |

\* with chrome plated knob



\*\* convertible radiator valve



### 431

tech. broch. 01030

Angled lockshield valve.  
Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code    | Radiator connection | Pipe connection     | Kv (m³/h) fully open |  |  |
|---------|---------------------|---------------------|----------------------|---|---|
| 431302  | 3/8"                |                     | 2,42                 | 10  | 50  |
| 431402  | 1/2"                |                     | 3,99                 | 10  | 50  |
| 431422* | 1/2"                |                     | 3,99                 | 10  | 50  |
| 431503  | 3/4"                | without rubber seal | 4,52                 | 5   | 25  |
| 431603  | 1"                  | without rubber seal | 5,64                 | 5   | 25  |



\* with chrome plated knob



### 412

tech. broch. 01030

Straight manual radiator valve.  
Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code     | Radiator connection | Pipe connection     | Kv (m³/h) |  |  |
|----------|---------------------|---------------------|-----------|---|---|
| 412302   | 3/8"                |                     | 1,32      | 10  | 50  |
| 412402   | 1/2"                |                     | 2,17      | 10  | 50  |
| 412422*  | 1/2"                |                     | 2,17      | 10  | 50  |
| 412503   | 3/4"                | without rubber seal | 2,58      | 5   | 25  |
| 402603** | 1"                  | without rubber seal | 4,43      | 5   | 25  |

\* with chrome plated knob



\*\* convertible radiator valve



### 432

tech. broch. 01030

Straight lockshield valve.  
Chrome plated.  
For steel pipe.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

| Code    | Radiator connection | Pipe connection     | Kv (m³/h) fully open |  |  |
|---------|---------------------|---------------------|----------------------|---|---|
| 432302  | 3/8"                |                     | 1,32                 | 10  | 50  |
| 432402  | 1/2"                |                     | 2,17                 | 10  | 50  |
| 432422* | 1/2"                |                     | 2,17                 | 10  | 50  |
| 432503  | 3/4"                | without rubber seal | 2,58                 | 5   | 25  |
| 432603  | 1"                  | without rubber seal | 4,81                 | 5   | 25  |

\* with chrome plated knob



## ONE-PIPE AND TWO-PIPE RADIATOR VALVES FOR DESIGNER HEATING SYSTEMS

### 4005



Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.  
**High chrome finish.**

Factory set for one-pipe systems, adjustable for two-pipe systems.

**Right-hand version.**

For copper, single and multilayer plastic pipes.

Flow rate to the radiator:

- with manual control knob: 45 %
- with thermostatic control head (proportional band 2K): 30 %

Outlet centre distance: 40 mm.

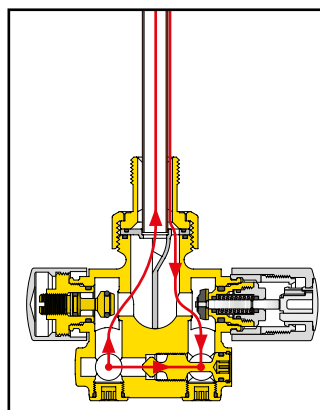
Brass probe: 40 cm.

Max. working pressure: 10 bar.

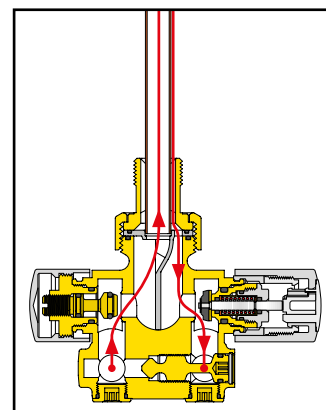
Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m <sup>3</sup> /h) |          |   |   |
|--------|---------------------|-----------------|------------------------|----------|---|---|
|        |                     |                 | one-pipe               | two-pipe |   |   |
| 400510 | 1/2"                | 23 p.1,5        | 1,6                    | 0,96     | 1 | 5 |

### One-pipe application



### Two-pipe application



Flow and return connections can be inverted by means of the rotation of the specific deflector.

### 4005



Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

**High chrome finish.**

Factory set for one-pipe systems, adjustable for two-pipe systems.

**Left-hand version.**

For copper, single and multilayer plastic pipes.

Flow rate to the radiator:

- with manual control knob: 45 %
- with thermostatic control head (proportional band 2K): 30 %

Outlet centre distance: 40 mm.

Brass probe: 40 cm.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.

| Code   | Radiator connection | Pipe connection | Kv (m <sup>3</sup> /h) |          |   |   |
|--------|---------------------|-----------------|------------------------|----------|---|---|
|        |                     |                 | one-pipe               | two-pipe |   |   |
| 400520 | 1/2"                | 23 p.1,5        | 1,6                    | 0,96     | 1 | 5 |

Installation example of the designer heating system radiator valve, vertical probe, left-hand version, with thermostatic control head



## VALVES FOR ONE-PIPE SYSTEMS

### 456

tech. broch. 01323

Convertible radiator valve fitted for thermostatic and electronic control heads, thermo-electric actuators.

For one-pipe systems.

For copper, single and multilayer plastic pipes.

Flow rate to the radiator:

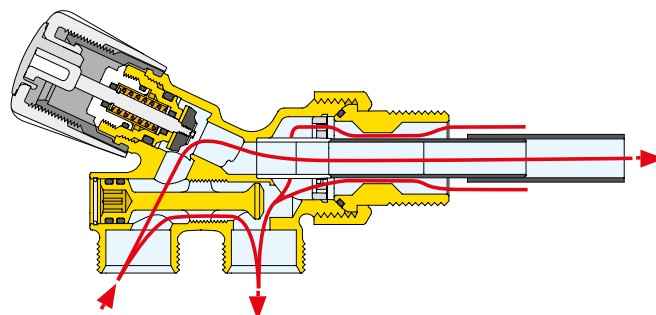
- with manual control knob: 27 %
- with thermostatic control head (proportional band 2K): 20 %

Outlet centre distance: 35 mm.

PP probe: 33 cm.

Max. working pressure: 10 bar.

Temperature range: 5–100 °C.



Flow and return connections can be inverted

| Code   | Radiator connection | Pipe connection | Kv (m <sup>3</sup> /h) |  |    |   |
|--------|---------------------|-----------------|------------------------|--|----|---|
|        |                     |                 |                        |  |    |   |
| 456400 | 1/2"                | 23 p.1,5        | 1,6                    |  | 10 | – |
| 456500 | 3/4"                | 23 p.1,5        | 1,6                    |  | 10 | – |

## ONE-PIPE AND TWO-PIPE RADIATOR VALVES

### 455

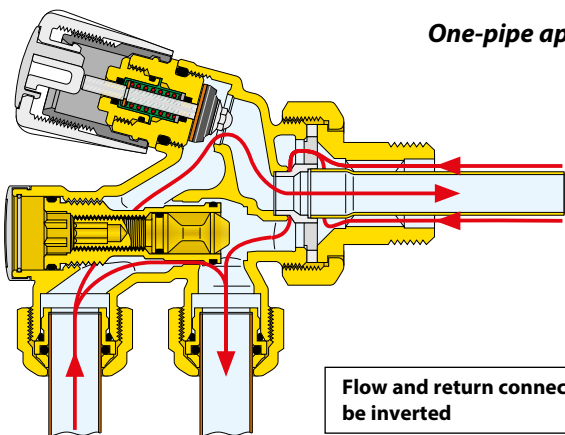
tech. broch. 01051

Convertible radiator valve fitted for thermostatic control heads and thermo-electric actuator. Chrome plated.  
Factory set for one-pipe systems, adjustable for two-pipe systems.  
For copper, single and multilayer plastic pipes.  
Outlet centre distance: 40 mm.  
Brass probe: 30 cm.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



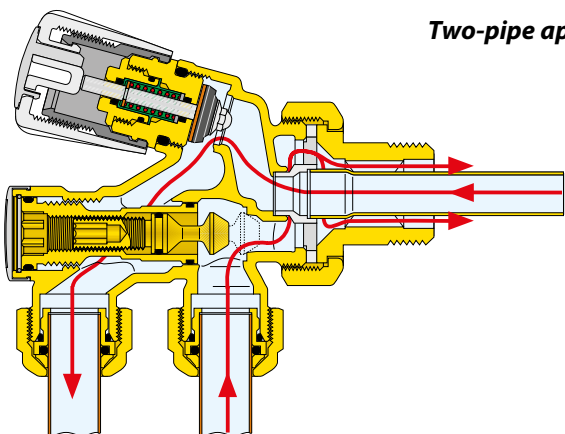
| Code   | Radiator connection | Pipe connection | Kv (m³/h) |          |      |
|--------|---------------------|-----------------|-----------|----------|------|
|        |                     |                 | one-pipe  | two-pipe |      |
| 455400 | 1/2"                | 23 p.1,5        | 2,00      | 1,10     | 10 – |
| 455500 | 3/4"                | 23 p.1,5        | 2,00      | 1,10     | 10 – |
| 455600 | 1" right            | 23 p.1,5        | 2,00      | 1,10     | 10 – |
| 455601 | 1" left             | 23 p.1,5        | 2,00      | 1,10     | 10 – |

### One-pipe application



Flow and return connections can be inverted

### Two-pipe application



### 4501

Radiator valve for one-pipe systems. Chrome plated.  
For copper, single and multilayer plastic pipes.  
Flow rate to the radiator: 100 %.  
Without template and wall-covering plate.  
Outlet centre distance: 40 mm.  
Brass probe: 30 cm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |    |    |
|--------|---------------------|-----------------|-----------|----|----|
| 450140 | 1/2"                | 23 p.1,5        | 3,20      | 10 | 40 |
| 450150 | 3/4"                | 23 p.1,5        | 3,70      | 10 | –  |

### 348

Radiator valve for one-pipe systems. Chrome plated.  
For copper, single and multilayer plastic pipes.  
Flow rate to the radiator: 100 %.  
With front adjusting handle.  
Without template and wall-covering plate.  
Outlet centre distance: 40 mm.  
Brass probe: 30 cm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |    |   |
|--------|---------------------|-----------------|-----------|----|---|
| 348400 | 1/2"                | 23 p.1,5        | 3,10      | 10 | – |
| 348500 | 3/4"                | 23 p.1,5        | 3,50      | 10 | – |

### 452

Radiator valve for one-pipe systems. Chrome plated.  
For copper, single and multilayer plastic pipes.  
Flow rate to the radiator: 50 %.  
For Ø 15 mm outside probe (454 series).  
Wall connections.  
Complete with template, wall-covering plate and probe connection.  
Outlet centre distance: 40 mm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |   |    |
|--------|---------------------|-----------------|-----------|---|----|
| 452400 | 1/2"                | 23 p.1,5        | 2,20      | 1 | 25 |

## ONE-PIPE AND TWO-PIPE RADIATOR VALVES AND ACCESSORIES

### 452

Radiator valve for two-pipe systems.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
For Ø 15 mm outside probe (454 series).  
Wall connections.  
Complete with template, wall-covering plate  
and probe connection.

Outlet centre distance: 40 mm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |   |    |
|--------|---------------------|-----------------|-----------|---|----|
| 452401 | 1/2"                | 23 p.1,5        | 1,80      | 1 | 25 |

### 328

Radiator valve for one-pipe systems.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
Flow rate to the radiator: 50 %.  
For Ø 15 mm outside probe (454 series).  
Floor connections.  
Complete with probe connection.

Outlet centre distance: 40 mm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |   |    |
|--------|---------------------|-----------------|-----------|---|----|
| 328400 | 1/2"                | 23 p.1,5        | 2,20      | 1 | 20 |

### 328

Radiator valve for two-pipe systems.  
Chrome plated.  
For copper, single and multilayer plastic pipes.  
For Ø 15 mm outside probe (454 series).  
Floor connections.  
Complete with probe connection.

Outlet centre distance: 40 mm.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.



| Code   | Radiator connection | Pipe connection | Kv (m³/h) |   |    |
|--------|---------------------|-----------------|-----------|---|----|
| 328401 | 1/2"                | 23 p.1,5        | 1,80      | 1 | 20 |



### 459

Angled connection for one-pipe valves 328 and 452 series and convertible radiator valves code 339402.  
Chrome plated.

| Code   |                     |    |   |
|--------|---------------------|----|---|
| 459001 | 1/2" M x 3/4" F nut | 10 | - |



### 4496

Wall template.  
For valves 4501, 452, 328, 348 and 455 series.  
Outlet centre distance: 40 mm.

| Code   |  |    |   |
|--------|--|----|---|
| 449640 |  | 10 | - |



### 453

Brass pipe extension for probe.  
For valves 348, 4501 and 455 series.

| Code   |                                   |    |   |
|--------|-----------------------------------|----|---|
| 453020 | 200 mm (x 348-4501-455400-455500) | 10 | - |
| 453030 | 300 mm (x 455600-455601)          | 10 | - |

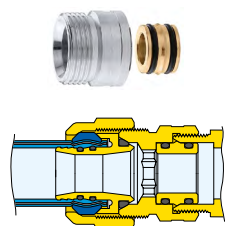


### 454

Ø 15 mm brass outside probe. Chrome plated.  
To be connected with valves 452 and 328 series at the bottom and radiator valves 223, 227, 339 and 341 series.

| Code   |        |   |   |
|--------|--------|---|---|
| 454060 | 600 mm | 5 | - |
| 454090 | 900 mm | 5 | - |

## ACCESSORIES



**383**

Connection fitting with O-Ring seal for use with 3/4" 679 and 681 series. Chrome plated.

Code

|               |                     |    |     |
|---------------|---------------------|----|-----|
| <b>383551</b> | 3/4" M x 23 p.1,5 F | 10 | 100 |
|---------------|---------------------|----|-----|



**382**

Reduced tailpiece. Chrome plated.

Code

|               |                     |   |   |
|---------------|---------------------|---|---|
| <b>382532</b> | 3/4" F nut x 3/8" M | 1 | - |
|---------------|---------------------|---|---|



**381**

Telescopic union tailpiece with nut for radiator valves and lockshield valves. Extension range: 15 mm. Max. working pressure: 10 bar. Max. working temperature: 100 °C. Chrome plated.

Code

|               |                     |   |    |
|---------------|---------------------|---|----|
| <b>381302</b> | 1/2" F nut x 3/8" M | 1 | 10 |
| <b>381402</b> | 3/4" F nut x 1/2" M | 1 | 10 |



**383**

Female fitting - olive coupling. Chrome plated.

Code

|               |                     |    |   |
|---------------|---------------------|----|---|
| <b>383151</b> | 3/4" M x 23 p.1,5 F | 10 | - |
|---------------|---------------------|----|---|



**384**

Male fitting - olive coupling. Chrome plated.

Code

|               |                     |    |   |
|---------------|---------------------|----|---|
| <b>384031</b> | 3/8" M x 23 p.1,5 M | 10 | - |
| <b>384041</b> | 1/2" M x 23 p.1,5 M | 10 | - |



**382**

Fitting with 23 p.1,5 captive nut. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

Code

|               |                             |    |   |
|---------------|-----------------------------|----|---|
| <b>382000</b> | 23 p.1,5 M x 23 p.1,5 F nut | 10 | - |
|---------------|-----------------------------|----|---|



**942**

Sleeve. Chrome plated.

Code

|               |               |   |   |
|---------------|---------------|---|---|
| <b>942551</b> | 3/4" M x 3/4" | 1 | - |
| <b>942561</b> | 3/4" M x 1"   | 1 | - |

**936**

Extension for connection between elbow fitting 933 series and radiator valves. Annealed copper, chrome plated. With shaped rubber seal. Length: 200 mm (useful 188 mm).



Code

|               |             |   |    |
|---------------|-------------|---|----|
| <b>936400</b> | 1/2" x Ø 16 | 1 | 50 |
|---------------|-------------|---|----|



**3871**

Universal key. Use for 3/8" to 1" union tailpiece.

Code

|               |  |   |    |
|---------------|--|---|----|
| <b>387127</b> |  | 1 | 10 |
|---------------|--|---|----|



**3871**

Wrench for 26 and 30 mm hexagonal nuts. For fittings 437, 447, 679, 680, 681 23 p.1,5 and 3/4" series.

Code

|               |  |   |   |
|---------------|--|---|---|
| <b>387100</b> |  | 1 | 4 |
|---------------|--|---|---|



**560**

Drain cock for radiators and wall-mounted boilers. Max. working pressure: 10 bar. Max. working temperature: 100 °C. Chrome plated.

Code

|                 |                           |    |   |
|-----------------|---------------------------|----|---|
| <b>560421</b> ♦ | 1/2"                      | 10 | - |
| <b>560000</b>   | extractor hose connection | 25 | - |

♦ One extractor hose connection code 560000 is included in each 10-item package.

tech. broch. 01056

## SPARE PARTS

### 3872

Replacement kit for radiator valves headwork. Equipped with 20 spare headworks (only for valves without pre-setting)

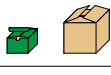
**Only for 3/8" and 1/2" valves.**

For valves 338, 339, 401, 402, 425, 426, 421, 422, 230, 231, 232, 233, 234, 237, 220, 221, 222, 223, 224, 225, 226, 227, 456 and 4005.



Code

**387201**



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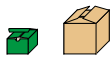
### 3872

Adapting kit for headwork tool code 387200 to new headwork tool code 387201.



Code

**387211**



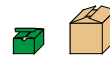
1

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Code

**F39146**



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Spare headworks for **convertible and thermostatic radiator valves** 338, 339, 401, 402, 220, 221, 222, 223, 224, 227, 225 and 226 series.

Only for 3/8" and 1/2" sizes.



Code

**F49290**



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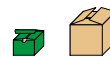
Spare headworks for **convertible radiator valves with pre-setting** 425, 426, 421 and 422 series.

Only for 3/8" and 1/2" sizes.



Code

**230000**



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Spare headworks for **dynamic thermostatic radiator valves** 230, 231, 232, 233, 234 and 237 series.



Code

**338000**



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Spare headworks for **reverse flow** for convertible and thermostatic radiator valves 338, 339, 401, 402, 220, 221, 222, 223, 224, 227, 225 and 226 series.

Only for 3/8" and 1/2" sizes.



Code

**421000**



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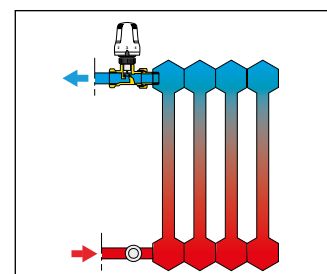
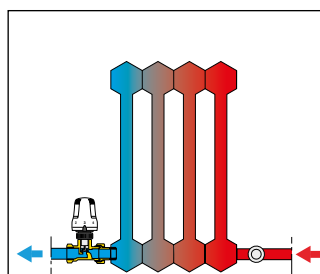
-

Spare headworks for **reverse flow** for convertible radiator valves with pre-setting 421, 422, 425 and 426 series.

Only for 3/8" and 1/2" sizes.

PATENT PENDING.

#### Installation with reverse flow





## FITTINGS 23 p.1,5



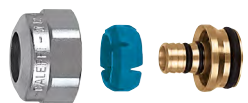
### 679 DARCAL

Fitting for multilayer plastic pipes for continuous high temperature use.  
Max. working pressure: 10 bar.  
Temperature range: 0–95 °C.  
Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 99).

| Code    |                                  |    |     |  |
|---------|----------------------------------|----|-----|--|
| 679014  | 23 p.1,5 - Ø 14x2                | 10 | 100 |  |
| 679024  | 23 p.1,5 - Ø 16x2                | 10 | 100 |  |
| 679025  | 23 p.1,5 - Ø 16x2,25             | 10 | 100 |  |
| 679044  | 23 p.1,5 - Ø 18x2                | 10 | 100 |  |
| 679064* | 23 p.1,5 - Ø 20x2                | 10 | 100 |  |
| 679065* | 23 p.1,5 - Ø 20x2,25             | 10 | 100 |  |
| 679066* | 23 p.1,5 - Ø 20x2,5              | 10 | 100 |  |
| 679067* | 23 p.1,5 - Ø 20x2,9 (REHAU pipe) | 10 | 100 |  |

\* With metal ring

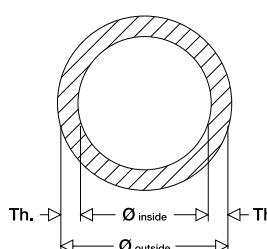


### 681 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).  
Chrome plated.

| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|----------|---------------------|----------------------|----|-----|
| 681000 | 23 p.1,5 | 7,5– 8              | 12–14                | 10 | 100 |
| 681002 | 23 p.1,5 | 9 – 9,5             | 14–16                | 10 | 100 |
| 681001 | 23 p.1,5 | 9,5–10              | 12–14                | 10 | 100 |
| 681006 | 23 p.1,5 | 9,5–10              | 14–16                | 10 | 100 |
| 681015 | 23 p.1,5 | 10,5–11             | 14–16                | 10 | 100 |
| 681017 | 23 p.1,5 | 10,5–11             | 16–18                | 10 | 100 |
| 681024 | 23 p.1,5 | 11,5–12             | 14–16                | 10 | 100 |
| 681026 | 23 p.1,5 | 11,5–12             | 16–18                | 10 | 100 |
| 681035 | 23 p.1,5 | 12,5–13             | 16–18                | 10 | 100 |
| 681044 | 23 p.1,5 | 13,5–14             | 16–18                | 10 | 100 |

#### Example: 681 series fitting selection



Known both the outside and inside diameters (ex.: 17 mm and 13 mm);  
or known the outside diameter (ex.: Ø 17 mm) and the thickness (ex.: th. 2 mm) and considering that:

$$\text{Ø}_{\text{outside}} - 2 \cdot \text{th.} = \text{Ø}_{\text{inside}}$$

$$17 - 2 \cdot 2 = 13 \text{ mm}$$

Look within the table for the code matching both diameters:

| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 681035 | 23 p.1,5 | 12,5–13             | 16–18                |



### 447

Pre-assembled compression fitting, for soft annealed copper, hard copper, brass, mild and stainless steel pipes.  
With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.  
Chrome plated.

| Code   |                 |     |   |  |
|--------|-----------------|-----|---|--|
| 447010 | 23 p.1,5 - Ø 10 | 100 | – |  |
| 447012 | 23 p.1,5 - Ø 12 | 100 | – |  |
| 447014 | 23 p.1,5 - Ø 14 | 100 | – |  |
| 447015 | 23 p.1,5 - Ø 15 | 100 | – |  |
| 447016 | 23 p.1,5 - Ø 16 | 100 | – |  |



### 437

Compression fitting, for soft annealed copper, hard copper, brass, mild and stainless steel pipes.  
With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.  
Chrome plated.

| Code   |                 |     |   |  |
|--------|-----------------|-----|---|--|
| 437010 | 23 p.1,5 - Ø 10 | 100 | – |  |
| 437012 | 23 p.1,5 - Ø 12 | 100 | – |  |
| 437014 | 23 p.1,5 - Ø 14 | 100 | – |  |
| 437015 | 23 p.1,5 - Ø 15 | 100 | – |  |
| 437016 | 23 p.1,5 - Ø 16 | 100 | – |  |

### 439

Fitting for copper pipe, with gasket.  
Chrome plated.  
**Do not use with valves 232 series.**



| Code   |                 |     |   |  |
|--------|-----------------|-----|---|--|
| 439010 | 23 p.1,5 - Ø 10 | 100 | – |  |
| 439012 | 23 p.1,5 - Ø 12 | 100 | – |  |
| 439014 | 23 p.1,5 - Ø 14 | 100 | – |  |
| 439015 | 23 p.1,5 - Ø 15 | 100 | – |  |
| 439016 | 23 p.1,5 - Ø 16 | 100 | – |  |



### 438

Compression fitting for copper pipe, with PTFE seal.  
Chrome plated.

| Code   |                                  |     |   |  |
|--------|----------------------------------|-----|---|--|
| 438010 | 23 p.1,5 - Ø 10                  | 100 | – |  |
| 438012 | 23 p.1,5 - Ø 12                  | 100 | – |  |
| 438014 | 23 p.1,5 - Ø 14                  | 100 | – |  |
| 438015 | 23 p.1,5 - Ø 15                  | 100 | – |  |
| 438016 | 23 p.1,5 - Ø 16                  | 100 | – |  |
| 438018 | 23 p.1,5 - Ø 18 with metal olive | 100 | – |  |

## FITTINGS 3/4"



### 679 DARGAL

Fitting for multilayer plastic pipes for continuous high temperature use.  
Max. working pressure: 10 bar.  
Temperature range: 0–95 °C.  
Chrome plated.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 99).

| Code   |                  |    |     |  |
|--------|------------------|----|-----|--|
| 679264 | 3/4" - Ø 20x2    | 10 | 100 |  |
| 679265 | 3/4" - Ø 20x2,25 | 10 | 100 |  |
| 679266 | 3/4" - Ø 20x2,5  | 10 | 100 |  |



### 681 DARGAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).  
Chrome plated.

| Code   |      | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|------|---------------------|----------------------|----|-----|
| 681502 | 3/4" | 7,5– 8              | 12–14                | 10 | 100 |
| 681500 | 3/4" | 9 – 9,5             | 14–16                | 10 | 100 |
| 681501 | 3/4" | 9,5–10              | 12–14                | 10 | 100 |
| 681506 | 3/4" | 9,5–10              | 14–16                | 10 | 100 |
| 681515 | 3/4" | 10,5–11             | 14–16                | 10 | 100 |
| 681517 | 3/4" | 10,5–11             | 16–18                | 10 | 100 |
| 681524 | 3/4" | 11,5–12             | 14–16                | 10 | 100 |
| 681526 | 3/4" | 11,5–12             | 16–18                | 10 | 100 |
| 681535 | 3/4" | 12,5–13             | 16–18                | 10 | 100 |
| 681537 | 3/4" | 12,5–13             | 18–20                | 10 | 100 |
| 681546 | 3/4" | 13,5–14             | 18–20                | 10 | 100 |
| 681555 | 3/4" | 14,5–15             | 18–20                | 10 | 100 |
| 681556 | 3/4" | 15 – 15,5           | 18–20                | 10 | 100 |
| 681564 | 3/4" | 15,5–16             | 18–20                | 10 | 100 |



### 437

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes.  
With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.  
Chrome plated.  
For connecting pipes to special valves for panel radiators.

| Code   |             |     |   |
|--------|-------------|-----|---|
| 437510 | 3/4" - Ø 10 | 100 | – |
| 437512 | 3/4" - Ø 12 | 100 | – |
| 437514 | 3/4" - Ø 14 | 100 | – |
| 437515 | 3/4" - Ø 15 | 100 | – |
| 437516 | 3/4" - Ø 16 | 100 | – |
| 437518 | 3/4" - Ø 18 | 10  | – |



### 438

Compression fitting for copper pipe, with PTFE seal.  
Chrome plated.

| Code   |             |     |   |
|--------|-------------|-----|---|
| 438512 | 3/4" - Ø 12 | 100 | – |
| 438514 | 3/4" - Ø 14 | 100 | – |
| 438515 | 3/4" - Ø 15 | 100 | – |
| 438516 | 3/4" - Ø 16 | 100 | – |
| 438518 | 3/4" - Ø 18 | 100 | – |

## CALIBRATOR FOR MULTILAYER PIPES

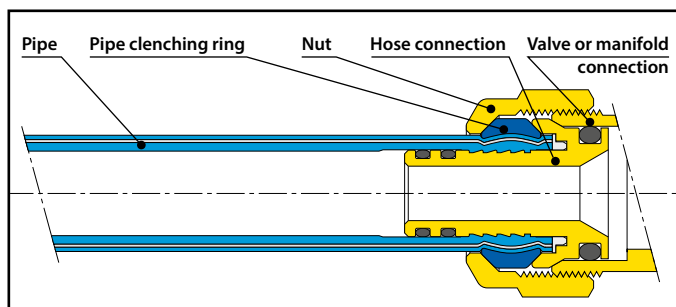
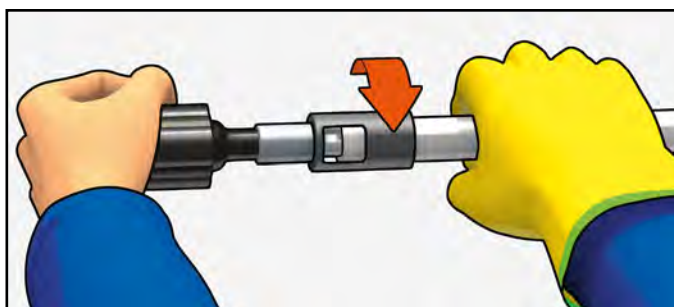


### 679

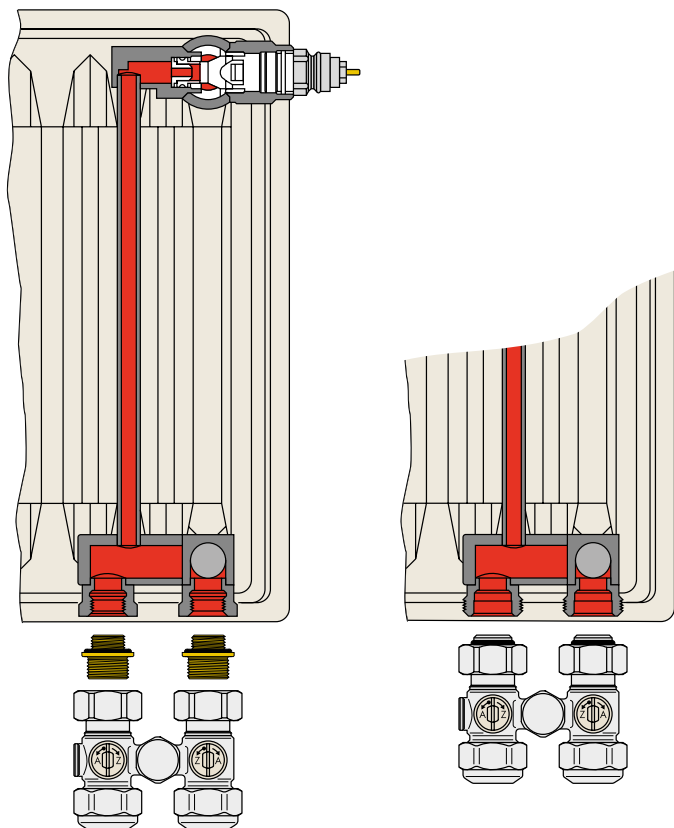
Calibrator and handle to adjust multilayer pipes diameter before use with fittings 679 series.

| Code   |                       |   |   |
|--------|-----------------------|---|---|
| 679001 | calibrator Ø 14x2     | 1 | – |
| 679002 | calibrator Ø 16x2     | 1 | – |
| 679003 | calibrator Ø 16x2,25  | 1 | – |
| 679004 | calibrator Ø 18x2     | 1 | – |
| 679006 | calibrator Ø 20x2     | 1 | – |
| 679007 | calibrator Ø 20x2,25  | 1 | – |
| 679008 | calibrator Ø 20x2,5   | 1 | – |
| 679009 | handle for calibrator | 1 | – |
| 679010 | calibrator Ø 26x3     | 1 | – |

### Multilayer pipe calibration and installation of fitting components 679 series



## VALVES FOR PANEL RADIATORS



This valves are installed on a particular kind of panel radiators, featuring both the connections at the bottom and an inner pipe, invisible from outside, providing the flow medium to the upper valve.

They come in two versions: for two-pipe and one-pipe systems. Both are available straight (pipes exiting the floor) and angled (pipes exiting the wall). The two-pipe version is equipped with two ball shut-off valves; the one-pipe, in addition to the shut-off valves, is equipped with an adjustable by-pass from 30 % to 50 % of the flow rate towards the radiator.

### 3010



Valve for panel radiators with built-in thermostatic valve unit. Single valve straight version (floor connections) with 1/2" F radiator connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301040 | 1/2" M              | 3/4"            | 1 | 25 |

### 3011



Valve for panel radiators with built-in thermostatic valve unit. Single valve angled version (wall connections) with 1/2" F radiator connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301140 | 1/2" M              | 3/4"            | 1 | 25 |

### 3012



Valve for panel radiators with built-in thermostatic valve unit. One-pipe straight version (floor connections) with 1/2" F radiator connections.  
With adjustable by-pass.  
**With non-return device.**  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301241 | 1/2" M              | 3/4"            | 1 | 25 |

### 3013



Valve for panel radiators with built-in thermostatic valve unit. One-pipe angled version (wall connections) with 1/2" F radiator connections.  
With adjustable by-pass.  
**With non-return device.**  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301341 | 1/2" M              | 3/4"            | 1 | 25 |



### 3010

Valve for panel radiators with built-in thermostatic valve unit. Single valve straight version (floor connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.



### 3014

Straight single valve for panel radiators with built-in thermostatic valve unit (floor connections) with 1/2" F radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301050 | 3/4" F              | 3/4"            | 1 | 25 |

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301440 | 1/2" M              | 3/4"            | 1 | 50 |



### 3011

Valve for panel radiators with built-in thermostatic valve unit. Single valve angled version (wall connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.



### 3015

Angled single valve for panel radiators with built-in thermostatic valve unit (wall connections) with 1/2" F radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301150 | 3/4" F              | 3/4"            | 1 | 25 |

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301540 | 1/2" M              | 3/4"            | 1 | 50 |



### 3012

Valve for panel radiators with built-in thermostatic valve unit. One-pipe straight version (floor connections) with 3/4" M radiator connections. With adjustable by-pass. **With non-return device.** Max. working pressure: 10 bar. Max. working temperature: 100 °C.



### 3014

Straight single valve for panel radiators with built-in thermostatic valve unit (floor connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301250 | 3/4" F              | 3/4"            | 1 | 25 |

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301450 | 3/4" F              | 3/4"            | 1 | 50 |



### 3013

Valve for panel radiators with built-in thermostatic valve unit. One-pipe angled version (wall connections) with 3/4" M radiator connections. With adjustable by-pass. **With non-return device.** Max. working pressure: 10 bar. Max. working temperature: 100 °C.



### 3015

Angled single valve for panel radiators with built-in thermostatic valve unit (wall connections) with 3/4" M radiator connections. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301350 | 3/4" F              | 3/4"            | 1 | 25 |

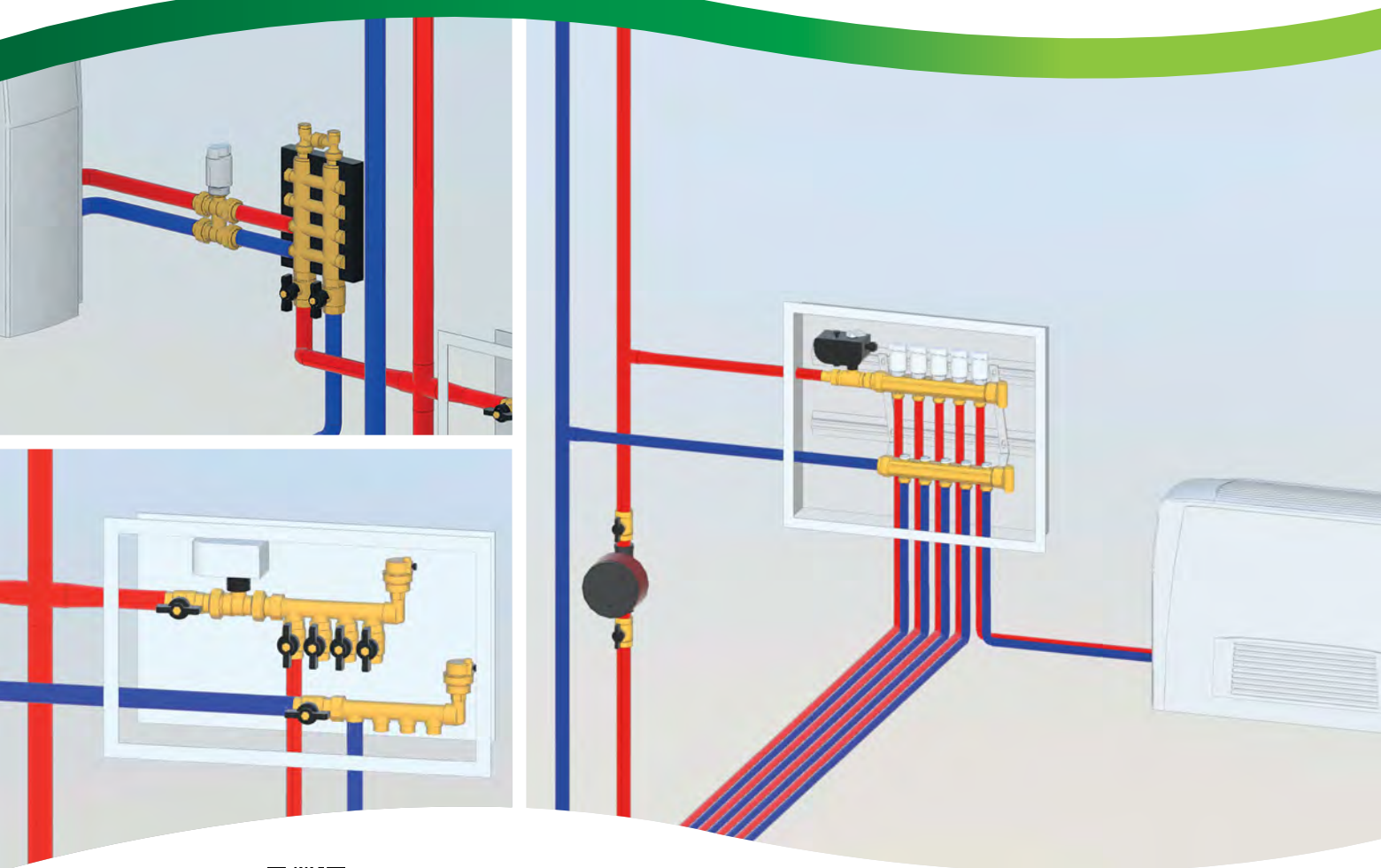
| Code   | Radiator connection | Pipe connection |   |    |
|--------|---------------------|-----------------|---|----|
| 301550 | 3/4" F              | 3/4"            | 1 | 50 |





# ZONE VALVES AND MOTORISED VALVES, DISTRIBUTION MANIFOLDS, WALL BOXES AND ACCESSORIES

4



**BIM**  
bim.caleffi.com

**Motorised ball zone valves**  
**Thermo-electric zone piston valves**  
**Motorised zone valves with spring return**  
**Motorised ball valves**  
**Motorised valves for central heating systems**  
**Butterfly valves**  
**Distribution manifolds**  
**Thermo-electric actuators**  
**Inspection wall boxes**

## TWO-WAY AND THREE-WAY VALVES, DISTRIBUTION MANIFOLDS AND BOXES

The zone valves perform the function of automatically shutting off the flow rate of the vector medium distributed to the system.

In particular:

- in zone heating systems, they assist in ambient temperature regulation;
- in domestic hot water production and storage systems they regulate the temperature inside storage boilers;
- in residential and industrial systems they shut off the medium in the distribution networks.

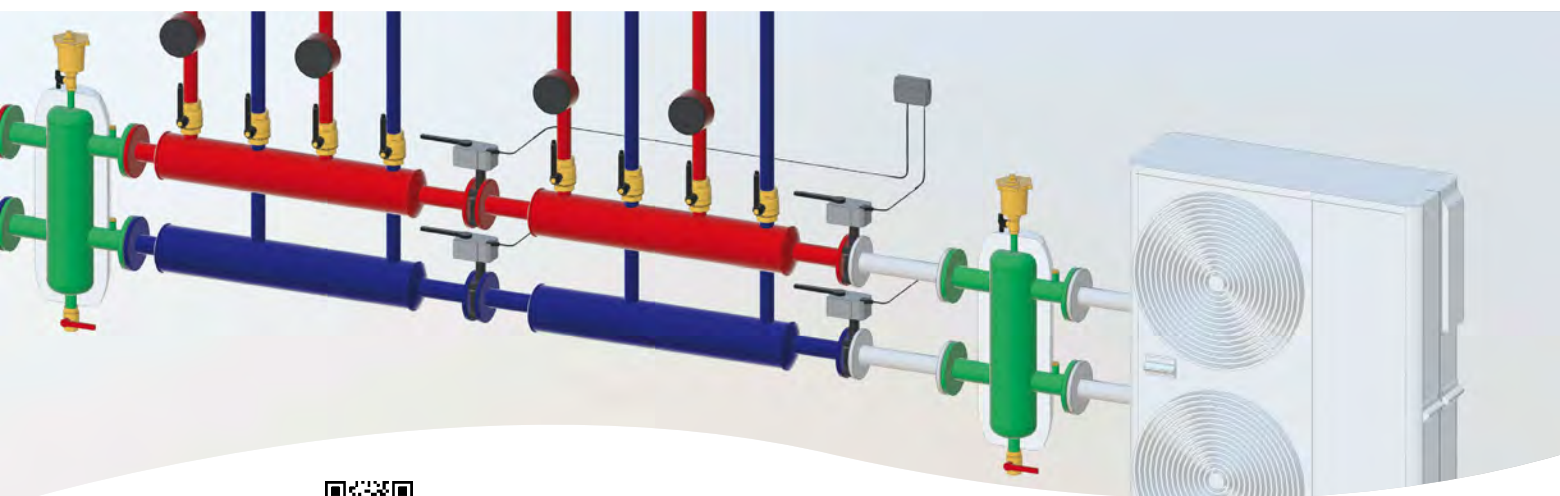
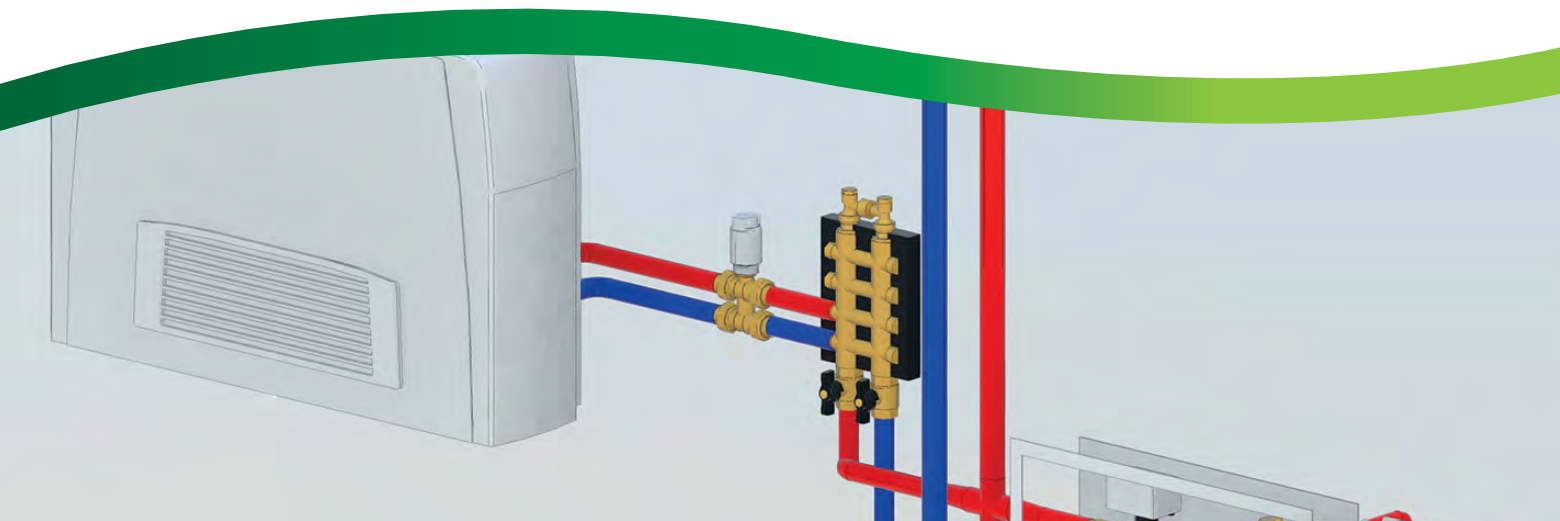
### Zone valves and motorised valves

- **Motorised ball zone valves**
- **Thermo-electric zone piston valves**
- **Motorised zone valves with spring return**
- **Motorised ball valves**
- **Motorised ball valves for high flow rates**
- **Motorised valves for central heating systems**
- **Butterfly valves**

### Distribution manifolds and boxes

- **Single manifolds**
- **Dual manifolds**
- **Manifolds with shut-off and pre-adjustment valves**
- **Thermo-electric actuators**
- **Fittings**
- **Plastic inspection wall boxes**
- **Sheet metal inspection wall boxes**




























## ZONE VALVES AND MOTORISED VALVES



 **BIM**  
bim.caleffi.com

**Motorised ball zone valves**  
**Thermo-electric piston zone valves**  
**Motorised zone valves with spring return**  
**Motorised ball valves**  
**Butterfly valves**

**TWO-WAY VALVES**

|  | Actuator   | Application  | Type of valve |        |        |           |       | Type of actuator |           |                              | Control signal |          |
|--|--|--|---------------|--------|--------|-----------|-------|------------------|-----------|------------------------------|----------------|----------|
|  |  |  | ball          | piston | paddle | butterfly | globe | thermo-electric  | motorised | motorised with spring return | 2 points       | 3 points |
| <b>642</b>              |  |   |               |        | ●      |           |       |                  |           | ●                            | ●              |          |
| <b>676</b>              | <b>656.</b>   |   |               | ●      |        |           |       | ●                |           |                              | ●              |          |
| <b>632</b>              | <b>630</b>    |   |               | ●      |        |           |       | ●                |           |                              | ●              |          |
| <b>6452</b>             |  |    | ●             |        |        |           |       |                  | ●         |                              | ●<br>(R)       |          |
| <b>6442 (40 sec)</b>    |  |    | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| <b>6442 (10 sec)</b>  |  |    | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| <b>638</b>            |  |   <br>(kit) | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| <b>639 - LUG</b>      | <b>639</b>  |    |               |        |        | ●         |       |                  | ●         |                              | ●              | ●        |
| <b>639 - WAFER</b>    | <b>639</b>  |    |               |        |        | ●         |       |                  | ●         |                              | ●              | ●        |

**Legend**


For heating systems



For cooling systems



Suitable for cooling with the use of insulation



For domestic water systems (check legislation in individual countries)

(R) with internal relay

(kit) with optional insulation kit

# THREE-WAY VALVES

|                       | Actuator | Application | Type of valve |        |        |           |       | Type of actuator |           |                              | Control signal |          |
|-----------------------|----------|-------------|---------------|--------|--------|-----------|-------|------------------|-----------|------------------------------|----------------|----------|
|                       |          |             | ball          | piston | paddle | butterfly | globe | thermo-electric  | motorised | motorised with spring return | 2 points       | 3 points |
| 643                   |          |             |               |        | ●      |           |       |                  |           | ●                            | ●              |          |
| 677                   |          | 656.        |               | ●      |        |           |       | ●                |           |                              | ●              |          |
| 678                   |          | 656.        |               | ●      |        |           |       | ●                |           |                              | ●              |          |
| 633                   |          | 630         |               | ●      |        |           |       | ●                |           |                              | ●              |          |
| 6453                  |          |             | ●             |        |        |           |       |                  | ●         |                              | ●<br>(R)       |          |
| 6443<br>(40 sec)      |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| 6443<br>(10 sec)      |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| 6443.. 3BY            |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| 6444                  |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| 638<br>("T" drilling) |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |
| 638<br>("L" drilling) |          |             | ●             |        |        |           |       |                  | ●         |                              |                | ●        |



## MOTORISED TWO-WAY BALL ZONE VALVES

### Operating time 10 s

#### 6442

tech. broch. 01131



Motorised two-way ball valve.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control.**

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC).

Power consumption: 8 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

**Operating time: 10 s (rotation 90°).**

Cable length: 100 cm.

PATENT.



| Code   | Supply voltage<br>V | Kv (m³/h) |      |      |
|--------|---------------------|-----------|------|------|
| 644246 | 1/2"                | 230       | 11,1 | 1 10 |
| 644256 | 3/4"                | 230       | 11,1 | 1 10 |
| 644248 | 1/2"                | 24        | 11,1 | 1 10 |
| 644258 | 3/4"                | 24        | 11,1 | 1 10 |

### Operating time 40 s

#### 6442

tech. broch. 01131



Motorised two-way ball zone valve.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control.**

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC).

Power consumption: 4 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

**Operating time: 40 s (90° rotation).**

Length of supply cable: 100 cm.

PATENT.



| Code   | Supply voltage<br>V | Kv (m³/h) |      |      |
|--------|---------------------|-----------|------|------|
| 644242 | 1/2"                | 230       | 11,1 | 1 10 |
| 644252 | 3/4"                | 230       | 11,1 | 1 10 |
| 644262 | 1"                  | 230       | 11,1 | 1 10 |
| 644244 | 1/2"                | 24        | 11,1 | 1 10 |
| 644254 | 3/4"                | 24        | 11,1 | 1 10 |
| 644264 | 1"                  | 24        | 11,1 | 1 10 |

## MOTORISED THREE-WAY BALL DIVERter VALVES

### Operating time 10 s

#### 6443

tech. broch. 01132



Motorised three-way diverter valve.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control.**

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC).

Power consumption: 8 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

**Operating time: 10 s (rotation 90°).**

Cable length: 100 cm.

PATENT.



| Code   | Supply voltage<br>V | Kv (m³/h) |     |     |
|--------|---------------------|-----------|-----|-----|
| 644346 | 1/2"                | 230       | 3,9 | 1 5 |
| 644356 | 3/4"                | 230       | 3,9 | 1 5 |
| 644357 | 3/4"                | 230       | 8,6 | 1 5 |
| 644366 | 1"                  | 230       | 9,0 | 1 5 |
| 644348 | 1/2"                | 24        | 3,9 | 1 5 |
| 644358 | 3/4"                | 24        | 3,9 | 1 5 |
| 644359 | 3/4"                | 24        | 8,6 | 1 5 |
| 644368 | 1"                  | 24        | 9,0 | 1 5 |

### Operating time 40 s

#### 6443

tech. broch. 01132



Motorised three-way diverter valve.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control. With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC).

Power consumption: 4 VA.

Auxiliary microswitch contact rating:

0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

**Operating time: 40 s (90° rotation).**

Cable length: 100 cm.

PATENT.



| Code   | Supply voltage<br>V | Kv (m³/h) |     |     |
|--------|---------------------|-----------|-----|-----|
| 644342 | 1/2"                | 230       | 3,9 | 1 5 |
| 644352 | 3/4"                | 230       | 3,9 | 1 5 |
| 644353 | 3/4"                | 230       | 8,6 | 1 5 |
| 644362 | 1"                  | 230       | 9,0 | 1 5 |
| 644344 | 1/2"                | 24        | 3,9 | 1 5 |
| 644354 | 3/4"                | 24        | 3,9 | 1 5 |
| 644355 | 3/4"                | 24        | 8,6 | 1 5 |
| 644364 | 1"                  | 24        | 9,0 | 1 5 |

## MOTORISED BALL DIVERter VALVES BY-PASS VERSION

### 6443.. 3BY

tech. broch. 01131



Motorised three-way ball zone valve, by-pass version.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.

**Equipped with actuator with 3-contact control. With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC).  
Power consumption: 4 VA.  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Ambient temperature range: 0–55 °C.  
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).  
Operating time: 40 s (90° rotation).  
Length of supply cable: 100 cm.  
PATENT.



| Code       | Supply voltage V | Kv (m³/h) straight | Kv (m³/h) by-pass |     |     |
|------------|------------------|--------------------|-------------------|-----|-----|
| 644342 3BY | 1/2"             | 230                | 10,3              | 1,8 | 1 5 |
| 644352 3BY | 3/4"             | 230                | 10,3              | 1,8 | 1 5 |
| 644362 3BY | 1"               | 230                | 10,3              | 1,8 | 1 5 |
| 644344 3BY | 1/2"             | 24                 | 10,3              | 1,8 | 1 5 |
| 644354 3BY | 3/4"             | 24                 | 10,3              | 1,8 | 1 5 |
| 644364 3BY | 1"               | 24                 | 10,3              | 1,8 | 1 5 |

## MOTORISED BALL DIVERter VALVES WITH TELESCOPIC BY-PASS TEE

### 6444

tech. broch. 01131



Motorised three-way ball zone valve with telescopic by-pass tee.  
Max. working pressure: 10 bar.  
Max. Δp: 10 bar.  
Temperature range: -5–110 °C.  
Tee complete with nozzle U6.

**Adjustable outlet centre distance from 49 to 63 mm.**

**Equipped with actuator with 3-contact control. With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC).  
Power consumption: 4 VA.  
Auxiliary microswitch contact rating: 0,8 A (230 V).  
Ambient temperature range: 0–55 °C.  
Protection class: IP 44 (vertical stem), IP 40 (horizontal stem).  
Operating time: 40 s (90° rotation).  
Length of supply cable: 100 cm.  
PATENT.



| Code   | Supply voltage V | Kv (m³/h) straight | Kv (m³/h) by-pass |     |     |
|--------|------------------|--------------------|-------------------|-----|-----|
| 644442 | 1/2"             | 230                | 10,3              | 1,2 | 1 5 |
| 644452 | 3/4"             | 230                | 10,3              | 1,2 | 1 5 |
| 644462 | 1"               | 230                | 10,3              | 1,2 | 1 5 |
| 644444 | 1/2"             | 24                 | 10,3              | 1,2 | 1 5 |
| 644454 | 3/4"             | 24                 | 10,3              | 1,2 | 1 5 |
| 644464 | 1"               | 24                 | 10,3              | 1,2 | 1 5 |

## ACCESSORIES AND SPARE PARTS

### 6440

tech. broch. 01132



3-contact control spare actuator for motorised ball zone valves 6443 series.  
**Operating time 10 s.**  
Supply: 230 V (AC) or 24 V (AC).



| Code   | Supply voltage V |   |    |
|--------|------------------|---|----|
| 644012 | 230              | 1 | 10 |
| 644014 | 24               | 1 | 10 |

### 6440

tech. broch. 01132



3-contact control spare actuator for motorised ball zone valve 6443 series.  
**Operating time 40 s.**  
Supply: 230 V (AC) or 24 V (AC).



| Code   | Supply voltage V |   |    |
|--------|------------------|---|----|
| 644002 | 230              | 1 | 10 |
| 644004 | 24               | 1 | 10 |

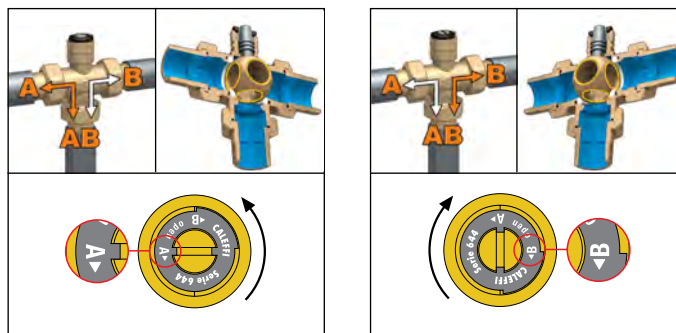
NEW

Insulation kit for heating and cooling systems.  
Medium temperature range: -10–110 °C.  
For motorised three-way ball valves 644 series.



| Code      | Use                         |   |   |
|-----------|-----------------------------|---|---|
| CBN644357 | 644353/57/62/66/55/59/64/68 | 1 | — |

### Operating diagram for 6443 series valve Operating time 10 s and 40 s - with "T" drilling



## MOTORIZED TWO-WAY BALL ZONE VALVES WITH INSULATION



### 6452

tech. broch. 01199

Motorised two-way ball zone valve, for heating and cooling systems. With manual opening lever.

**With insulation.**

Max. working pressure: 10 bar.

Max.  $\Delta p$ : 10 bar.

Temperature range: -10–110 °C.

**With auxiliary microswitch.**

Supply: 230 V (AC) o 24 V (AC).

Power consumption: 6 VA.

Auxiliary microswitch contact rating:

6 (2) A (230 V).



Ambient temperature range: -10–55 °C.

Protection class: IP 65.

Operating time: 50 s (90° rotation).

Length of supply cable: 80 cm.



| Code   |        | Supply voltage<br>V | Kv (m³/h) |  |  |
|--------|--------|---------------------|-----------|---|---|
| 645242 | 1/2"   | 230                 | 17,00     | 1   | –   |
| 645252 | 3/4"   | 230                 | 17,27     | 1   | –   |
| 645262 | 1"     | 230                 | 36,58     | 1   | –   |
| 645272 | 1 1/4" | 230                 | 39,50     | 1   | –   |
| 645244 | 1/2"   | 24                  | 17,00     | 1   | –   |
| 645254 | 3/4"   | 24                  | 17,27     | 1   | –   |
| 645264 | 1"     | 24                  | 36,58     | 1   | –   |
| 645274 | 1 1/4" | 24                  | 39,50     | 1   | –   |





### 6450

tech. broch. 01199

Spare actuator for motorised ball zone valves 6452 and 6453 series.

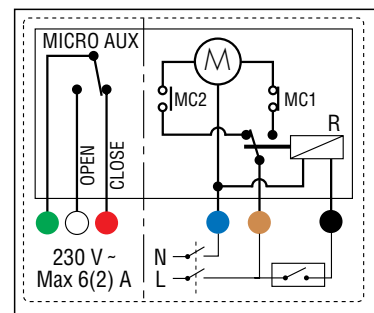
Supply: 230 V (AC) or 24 V (AC).



| Code   | Supply voltage<br>V |  |  |
|--------|---------------------|---|---|
| 645002 | 230                 | 1   | –   |
| 645004 | 24                  | 1   | –   |

### Wiring diagram for 6452 and 6453 series valves, two point actuator with internal relays, valve in closed position

- R relay
- MC1 opening end microswitch.
- MC2 closing end microswitch.
- MICRO AUX free auxiliary microswitch.



## MOTORIZED THREE-WAY BALL ZONE VALVES WITH INSULATION



### 6453

tech. broch. 01199

Motorised three-way ball zone valve, for heating and cooling systems. With manual opening lever.

#### With insulation.

Max. working pressure: 10 bar.  
Max. Δp: 10 bar.

Temperature range: -10–110 °C.

#### With auxiliary microswitch.

Supply: 230 V (AC) o 24 V (AC).

Power consumption: 6 VA.

Auxiliary microswitch contact rating: 6 (2) A (230 V).

Ambient temperature range: -10–55 °C.

Protection class: IP 65.

Operating time: 50 s (90° rotation).

Length of supply cable: 80 cm.



| Code   | Supply voltage V | Kv (m³/h) straight | Kv (m³/h) by-pass |      |     |
|--------|------------------|--------------------|-------------------|------|-----|
| 645342 | 1/2"             | 230                | 14,10             | 2,45 | 1 – |
| 645352 | 3/4"             | 230                | 14,43             | 2,50 | 1 – |
| 645362 | 1"               | 230                | 33,52             | 3,60 | 1 – |
| 645372 | 1 1/4"           | 230                | 36,00             | 3,80 | 1 – |
| 645344 | 1/2"             | 24                 | 14,10             | 2,45 | 1 – |
| 645354 | 3/4"             | 24                 | 14,43             | 2,50 | 1 – |
| 645364 | 1"               | 24                 | 33,52             | 3,60 | 1 – |
| 645374 | 1 1/4"           | 24                 | 36,00             | 3,80 | 1 – |



### 6459

tech. broch. 01199

By-pass tee.

For motorised ball zone valves 6453 series.

#### With insulation.

Max. working pressure: 10 bar.

Max. Δp: 10 bar.

Temperature range: -10–110 °C.

| Code   | Kv (m³/h) tee + valve in by-pass |      |     |
|--------|----------------------------------|------|-----|
| 645940 | 1/2" without nozzle              | 2,20 | 1 – |
| 645950 | 3/4" without nozzle              | 2,25 | 1 – |
| 645960 | 1" without nozzle                | 3,25 | 1 – |
| 645970 | 1 1/4" without nozzle            | 3,40 | 1 – |

## ACCESSORIES AND SPARE PARTS



### 6459

tech. broch. 01199

Shell insulation

for motorised ball zone valves

6453 series with by-pass tee 6459 and 6490 series.

Fitted for manifolds 356... IS series.

Code

|        |             |   |   |
|--------|-------------|---|---|
| 645901 | 1/2" - 3/4" | 1 | – |
| 645900 | 1" - 1 1/4" | 1 | – |



### 6450

tech. broch. 01199

Spare actuator for motorised ball zone valves 6452 and 6453 series.

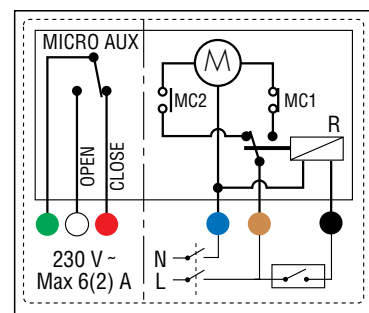
Supply: 230 V (AC) or 24 V (AC).



| Code   | Supply voltage V |   |   |
|--------|------------------|---|---|
| 645002 | 230              | 1 | – |
| 645004 | 24               | 1 | – |

### Wiring diagram for 6452 and 6453 series valves, two point actuator with internal relays, valve in closed position

- R relay
- MC1 opening end microswitch.
- MC2 closing end microswitch.
- MICRO AUX free auxiliary microswitch.



## MOTORIZED TWO-WAY BALL VALVES FOR HIGH FLOW RATES



**638**

tech. broch. 01196

Motorised two-way ball valve.  
**With auxiliary microswitch.**  
 Supply: 230 V (AC) or 24 V (AC).  
 Max. working pressure: 16 bar.  
 Max.  $\Delta p$ : 3/4"-1 1/4": 10 bar,  
 1 1/2"-2": 5 bar.  
 Temperature range: -10-110 °C.  
 Ambient temperature range: -10-55 °C.  
 Power consumption: 6 VA.  
 Auxiliary microswitch contact rating:  
 6 (2) A - 230 V (AC).  
 Protection class: IP 65.  
 Operating time: 50 s (90° rotation).



Insulation kit  
 for heating and cooling systems.  
 Medium temperature range: -10-110 °C.  
 For motorised two-way ball valves 638 series.

| Code             | Use       |   |   |
|------------------|-----------|---|---|
| <b>CBN638052</b> | 3/4"      | 1 | - |
| <b>CBN638062</b> | 1"        | 1 | - |
| <b>CBN638072</b> | 1 1/4"    | 1 | - |
| <b>CBN638082</b> | 1 1/2"-2" | 1 | - |

| Code          | Actuator torque<br>(N-m) | Supply voltage<br>V | Kv (m³/h) |      |     |
|---------------|--------------------------|---------------------|-----------|------|-----|
| <b>638052</b> | 3/4"                     | 15                  | 230       | 17   | 1 - |
| <b>638062</b> | 1"                       | 15                  | 230       | 36,5 | 1 - |
| <b>638072</b> | 1 1/4"                   | 15                  | 230       | 48   | 1 - |
| <b>638082</b> | 1 1/2"                   | 15                  | 230       | 77   | 1 - |
| <b>638092</b> | 2"                       | 15                  | 230       | 140  | 1 - |
| <b>638054</b> | 3/4"                     | 15                  | 24        | 17   | 1 - |
| <b>638064</b> | 1"                       | 15                  | 24        | 36,5 | 1 - |
| <b>638074</b> | 1 1/4"                   | 15                  | 24        | 48   | 1 - |
| <b>638084</b> | 1 1/2"                   | 15                  | 24        | 77   | 1 - |
| <b>638094</b> | 2"                       | 15                  | 24        | 140  | 1 - |



Spare actuators for  
 motorised two-way valves 638 series.  
 90° rotation.  
 Supply: 230 V (AC) or 24 V (AC).

| Code          | Supply voltage<br>V |   |   |
|---------------|---------------------|---|---|
| <b>638012</b> | 230                 | 1 | - |
| <b>638014</b> | 24                  | 1 | - |



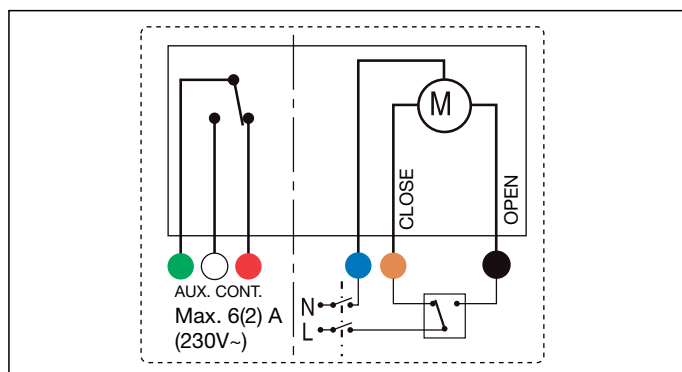
Insulation kit  
 for heating and cooling systems.  
 Medium temperature range: -10-110 °C.  
 For motorised three-way ball valves 638 series.

| Code             | Use                         |   |   |
|------------------|-----------------------------|---|---|
| <b>CBN638053</b> | 3/4" with "L" drilling      | 1 | - |
| <b>CBN638063</b> | 1" with "L" drilling        | 1 | - |
| <b>CBN638073</b> | 1 1/4" with "L" drilling    | 1 | - |
| <b>CBN638083</b> | 1 1/2"-2" with "L" drilling | 1 | - |
| <b>CBN638153</b> | 3/4" with "T" drilling      | 1 | - |
| <b>CBN638163</b> | 1" with "T" drilling        | 1 | - |
| <b>CBN638173</b> | 1 1/4" with "T" drilling    | 1 | - |
| <b>CBN638183</b> | 1 1/2"-2" with "T" drilling | 1 | - |

### Wiring diagram for two-way and three-way ball valves 638 series with 3-contact actuator

Internal diagram with valve in the following position:

- Closed, for two-way valve.
- Port **A** closed for three-way valves.





## MOTORISED THREE-WAY BALL VALVES FOR HIGH FLOW RATES



**638**

tech. broch. 01196

Motorised three-way ball valve.  
**With auxiliary microswitch.**  
 Supply: 230 V (AC) or 24 V (AC).  
 Max. working pressure: 16 bar.  
 Max.  $\Delta p$ : 10 bar.  
 Temperature range: -10–110 °C.  
 Ambient temperature range: -10–55 °C.  
 Power consumption: 6 VA.  
 Auxiliary microswitch contact rating:  
 6 (2) A - 230 V (AC).  
 Protection class: IP 65.  
 Operating time: 50 s (90° rotation).  
**With "T" drilling. Reduced bore.**



**638**

tech. broch. 01196

Motorised three-way ball valve.  
**With auxiliary microswitch.**  
 Supply: 230 V (AC) or 24 V (AC).  
 Max. working pressure: 16 bar.  
 Max.  $\Delta p$ : 10 bar.  
 Temperature range: -10–110 °C.  
 Ambient temperature range: -10–55 °C.  
 Power consumption: 6 VA.  
 Auxiliary microswitch contact rating:  
 6 (2) A - 230 V (AC).  
 Protection class: IP 65.  
 Operating time: 100 s (180° rotation).  
**With "L" drilling. Reduced bore.**



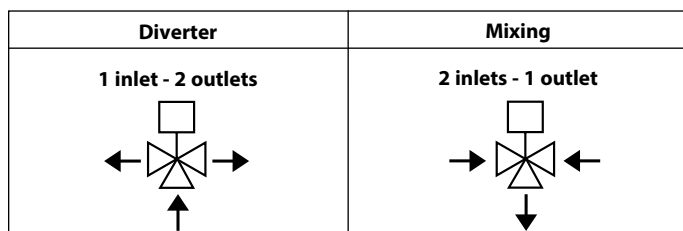
| Code   | Actuator torque<br>(N·m) | Supply voltage<br>V | Kv (m³/h) |      |     |
|--------|--------------------------|---------------------|-----------|------|-----|
| 638153 | 3/4"                     | 15                  | 230       | 9,5  | 1 – |
| 638163 | 1"                       | 15                  | 230       | 12,9 | 1 – |
| 638173 | 1 1/4"                   | 15                  | 230       | 24,7 | 1 – |
| 638183 | 1 1/2"                   | 15                  | 230       | 47   | 1 – |
| 638193 | 2"                       | 15                  | 230       | 50   | 1 – |
| 638155 | 3/4"                     | 15                  | 24        | 9,5  | 1 – |
| 638165 | 1"                       | 15                  | 24        | 12,9 | 1 – |
| 638175 | 1 1/4"                   | 15                  | 24        | 24,7 | 1 – |
| 638185 | 1 1/2"                   | 15                  | 24        | 47   | 1 – |
| 638195 | 2"                       | 15                  | 24        | 50   | 1 – |

Spare actuators for  
 motorised three-way valves 638 series.  
 With "T" drilling. 90° rotation.  
 Supply: 230 V (AC) or 24 V (AC).

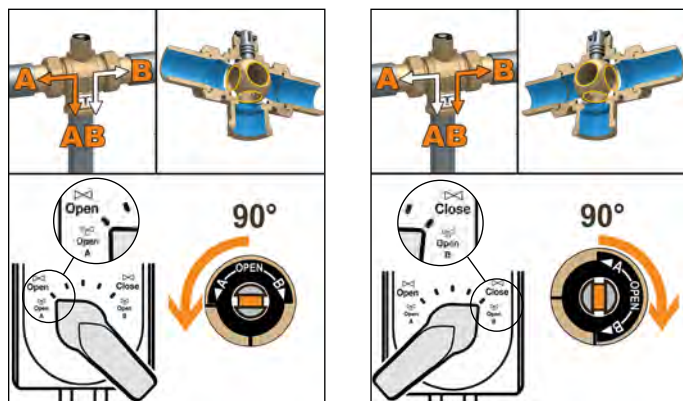


| Code   | Supply voltage<br>V |   |   |
|--------|---------------------|---|---|
| 638012 | 230                 | 1 | – |
| 638014 | 24                  | 1 | – |

### Applications



### Operating diagram of valves 638 series - "T" drilling



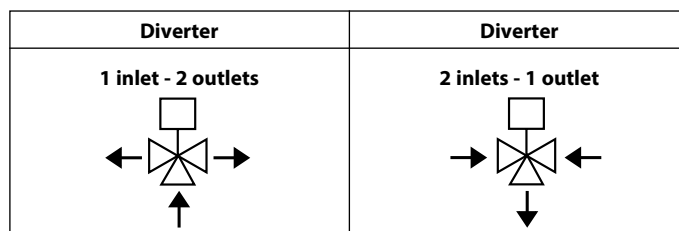
| Code   | Actuator torque<br>(N·m) | Supply voltage<br>V | Kv (m³/h) |      |     |
|--------|--------------------------|---------------------|-----------|------|-----|
| 638053 | 3/4"                     | 15                  | 230       | 9,9  | 1 – |
| 638063 | 1"                       | 15                  | 230       | 13,4 | 1 – |
| 638073 | 1 1/4"                   | 15                  | 230       | 22,8 | 1 – |
| 638083 | 1 1/2"                   | 15                  | 230       | 44   | 1 – |
| 638093 | 2"                       | 15                  | 230       | 50   | 1 – |
| 638055 | 3/4"                     | 15                  | 24        | 9,9  | 1 – |
| 638065 | 1"                       | 15                  | 24        | 13,4 | 1 – |
| 638075 | 1 1/4"                   | 15                  | 24        | 22,8 | 1 – |
| 638085 | 1 1/2"                   | 15                  | 24        | 44   | 1 – |
| 638095 | 2"                       | 15                  | 24        | 50   | 1 – |

Spare actuators for  
 motorised three-way valves 638 series.  
 With "L" drilling. 180° rotation.  
 Supply: 230 V (AC) or 24 V (AC).

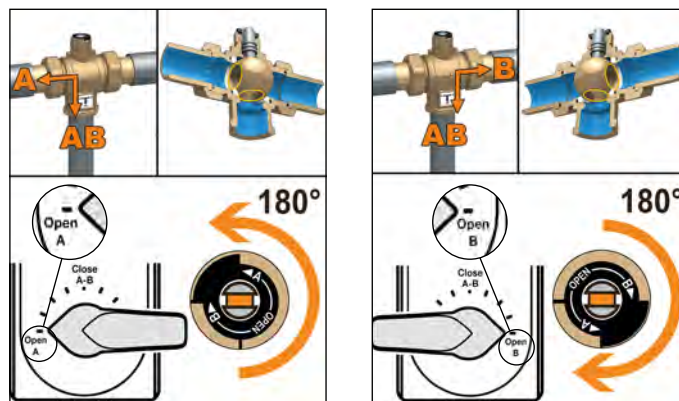


| Code   | Supply voltage<br>V |   |   |
|--------|---------------------|---|---|
| 638412 | 230                 | 1 | – |
| 638414 | 24                  | 1 | – |

### Applications



### Operating diagram of valves 638 series - "L" drilling



## THERMO-ELECTRIC PISTON ZONE VALVES



### 676

tech. broch. 01343

Two-way zone valve with high flow rate. Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series. Max. working pressure: 10 bar. Max.  $\Delta p$ : 2,5 bar. Temperature range: 0–95 °C.

| Code   |    | Kv (m <sup>3</sup> /h) |   |    |
|--------|----|------------------------|---|----|
| 676500 | 1" | 4,77                   | 1 | 20 |



### 676

tech. broch. 01072

Two-way zone valve. Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series. Max. working pressure: 10 bar. Max.  $\Delta p$ : 1,2 bar. Temperature range: 0–95 °C.

| Code   |      | Kv (m <sup>3</sup> /h) |   |    |
|--------|------|------------------------|---|----|
| 676040 | 1/2" | 3,7                    | 1 | 10 |
| 676050 | 3/4" | 3,7                    | 1 | 10 |
| 676060 | 1"   | 3,7                    | 1 | 10 |



### 677

tech. broch. 01072

Three-way zone valve. Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series. Max. working pressure: 10 bar. Max.  $\Delta p$ : 1,2 bar. Temperature range: 0–95 °C.

| Code   |      | Kv (m <sup>3</sup> /h) straight | Kv (m <sup>3</sup> /h) by-pass |   |    |
|--------|------|---------------------------------|--------------------------------|---|----|
| 677040 | 1/2" | 3,7                             | 1,0                            | 1 | 10 |
| 677050 | 3/4" | 3,7                             | 1,0                            | 1 | 10 |
| 677060 | 1"   | 3,7                             | 1,0                            | 1 | 10 |



### 678

tech. broch. 01072

Three-way zone valve with by-pass tee. Fitted for thermo-electric actuators 6563, 6561, 6562 and 6564 series. Max. working pressure: 10 bar. Max.  $\Delta p$ : 1,2 bar. Temperature range: 0–95 °C. Tee complete with nozzle U6. **Adjustable outlet centre distance from 49 to 63 mm.**

| Code   |      | Kv (m <sup>3</sup> /h) straight | Kv (m <sup>3</sup> /h) by-pass |   |    |
|--------|------|---------------------------------|--------------------------------|---|----|
| 678040 | 1/2" | 3,7                             | 1,0                            | 1 | 10 |
| 678050 | 3/4" | 3,7                             | 1,0                            | 1 | 10 |
| 678060 | 1"   | 3,7                             | 1,0                            | 1 | 10 |



### 6563

tech. broch. 01142

Thermo-electric actuator. With manual opening and position indicator. Normally closed. **With auxiliary microswitch.** Supply: 230 V (AC) or 24 V (AC)/(DC). Power consumption: 3 W. Starting current:  $\leq 1$  A. Auxiliary microswitch contact rating: 0,8 A (230 V). Ambient temperature range: 0–50 °C. Protection class: IP 40. PATENT.



| Code   | Supply voltage V |                               |      |
|--------|------------------|-------------------------------|------|
| 656312 | 230              | 1                             | 10   |
| 656314 | 24               | 1                             | 10   |
| 656302 | 230              | without auxiliary microswitch | 1 10 |
| 656304 | 24               | without auxiliary microswitch | 1 10 |



### 6561

tech. broch. 01042

Thermo-electric actuator. Normally closed. **With auxiliary microswitch.** Supply: 230 V (AC) or 24 V (AC)/(DC). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current:  $\leq 1$  A. Ambient temperature range: 0–50 °C. Protection class: IP 44 (vertical stem).



| Code   | Supply voltage V |                               |      |
|--------|------------------|-------------------------------|------|
| 656112 | 230              | 1                             | 10   |
| 656114 | 24               | 1                             | 10   |
| 656102 | 230              | without auxiliary microswitch | 1 10 |
| 656104 | 24               | without auxiliary microswitch | 1 10 |



### 6562

tech. broch. 01198

Thermo-electric actuator. With opening position indicator. **Quick-coupling installation, with a clip adapter.** Normally closed. **With auxiliary microswitch.** Supply: 230 V (AC) or 24 V (AC)/(DC). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current:  $\leq 1$  A. Ambient temperature range: 0–50 °C. Protection class: IP 54.



| Code   | Supply voltage V |                               |      |
|--------|------------------|-------------------------------|------|
| 656212 | 230              | 1                             | 10   |
| 656214 | 24               | 1                             | 10   |
| 656202 | 230              | without auxiliary microswitch | 1 10 |
| 656204 | 24               | without auxiliary microswitch | 1 10 |



### 6564

tech. broch. 01198

Thermo-electric actuator with low power consumption. With opening position indicator. **Quick-coupling installation, with a clip adapter.** Normally closed. **With auxiliary microswitch.** Supply: 230 V (AC) or 24 V (AC)/(DC). Auxiliary microswitch contact rating: 0,8 A (230 V). Power consumption: 3 W. Starting current:  $\leq 250$  mA. Ambient temperature range: 0–50 °C. Protection class: IP 54.



| Code   | Supply voltage V |                               |      |
|--------|------------------|-------------------------------|------|
| 656412 | 230              | 1                             | 10   |
| 656414 | 24               | 1                             | 10   |
| 656402 | 230              | without auxiliary microswitch | 1 10 |
| 656404 | 24               | without auxiliary microswitch | 1 10 |

## THERMO-ELECTRIC PISTON ZONE VALVES



### 632

tech. broch. 01039

Two-way piston zone valve.  
Max. working pressure: 10 bar.  
Max. Δp: 1 bar.  
Temperature range: -5-95 °C.

| Code   |      | Kv (m³/h) |   |   |
|--------|------|-----------|---|---|
| 632400 | 1/2" | 5,10      | 1 | 5 |
| 632500 | 3/4" | 6,27      | 1 | 5 |
| 632600 | 1"   | 6,38      | 1 | 5 |



### 633

tech. broch. 01039

Three-way piston zone valve.  
3/4" F by-pass connection.  
Max. working pressure: 10 bar.  
Max. Δp: 1 bar.  
Temperature range: -5-95 °C.



| Code   |      | Kv (m³/h)<br>straight | Kv (m³/h)<br>by-pass |   |   |
|--------|------|-----------------------|----------------------|---|---|
| 633400 | 1/2" | 4,99                  | 4,33                 | 1 | 5 |
| 633500 | 3/4" | 6,19                  | 4,91                 | 1 | 5 |
| 633600 | 1"   | 6,45                  | 5,30                 | 1 | 5 |



### 635

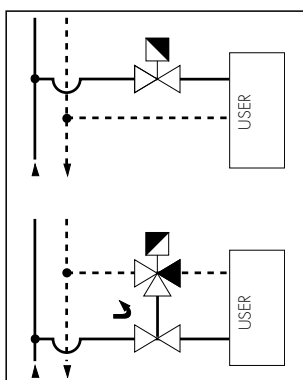
tech. broch. 01039

Balanced by-pass tee.  
For zone valves 633 series.  
Max. working pressure: 10 bar.  
Max. Δp: 1 bar.  
Temperature range: -5-95 °C.

|               |      |                                     |      |  |  |
|---------------|------|-------------------------------------|------|---|---|
| Code          |      | Kv (m³/h)<br>tee + valve in by-pass |      |   |   |
| <b>635440</b> | 1/2" | U4                                  | 0,96 | 1   | 5   |
| <b>635460</b> | 1/2" | U6                                  | 1,32 | 1   | 5   |
| <b>635480</b> | 1/2" | U8                                  | 1,73 | 1   | 5   |
| <b>635540</b> | 3/4" | U4                                  | 0,98 | 1   | 5   |
| <b>635560</b> | 3/4" | U6                                  | 1,36 | 1   | 5   |
| <b>635580</b> | 3/4" | U8                                  | 1,79 | 1   | 5   |
| <b>635640</b> | 1"   | U4                                  | 1,02 | 1   | 5   |
| <b>635660</b> | 1"   | U6                                  | 1,43 | 1   | 5   |
| <b>635680</b> | 1"   | U8                                  | 1,88 | 1   | 5   |

#### Installation

1. The 2-way zone valve 632 series should be installed on the circuit flow pipe.  
The 2-way valve cannot be converted into 3-way valve by removing the plug.
2. The 3-way zone valve 633 series should be installed on the circuit return pipe.  
The 3-way valve cannot be converted into 2-way valve by applying a plug.





### 630

tech. broch. 01039

Thermo-electric actuator.  
For zone valves 632 and 633 series.  
Normally closed.  
Supply: 230 V (AC) or 24 V (AC).  
**With auxiliary microswitch.**  
Power consumption: - starting 11 W.  
- operating 4 W.  
Auxiliary microswitch contact rating:  
6 (3) A (230 V).  
Max. ambient temperature: 55 °C.  
Protection class:  
IP 44 (vertical stem),  
IP 42 (horizontal stem).



| Code          | Supply voltage<br>V |                               |  |  |
|---------------|---------------------|-------------------------------|---|---|
| <b>630012</b> | 230                 |                               | 1   | 10  |
| <b>630014</b> | 24                  |                               | 1   | 10  |
| <b>630002</b> | 230                 | without auxiliary microswitch | 1   | 10  |
| <b>630004</b> | 24                  | without auxiliary microswitch | 1   | 10  |





### 630

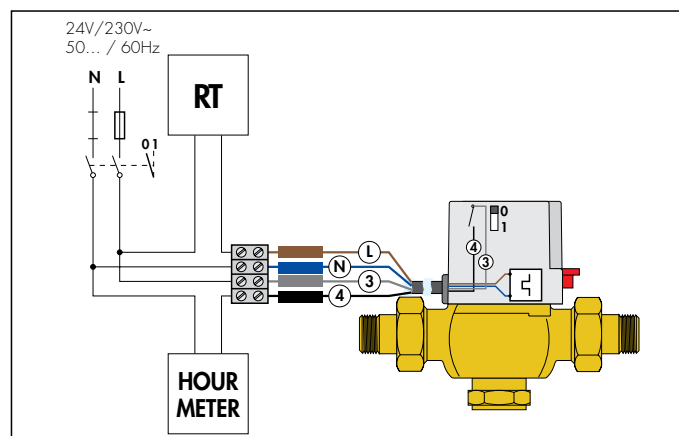
tech. broch. 01039

Thermo-electric actuator.  
For zone valves 632 and 633 series.  
Normally closed.  
Supply: 230 V (AC) or 24 V (AC).  
**With manual actuator and auxiliary microswitch.**  
Power consumption: - starting 11 W.  
- operating 4 W.  
Auxiliary microswitch contact rating:  
6 (3) A (230 V).  
Max. ambient temperature: 55 °C.  
Protection class: IP 20.



| Code          | Supply voltage<br>V |                               |  |  |
|---------------|---------------------|-------------------------------|---|---|
| <b>630112</b> | 230                 |                               | 1   | 10  |
| <b>630114</b> | 24                  |                               | 1   | 10  |
| <b>630102</b> | 230                 | without auxiliary microswitch | 1   | 10  |
| <b>630104</b> | 24                  | without auxiliary microswitch | 1   | 10  |

#### Wiring diagram for piston zone valves 632 and 633 series with thermo-electric actuator





## MOTORIZED ZONE VALVES WITH SPRING RETURN

### 642 Z-one™

tech. broch. 01115



Motorised two-way zone valve.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC).  
Power consumption: 6,5 W; 7 VA.  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Opening time: 70–75 s.  
Closing time: 5–7 s.  
Protection class: IP 20.  
Max. ambient temperature: 40 °C.  
Max. working pressure: 16 bar.  
Temperature range: 0–90 °C.  
Cable length: 95 cm.



| Code   |      | Kv (m³/h) | Max. Δp (bar) |  |  |
|--------|------|-----------|---------------|---|---|
| 642042 | 1/2" | 2,5       | 2,10          | 1   | 10  |
| 642052 | 3/4" | 4,5       | 1,50          | 1   | 10  |
| 642062 | 1"   | 6         | 1,00          | 1   | 10  |

### 643 Z-one™

tech. broch. 01115



Motorised three-way zone valve.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC).  
Power consumption: 6,5 W; 7 VA.  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Opening time: 70–75 s.  
Closing time: 5–7 s.  
Protection class: IP 20.  
Max. ambient temperature: 40 °C.  
Max. working pressure: 16 bar.  
Temperature range: 0–90 °C.  
Cable length: 95 cm.

| Code   |      | Kv (m³/h) | Max. Δp (bar) |  |  |
|--------|------|-----------|---------------|---|---|
| 643042 | 1/2" | 2,5       | 2,10          | 1   | 10  |
| 643052 | 3/4" | 4,5       | 1,50          | 1   | 10  |
| 643062 | 1"   | 6         | 1,00          | 1   | 10  |

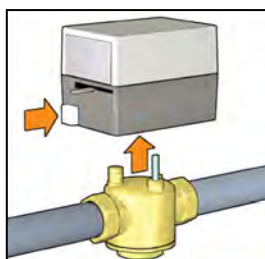
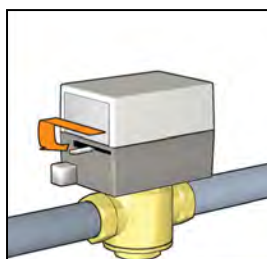
### 641

tech. broch. 01115



| Code   |  |  |  |
|--------|--|---|---|
| 641002 |  | 1   | –   |

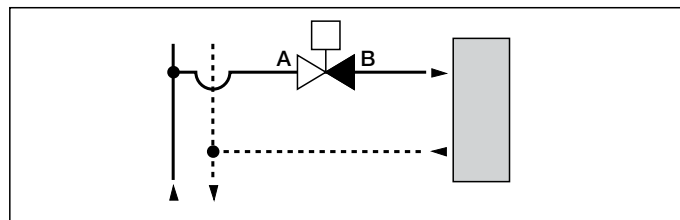
#### Removable actuator



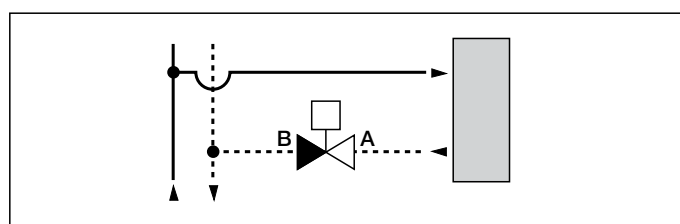
#### Installation

The 3-way valve cannot be converted into 2-way valve and viceversa.

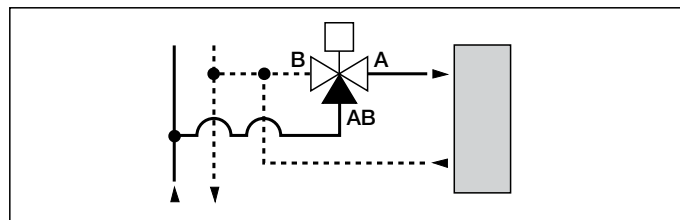
#### 2-way valve installed on the flow



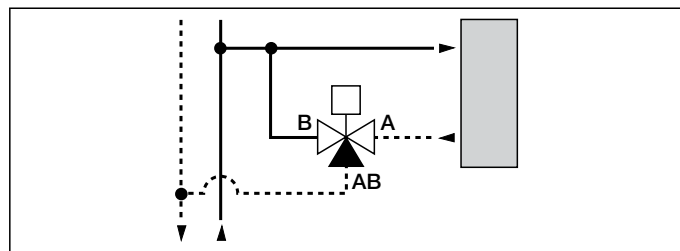
#### 2-way valve installed on the return



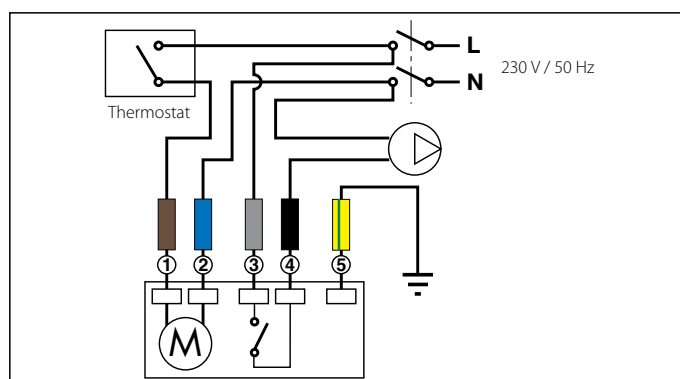
#### 3-way valve installed on the flow with diverting position and ON/OFF use mode



#### 3-way valve installed on the return with mixing position and ON/OFF use mode



#### Wiring diagram for spring return valves 642 and 643 series



## MOTORISED TWO-WAY ZONE VALVE

NEW



### 642 Z-one™

Motorised two-way zone valve.  
Normally closed.  
**With auxiliary microswitch and transformer.**  
Max. working pressure: 16 bar.  
Temperature range: 0–90 °C.  
Max. working temperature: 110 °C.  
Supply: 24 V (AC).  
Power consumption: 6,5 W; 7 VA.  
Auxiliary microswitch contact rating:

0,8 A (230 V).  
Opening time: 70–75 s.  
Closing time: 5–7 s.  
Max. ambient temperature: 40 °C.  
Protection class: IP 20.  
Cable length: 95 cm.



| Code   |      | Kv (m³/h) | Δp max. (bar) |   |   |
|--------|------|-----------|---------------|---|---|
| 642522 | Ø 22 | 4,5       | 1,50          | 1 | 6 |



### 642 Z-one™

Motorised two-way zone valve.  
Normally closed.  
**With reed contact and transformer.**  
Max. working pressure: 16 bar.  
Temperature range: 0–90 °C.  
Supply: 24 V (AC).  
Power consumption: 6,5 W; 7 VA.  
Auxiliary microswitch contact rating:

0,3 A (24 V).  
Opening time: 70–75 s.  
Closing time: 5–7 s.  
Max. ambient temperature: 40 °C.  
Protection class: IP 20.  
Cable length: 95 cm.



| Code   |      | Kv (m³/h) | Δp max. (bar) |   |   |
|--------|------|-----------|---------------|---|---|
| 642523 | Ø 22 | 4,5       | 1,50          | 1 | 6 |



### 642 Z-one™

Motorised two-way zone valve.  
Normally closed.  
**With transformer.**  
Max. working pressure: 16 bar.  
Temperature range: 0–90 °C.  
Max. working temperature: 110 °C.  
Supply: 24 V (AC).  
Power consumption: 6,5 W; 7 VA.  
Auxiliary microswitch contact rating:

0,8 A (230 V).  
Opening time: 70–75 s.  
Closing time: 5–7 s.  
Max. ambient temperature: 40 °C.  
Protection class: IP 20.  
Cable length: 95 cm.



| Code   |      | Kv (m³/h) | Δp max. (bar) |   |   |
|--------|------|-----------|---------------|---|---|
| 642622 | Ø 22 | 4,5       | 1,50          | 1 | 6 |

Accessories for code 642522 and 642622.

| Code   |                                     |   |   |  |  |
|--------|-------------------------------------|---|---|--|--|
| 641024 | Actuator 24 V (AC) with microswitch | 1 | – |  |  |
| 641034 | Actuator 24 V (AC)                  | 1 | – |  |  |
| F69893 | Transformer 230/24 V                | 1 | – |  |  |
| F69890 | Brass body                          | 1 | – |  |  |
| 641044 | Actuator 24V (AC)                   | 1 | – |  |  |



## BUTTERFLY VALVE





**639**

tech. broch. 01380

NEW

Butterfly valve, LUG type.  
Grey cast iron body.  
Flanged connections. PN 10/16.  
To be coupled with flat counterflanges  
PN 10/16 - EN 1092-1.  
Max. working pressure: 16 bar.  
Working temperature range: -20–120 °C.



| Code   |        | Kv (m³/h) |  |  |
|--------|--------|-----------|---|---|
| 639040 | DN 40  | 65        | 1   | –   |
| 639050 | DN 50  | 100       | 1   | –   |
| 639060 | DN 65  | 170       | 1   | –   |
| 639080 | DN 80  | 260       | 1   | –   |
| 639100 | DN 100 | 520       | 1   | –   |
| 639120 | DN 125 | 880       | 1   | –   |
| 639150 | DN 150 | 1400      | 1   | –   |



**639**

tech. broch. 01380

Butterfly valve, WAFER type.  
Grey cast iron body.  
Flanged connections. PN 6/10/16.  
To be coupled with flat counterflanges  
PN 6/10/16 - EN 1092-1.  
Max. working pressure: 16 bar.  
Working temperature range: -20–120 °C.

| Code   |        | Kv (m³/h) |  |  |
|--------|--------|-----------|---|---|
| 639041 | DN 40  | 65        | 1   | –   |
| 639051 | DN 50  | 100       | 1   | –   |
| 639061 | DN 65  | 170       | 1   | –   |
| 639081 | DN 80  | 260       | 1   | –   |
| 639101 | DN 100 | 520       | 1   | –   |
| 639121 | DN 125 | 880       | 1   | –   |
| 639151 | DN 150 | 1400      | 1   | –   |



**639**

tech. broch. 01380

Actuator for butterfly valve 639 series  
DN 40 - DN 125.  
Supply: 230 V (AC) o 24 V (DC).  
Control signal: **ON/OFF, 3 points**.  
Protection class: IP 54.  
Operating time (90° rotation):  
90 s (DN 40–65),  
150 s (DN 80–125).



Δp max: 3 bar.  
Δp max closure: 12 bar.  
Ambient temperature range:  
-30–50 °C.  
Warehouse storage temperature  
range: -40–80 °C.  
**Compatible with auxiliary  
microswitch code 639900.**

| Code   | Use         | Voltage<br>V |  |  |
|--------|-------------|--------------|---|---|
| 639902 | DN 40–DN 65 | 230          | 1   | –   |
| 639912 | DN 80       | 230          | 1   | –   |
| 639922 | DN 100      | 230          | 1   | –   |
| 639932 | DN 125      | 230          | 1   | –   |
| 639904 | DN 40–DN 65 | 24           | 1   | –   |
| 639914 | DN 80       | 24           | 1   | –   |
| 639924 | DN 100      | 24           | 1   | –   |
| 639934 | DN 125      | 24           | 1   | –   |





**639**

tech. broch. 01380

Actuator for butterfly valve 639 series  
DN 150  
Supply: 230 V (AC) o 24 V (DC).  
**With auxiliary 2 microswitches.**  
Adjustable points of intervention.  
Microswitch contact rating:  
1 mA...3 (0.5) A - 250 V (AC).  
Control signal: **ON/OFF, 3 points**.  
Protection class: IP 66/67.  
Operating time (90° rotation): 30–120 s.  
Δp max: 3 bar.  
Δp max closure: 12 bar.  
Ambient temperature range: -30–50 °C.  
Warehouse storage temperature range: -40–80 °C.





| Code   | Use    | Voltage<br>V |  |  |
|--------|--------|--------------|---|---|
| 639942 | DN 150 | 230          | 1   | –   |

**639**

tech. broch. 01380

Manual lever  
for 639 series butterfly valves.



| Code   | Use           |  |  |
|--------|---------------|---|---|
| 639000 | DN 40–DN 100  | 1   | –   |
| 639001 | DN 125–DN 150 | 1   | –   |



**639**

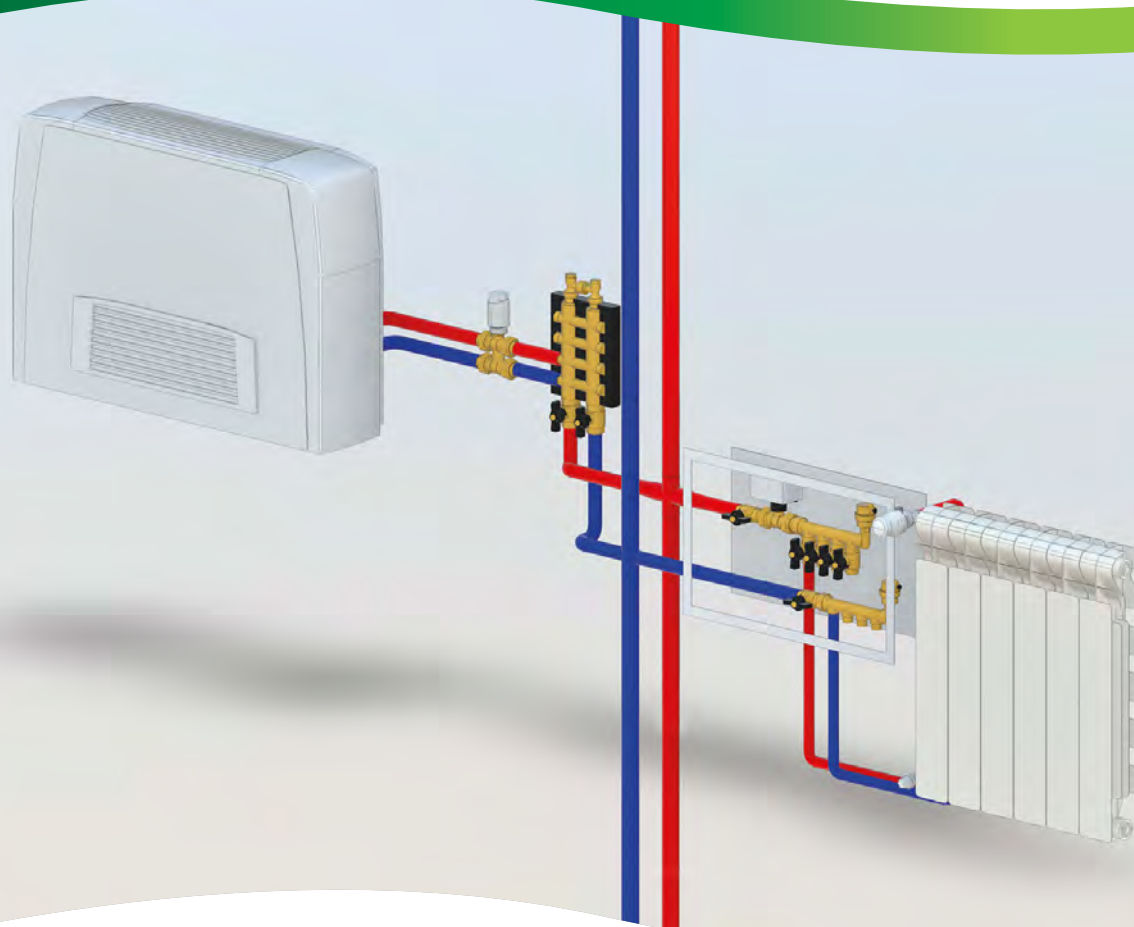
tech. broch. 01380

Auxiliary microswitches for 639 series actuators DN  
40–DN 125.  
Adjustable points of intervention.  
Microswitch contact rating:  
1 mA...3 (0.5) A - 250 V (AC),  
1 mA...0.5 (0.2) A - 110 V (DC).  
Ambient temperature range: -30–50 °C.  
Warehouse storage temperature range: -40–80 °C.



| Code   | Use          |  |  |
|--------|--------------|---|---|
| 639900 | DN 40–DN 125 | 1   | –   |

# DISTRIBUTION MANIFOLDS AND BOXES



 **BIM**  
bim.caleffi.com

**Single manifolds**

**Dual manifolds**

**Manifolds complete with shut-off valves and pre-regulating valves**

**Thermo-electric actuators**

**Accessories**

**Fittings**

**Inspection wall boxes, in plastic**

**Inspection wall boxes, in painted sheet steel**

## SINGLE DISTRIBUTION MANIFOLDS

### 349



Modular single distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 35 mm.

| Code   | Connections | Outlet No. | Outlets    |   |    |
|--------|-------------|------------|------------|---|----|
| 349020 | 3/4"        | x 2        | 23 p.1,5 M | 5 | 50 |
| 349030 | 3/4"        | x 3        | 23 p.1,5 M | 5 | 50 |
| 349040 | 3/4"        | x 4        | 23 p.1,5 M | 5 | 50 |
| 349050 | 3/4"        | x 5        | 23 p.1,5 M | 5 | 50 |

### 350



Modular single distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance:  
50 mm for 3/4" and 1".  
60 mm for 1 1/4".  
PTFE seal on coupling.

| Code    | Connections | Outlet No. | Outlets    |   |   |
|---------|-------------|------------|------------|---|---|
| 350520  | 3/4"        | x 2        | 23 p.1,5 M | 2 | – |
| 350530  | 3/4"        | x 3        | 23 p.1,5 M | 2 | – |
| 350540  | 3/4"        | x 4        | 23 p.1,5 M | 2 | – |
| 350620  | 1"          | x 2        | 23 p.1,5 M | 2 | – |
| 350630  | 1"          | x 3        | 23 p.1,5 M | 2 | – |
| 350640  | 1"          | x 4        | 23 p.1,5 M | 2 | – |
| 350720* | 1 1/4"      | x 2        | 23 p.1,5 M | 2 | – |
| 350730* | 1 1/4"      | x 3        | 23 p.1,5 M | 2 | – |
| 350740* | 1 1/4"      | x 4        | 23 p.1,5 M | 2 | – |

\* Without PTFE seal on coupling

### 351



Blind single distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range:  
-10–110 °C.  
Outlet centre distance:  
50 mm.

| Code   | Connections | Outlet No. | Outlets    |   |   |
|--------|-------------|------------|------------|---|---|
| 351520 | 3/4"        | x 2        | 23 p.1,5 M | 2 | – |
| 351530 | 3/4"        | x 3        | 23 p.1,5 M | 2 | – |
| 351540 | 3/4"        | x 4        | 23 p.1,5 M | 2 | – |
| 351620 | 1"          | x 2        | 23 p.1,5 M | 2 | – |
| 351630 | 1"          | x 3        | 23 p.1,5 M | 2 | – |
| 351640 | 1"          | x 4        | 23 p.1,5 M | 2 | – |

### 349



Modular single distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 35 mm.  
**Outlet male connections.**

| Code   | Connections | Outlet No. | Outlets |   |    |
|--------|-------------|------------|---------|---|----|
| 349130 | 3/4"        | x 3        | 1/2" M  | 5 | 50 |
| 349140 | 3/4"        | x 4        | 1/2" M  | 5 | 50 |
| 349150 | 3/4"        | x 5        | 1/2" M  | 5 | 50 |

With flat seat for press-fittings.

| Code   | Connections | Outlet No. | Outlets       |   |    |
|--------|-------------|------------|---------------|---|----|
| 349230 | 3/4"        | x 3        | 1/2" M - Ø 13 | 5 | 50 |
| 349240 | 3/4"        | x 4        | 1/2" M - Ø 13 | 5 | 50 |
| 349250 | 3/4"        | x 5        | 1/2" M - Ø 13 | 5 | 50 |

### 349



Modular single distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 35 mm.  
**Outlet female connections.**

| Code   | Connections | Outlet No. | Outlets |   |    |
|--------|-------------|------------|---------|---|----|
| 349330 | 3/4"        | x 3        | 1/2" F  | 5 | 50 |
| 349340 | 3/4"        | x 4        | 1/2" F  | 5 | 50 |
| 349350 | 3/4"        | x 5        | 1/2" F  | 5 | 50 |

### 350



Modular single distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 50 mm.  
**Outlet male connections.**

| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 350522 | 3/4"        | x 2        | 1/2" M  | 2 | – |
| 350532 | 3/4"        | x 3        | 1/2" M  | 2 | – |
| 350542 | 3/4"        | x 4        | 1/2" M  | 2 | – |

## SINGLE DISTRIBUTION MANIFOLDS



### 592

Modular single distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
PTFE seal on coupling.

**Outlet male connections.**

| Code    | Connections | Outlet No. | Outlets | Outlet centre distance |   |   |
|---------|-------------|------------|---------|------------------------|---|---|
| 592525  | 3/4"        | x 2        | 1/2" M  | 50                     | 2 | – |
| 592535  | 3/4"        | x 3        | 1/2" M  | 50                     | 2 | – |
| 592545  | 3/4"        | x 4        | 1/2" M  | 50                     | 2 | – |
| 592625  | 1"          | x 2        | 1/2" M  | 50                     | 2 | – |
| 592635  | 1"          | x 3        | 1/2" M  | 50                     | 2 | – |
| 592645  | 1"          | x 4        | 1/2" M  | 50                     | 2 | – |
| 592626  | 1"          | x 2        | 1/2" M  | 60                     | 2 | – |
| 592636  | 1"          | x 3        | 1/2" M  | 60                     | 2 | – |
| 592646  | 1"          | x 4        | 1/2" M  | 60                     | 2 | – |
| 592726* | 1 1/4"      | x 2        | 1/2" M  | 60                     | 2 | – |
| 592736* | 1 1/4"      | x 3        | 1/2" M  | 60                     | 2 | – |
| 592746* | 1 1/4"      | x 4        | 1/2" M  | 60                     | 2 | – |
| 592622  | 1"          | x 2        | 3/4" M  | 60                     | 2 | – |
| 592632  | 1"          | x 3        | 3/4" M  | 60                     | 2 | – |

\* Without PTFE on coupling



### 592

Modular single distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
PTFE seal on coupling.

**Outlet female connections.**

| Code    | Connections | Outlet No. | Outlets | Outlet centre distance |   |   |
|---------|-------------|------------|---------|------------------------|---|---|
| 592527  | 3/4"        | x 2        | 1/2" F  | 50                     | 2 | – |
| 592537  | 3/4"        | x 3        | 1/2" F  | 50                     | 2 | – |
| 592547  | 3/4"        | x 4        | 1/2" F  | 50                     | 2 | – |
| 592627  | 1"          | x 2        | 1/2" F  | 50                     | 2 | – |
| 592637  | 1"          | x 3        | 1/2" F  | 50                     | 2 | – |
| 592647  | 1"          | x 4        | 1/2" F  | 50                     | 2 | – |
| 592628  | 1"          | x 2        | 1/2" F  | 60                     | 2 | – |
| 592638  | 1"          | x 3        | 1/2" F  | 60                     | 2 | – |
| 592648  | 1"          | x 4        | 1/2" F  | 60                     | 2 | – |
| 592728* | 1 1/4"      | x 2        | 1/2" F  | 60                     | 2 | – |
| 592738* | 1 1/4"      | x 3        | 1/2" F  | 60                     | 2 | – |
| 592748* | 1 1/4"      | x 4        | 1/2" F  | 60                     | 2 | – |

\* Without PTFE on coupling

## BLIND SINGLE DISTRIBUTION MANIFOLDS



### 598

Blind single distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 50 mm.

**Outlet male connections.**

| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 598521 | 3/4"        | x 2        | 1/2" M  | 2 | – |
| 598531 | 3/4"        | x 3        | 1/2" M  | 2 | – |
| 598541 | 3/4"        | x 4        | 1/2" M  | 2 | – |
| 598631 | 1"          | x 3        | 1/2" M  | 2 | – |
| 598641 | 1"          | x 4        | 1/2" M  | 2 | – |



### 598

Blind single distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Outlet centre distance: 50 mm.

**Outlet female connections.**

| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 598522 | 3/4"        | x 2        | 1/2" F  | 2 | – |
| 598532 | 3/4"        | x 3        | 1/2" F  | 2 | – |
| 598542 | 3/4"        | x 4        | 1/2" F  | 2 | – |
| 598622 | 1"          | x 2        | 1/2" F  | 2 | – |
| 598632 | 1"          | x 3        | 1/2" F  | 2 | – |
| 598642 | 1"          | x 4        | 1/2" F  | 2 | – |



## SINGLE DISTRIBUTION MANIFOLDS WITH SHUT-OFF VALVES



### 354

Modular single distribution manifold with shut-off valves.  
**CR** dezincification resistant alloy body.  
 Max. working pressure: 10 bar.  
 Temperature range: 5–100 °C.  
 Outlet centre distance: 35 mm.





| Code   | Connections | Outlet No. | Outlets    |  |  |
|--------|-------------|------------|------------|---|---|
| 354052 | 3/4"        | x 2        | 23 p.1,5 M | 5   | 20  |
| 354053 | 3/4"        | x 3        | 23 p.1,5 M | 5   | 20  |
| 354054 | 3/4"        | x 4        | 23 p.1,5 M | 5   | 20  |
| 354055 | 3/4"        | x 5        | 23 p.1,5 M | 5   | 20  |



### 354

Modular single distribution manifold with shut-off valves.  
 Brass body.  
 Max. working pressure: 10 bar.  
 Temperature range: 5–100 °C.  
 Outlet centre distance: 35 mm.  
**Outlet male connections.**  
 With flat seat.  
**For press-fittings.**



| Code   | Connections | Outlet No. | Outlets       |  |  |
|--------|-------------|------------|---------------|---|---|
| 354252 | 3/4"        | x 2        | 1/2" M - Ø 13 | 2   | 30  |
| 354253 | 3/4"        | x 3        | 1/2" M - Ø 13 | 2   | 20  |
| 354254 | 3/4"        | x 4        | 1/2" M - Ø 13 | 2   | 10  |
| 354255 | 3/4"        | x 5        | 1/2" M - Ø 13 | 2   | 10  |



## SINGLE DISTRIBUTION MANIFOLDS FOR AIR CONDITIONING SYSTEMS

### 650

tech. broch. 01067

Modular single distribution manifold.  
 For air conditioning systems.  
**With insulation.**  
 Max. working pressure: 10 bar.  
 Temperature range: -40–95 °C.  
 Outlet centre distance: 60 mm.



| Code   | Connections | Outlet No. | Outlets |  |  |
|--------|-------------|------------|---------|---|---|
| 650622 | 1"          | x 2        | 3/4" M  | 2   | –   |
| 650632 | 1"          | x 3        | 3/4" M  | 2   | –   |
| 650722 | 1 1/4"      | x 2        | 3/4" M  | 2   | –   |
| 650732 | 1 1/4"      | x 3        | 3/4" M  | 2   | –   |
| 650742 | 1 1/4"      | x 4        | 3/4" M  | 2   | –   |



## DUAL DISTRIBUTION MANIFOLDS AND FITTINGS

### 356

tech. broch. 01014



Cast monoblock dual distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Main centre distance: 60 mm.  
Outlet centre distance: 40 mm.

| Code   | Connections | Outlet No. | Outlets    |   |   |
|--------|-------------|------------|------------|---|---|
| 356502 | 3/4"        | 2+2        | 23 p.1,5 M | 1 | 5 |
| 356504 | 3/4"        | 4+4        | 23 p.1,5 M | 1 | 5 |
| 356506 | 3/4"        | 6+6        | 23 p.1,5 M | 1 | 5 |
| 356508 | 3/4"        | 8+8        | 23 p.1,5 M | 1 | 5 |
| 356510 | 3/4"        | 10+10      | 23 p.1,5 M | 1 | 5 |
| 356604 | 1"          | 4+4        | 23 p.1,5 M | 1 | 5 |
| 356606 | 1"          | 6+6        | 23 p.1,5 M | 1 | 5 |
| 356608 | 1"          | 8+8        | 23 p.1,5 M | 1 | 5 |
| 356610 | 1"          | 10+10      | 23 p.1,5 M | 1 | 5 |
| 356612 | 1"          | 12+12      | 23 p.1,5 M | 1 | – |

### 356

tech. broch. 01014

Cast monoblock dual distribution manifold.  
For heating and cooling systems.

**With insulation.**

Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.  
Main centre distance: 60 mm.  
Outlet centre distance: 40 mm.



| Code      | Connections | Outlet No. | Outlets    |   |    |
|-----------|-------------|------------|------------|---|----|
| 356604 IS | 1"          | 4+4        | 23 p.1,5 M | 1 | 10 |
| 356606 IS | 1"          | 6+6        | 23 p.1,5 M | 1 | 10 |
| 356608 IS | 1"          | 8+8        | 23 p.1,5 M | 1 | 5  |
| 356610 IS | 1"          | 10+10      | 23 p.1,5 M | 1 | 5  |

### 357

tech. broch. 01014



Single sided cast monoblock dual distribution manifold.  
For heating and cooling systems.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Main centre distance: 60 mm.  
Outlet centre distance: 40 mm.

| Code   | Connections | Outlet No. | Outlets    |   |    |
|--------|-------------|------------|------------|---|----|
| 357502 | 3/4"        | 2+2        | 23 p.1,5 M | 1 | 10 |
| 357503 | 3/4"        | 3+3        | 23 p.1,5 M | 1 | 10 |
| 357504 | 3/4"        | 4+4        | 23 p.1,5 M | 1 | 5  |
| 357505 | 3/4"        | 5+5        | 23 p.1,5 M | 1 | –  |
| 357506 | 3/4"        | 6+6        | 23 p.1,5 M | 1 | –  |

### 356

tech. broch. 01014



Differential by-pass for dual distribution manifolds 356 and 357 series.  
3/8" connection for automatic air vent.  
Fixed differential by-pass setting:  
20 kPa (2000 mm w.g.).  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.

| Code   | Connections |   |    |
|--------|-------------|---|----|
| 356050 | 3/4" M      | 1 | 20 |

### 3640

End fitting.  
For distribution manifolds 356 and 357 series.



| Code   | Connections         |   |   |
|--------|---------------------|---|---|
| 364050 | 3/4" M x 23 p.1,5 M | 2 | – |
| 364060 | 1" M x 23 p.1,5 M   | 2 | – |

### 3641

Plug.  
For distribution manifolds 356 and 357 series.



| Code   | Connections |   |   |
|--------|-------------|---|---|
| 364150 | 3/4" M      | 2 | – |
| 364160 | 1" M        | 2 | – |

### 3642

End fitting for air vent connection.  
For distribution manifolds 356 and 357 series.



| Code   | Connections     |   |   |
|--------|-----------------|---|---|
| 364253 | 3/4" M x 3/8" F | 2 | – |
| 364254 | 3/4" M x 1/2" F | 2 | – |
| 364263 | 1" M x 3/8" F   | 2 | – |

## DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

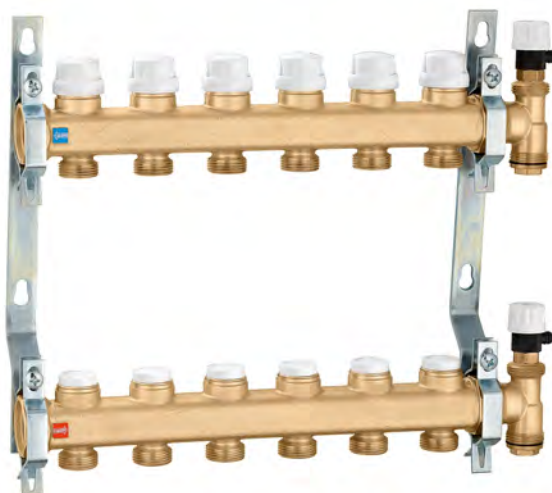
### CONNECTIONS 1"

#### 662

Distribution manifold group.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.

Consisting of:

- return manifold complete with shut-off valves fitted for thermo-electric actuator;
- flow manifold complete with lockshield valves for flow rate pre-regulation;
- end fittings consisting of double radial end fitting, manual air vent and plugs;
- steel mounting brackets for use with box 659 series or for direct wall fixing.



tech. broch. 01180

Insulation for distribution manifolds 662, 664 and 665 series.  
For heating and cooling systems.  
**For use with box code 659..4**  
(adjustable depth from 110 to 140 mm).



Code

|                  |                                    |   |   |
|------------------|------------------------------------|---|---|
| <b>CBN6646F1</b> | for manifolds from 2 to 6 outlets  | 1 | – |
| <b>CBN6646N1</b> | for manifolds from 7 to 12 outlets | 1 | – |
| <b>CBN6646O1</b> | for manifolds with 13 outlets      | 1 | – |



#### 391

Pair of ball shut-off valves with O-Ring seal.  
For distribution manifolds 664 and 665 series.  
Female - male connections with union with O-Ring seal.

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



Code

|               |    |   |   |
|---------------|----|---|---|
| <b>391066</b> | 1" | 1 | – |
|---------------|----|---|---|



| Code          | Connections | Outlet No. | Outlets |   |   |
|---------------|-------------|------------|---------|---|---|
| <b>6626B5</b> | 1"          | x 2        | 3/4" M  | 1 | – |
| <b>6626C5</b> | 1"          | x 3        | 3/4" M  | 1 | – |
| <b>6626D5</b> | 1"          | x 4        | 3/4" M  | 1 | – |
| <b>6626E5</b> | 1"          | x 5        | 3/4" M  | 1 | – |
| <b>6626F5</b> | 1"          | x 6        | 3/4" M  | 1 | – |
| <b>6626G5</b> | 1"          | x 7        | 3/4" M  | 1 | – |
| <b>6626H5</b> | 1"          | x 8        | 3/4" M  | 1 | – |
| <b>6626I5</b> | 1"          | x 9        | 3/4" M  | 1 | – |
| <b>6626L5</b> | 1"          | x 10       | 3/4" M  | 1 | – |
| <b>6626M5</b> | 1"          | x 11       | 3/4" M  | 1 | – |
| <b>6626N5</b> | 1"          | x 12       | 3/4" M  | 1 | – |
| <b>6626O5</b> | 1"          | x 13       | 3/4" M  | 1 | – |



## DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

### CONNECTIONS 1"

#### 662

tech. broch. 01180

Pair of manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 662625 | 1"          | x 2        | 3/4" M  | 1 | – |
| 662635 | 1"          | x 3        | 3/4" M  | 1 | – |
| 662645 | 1"          | x 4        | 3/4" M  | 1 | – |
| 662655 | 1"          | x 5        | 3/4" M  | 1 | – |
| 662665 | 1"          | x 6        | 3/4" M  | 1 | – |

#### 6620

tech. broch. 01180

Return manifold equipped with shut-off valves, fitted for thermo-electric actuator.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 662025 | 1"          | x 2        | 3/4" M  | 2 | – |
| 662035 | 1"          | x 3        | 3/4" M  | 2 | – |
| 662045 | 1"          | x 4        | 3/4" M  | 2 | – |
| 662055 | 1"          | x 5        | 3/4" M  | 2 | – |
| 662065 | 1"          | x 6        | 3/4" M  | 2 | – |

#### 6621

tech. broch. 01180

Flow manifold equipped with lockshield valves for flow rate pre-regulation.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 662125 | 1"          | x 2        | 3/4" M  | 2 | – |
| 662135 | 1"          | x 3        | 3/4" M  | 2 | – |
| 662145 | 1"          | x 4        | 3/4" M  | 2 | – |
| 662155 | 1"          | x 5        | 3/4" M  | 2 | – |
| 662165 | 1"          | x 6        | 3/4" M  | 2 | – |



#### 5996

tech. broch. 01180

End fitting consisting of double radial end fitting, air vent cock and plug.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.

Code

59962 1" F



1 25



#### 662

tech. broch. 01180

Fixed setting differential by-pass kit 20 kPa (2000 mm w.g.), with flexible hose. For distribution manifolds 662 series.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.

Code

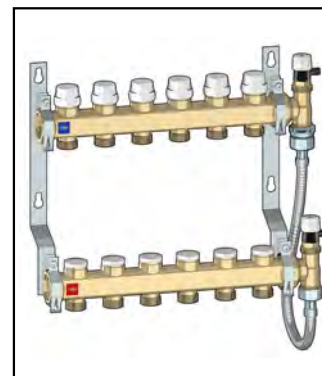
662000 3/4" F nut x 3/4" F



1 5

#### Connection example of differential by-pass code 662000 with manifold 662 series

This special by-pass kit consists of a flexible hose which makes installation easier and allows the manifold to be adapted to suit the brackets, according to the actual positions of the system flow and return piping.



#### 658

Pair of steel mounting brackets for distribution manifolds 662 and 664 series. To be used with boxes code 659..5 or directly wall mounted.

Code

658101



1 –



#### 658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series. With screws and wall anchors. To be used with boxes code 659..4 (depth 110–140 mm) or directly wall mounted.

Code

658400



1 5

## DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES

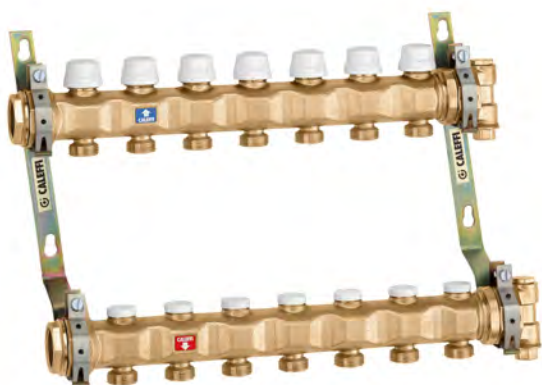
### CONNECTIONS 1 1/4"

#### 663

Pre-assembled distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.

Consisting of:

- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
- 1 flow distribution manifold complete with lockshield valves for flow rate pre-regulation;
- 2 mounting brackets code 658100;
- 2 reduction fittings 1 1/4" M x 1" F code 364276;
- 2 double radial end fittings with plugs.



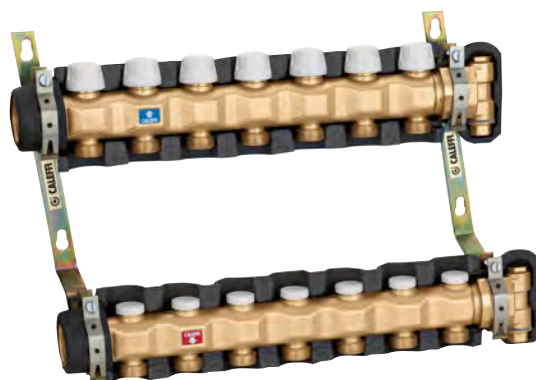
tech. broch. 01065

#### 663



Pre-assembled distribution manifold for cooling systems.  
**With insulation.**  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.



Consisting of:

- 1 return distribution manifold complete with shut-off valves fitted for thermo-electric actuator;
- 1 flow distribution manifold complete with lockshield valve for flow rate pre-regulation;
- 2 mounting brackets code 658100;
- 2 reduction fittings 1 1/4" M x 1" F code 364276;
- 2 double radial end fittings with plugs.



tech. broch. 01065

| Code   | Connections | Outlet No. | Outlets |  |  |
|--------|-------------|------------|---------|---|---|
| 6637C5 | 1 1/4" x 3  | 3/4" M     | 1       | —   |   |
| 6637D5 | 1 1/4" x 4  | 3/4" M     | 1       | —   |   |
| 6637E5 | 1 1/4" x 5  | 3/4" M     | 1       | —   |   |
| 6637F5 | 1 1/4" x 6  | 3/4" M     | 1       | —   |   |
| 6637G5 | 1 1/4" x 7  | 3/4" M     | 1       | —   |   |
| 6637H5 | 1 1/4" x 8  | 3/4" M     | 1       | —   |   |
| 6637I5 | 1 1/4" x 9  | 3/4" M     | 1       | —   |   |
| 6637L5 | 1 1/4" x 10 | 3/4" M     | 1       | —   |   |
| 6637M5 | 1 1/4" x 11 | 3/4" M     | 1       | —   |   |
| 6637N5 | 1 1/4" x 12 | 3/4" M     | 1       | —   |   |
| 6637O5 | 1 1/4" x 13 | 3/4" M     | 1       | —   |   |

| Code      | Connections | Outlet No. | Outlets |  |  |
|-----------|-------------|------------|---------|---|---|
| 6637C5 IS | 1 1/4" x 3  | 3/4" M     | 1       | –   |   |
| 6637D5 IS | 1 1/4" x 4  | 3/4" M     | 1       | –   |   |
| 6637E5 IS | 1 1/4" x 5  | 3/4" M     | 1       | –   |   |
| 6637F5 IS | 1 1/4" x 6  | 3/4" M     | 1       | –   |   |
| 6637G5 IS | 1 1/4" x 7  | 3/4" M     | 1       | –   |   |
| 6637H5 IS | 1 1/4" x 8  | 3/4" M     | 1       | –   |   |
| 6637I5 IS | 1 1/4" x 9  | 3/4" M     | 1       | –   |   |
| 6637L5 IS | 1 1/4" x 10 | 3/4" M     | 1       | –   |   |
| 6637M5 IS | 1 1/4" x 11 | 3/4" M     | 1       | –   |   |
| 6637N5 IS | 1 1/4" x 12 | 3/4" M     | 1       | –   |   |
| 6637O5 IS | 1 1/4" x 13 | 3/4" M     | 1       | –   |   |

## DISTRIBUTION MANIFOLDS WITH SHUT-OFF AND PRE-REGULATING VALVES



### CONNECTIONS 1 1/4"

#### 663

tech. broch. 01065

Pair of distribution manifolds equipped with shut-off and lockshield valves for flow rate pre-regulation.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.





| Code   | Connections | Outlet No. | Outlets |  |  |
|--------|-------------|------------|---------|---|---|
| 663735 | 1 1/4"      | x 3        | 3/4" M  | 1   | –   |
| 663745 | 1 1/4"      | x 4        | 3/4" M  | 1   | –   |
| 663755 | 1 1/4"      | x 5        | 3/4" M  | 1   | –   |
| 663765 | 1 1/4"      | x 6        | 3/4" M  | 1   | –   |
| 663775 | 1 1/4"      | x 7        | 3/4" M  | 1   | –   |
| 663785 | 1 1/4"      | x 8        | 3/4" M  | 1   | –   |

#### 6630

tech. broch. 01065

Return distribution manifold equipped with shut-off valves, fitted for thermo-electric actuator.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.





| Code   | Connections | Outlet No. | Outlets |  |  |
|--------|-------------|------------|---------|---|---|
| 663030 | 1 1/4"      | x 3        | 3/4" M  | 2   | –   |
| 663040 | 1 1/4"      | x 4        | 3/4" M  | 2   | –   |
| 663050 | 1 1/4"      | x 5        | 3/4" M  | 2   | –   |
| 663060 | 1 1/4"      | x 6        | 3/4" M  | 2   | –   |
| 663070 | 1 1/4"      | x 7        | 3/4" M  | 2   | –   |
| 663080 | 1 1/4"      | x 8        | 3/4" M  | 2   | –   |

#### 6631

tech. broch. 01065

Flow distribution manifold equipped with lockshield valve for flow rate pre-regulation.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 50 mm.




| Code   | Connections | Outlet No. | Outlets |  |  |
|--------|-------------|------------|---------|---|---|
| 663130 | 1 1/4"      | x 3        | 3/4" M  | 2   | –   |
| 663140 | 1 1/4"      | x 4        | 3/4" M  | 2   | –   |
| 663150 | 1 1/4"      | x 5        | 3/4" M  | 2   | –   |
| 663160 | 1 1/4"      | x 6        | 3/4" M  | 2   | –   |
| 663170 | 1 1/4"      | x 7        | 3/4" M  | 2   | –   |
| 663180 | 1 1/4"      | x 8        | 3/4" M  | 2   | –   |

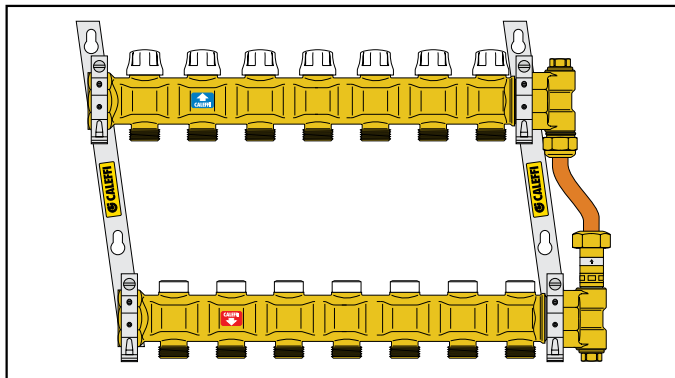
#### 663

Off-centre by-pass kit with fixed setting 20 kPa (2000 mm w.g.).  
For pre-assembled distribution manifolds 663 series.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.



| Code   |                 |  |  |
|--------|-----------------|---|---|
| 663000 | 1/2" M x 3/8" M | 1   | 20  |



Connection example of differential by-pass code 663000 with pre-assembled distribution manifold 663 series



#### 391

Pair of ball valves.  
Female - male connections with union.  
With temperature gauge, scale: 0–80 °C, Ø 40 mm.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.





| Code   |                 |  |  |
|--------|-----------------|---|---|
| 391167 | 1" x 1 1/4"     | 1   | –   |
| 391177 | 1 1/4" x 1 1/4" | 1   | –   |

#### 391

Pair of ball valves.  
Female - male connections with union.  
With temperature gauge connection.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.



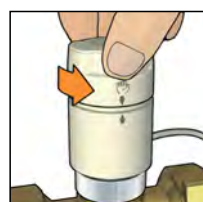
| Code   |                 |  |  |
|--------|-----------------|---|---|
| 391067 | 1" x 1 1/4"     | 1   | –   |
| 391077 | 1 1/4" x 1 1/4" | 1   | –   |



## THERMO-ELECTRIC ACTUATORS

### 6563

tech. broch. 01142



Thermo-electric actuator.  
With manual opening and position indicator.  
For distribution manifolds 662 and 663 series.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Starting current (656344/54):  $\leq 250$  mA.  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Ambient temperature range: 0–50 °C.  
Protection class: IP 40.  
Cable length: 80 cm.  
PATENT.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656312 | 230                 | 1                             | 10   |
| 656314 | 24                  | 1                             | 10   |
| 656302 | 230                 | without auxiliary microswitch | 1 10 |
| 656304 | 24                  | without auxiliary microswitch | 1 10 |

#### With low power consumption

| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656354 | 24                  | 1                             | 10   |
| 656344 | 24                  | without auxiliary microswitch | 1 10 |

### 6561

tech. broch. 01042



Thermo-electric actuator.  
For distribution manifolds 662 and 663 series.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 44 (vertical stem).  
Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656112 | 230                 | 1                             | 10   |
| 656114 | 24                  | 1                             | 10   |
| 656102 | 230                 | without auxiliary microswitch | 1 10 |
| 656104 | 24                  | without auxiliary microswitch | 1 10 |

### 6562

tech. broch. 01198



Thermo-electric actuator.  
With opening position indicator.  
**Quick-coupling installation, with a clip adapter.**  
For distribution manifolds 662 and 663 series.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 1$  A.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 54.  
Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656212 | 230                 | 1                             | 10   |
| 656214 | 24                  | 1                             | 10   |
| 656202 | 230                 | without auxiliary microswitch | 1 10 |
| 656204 | 24                  | without auxiliary microswitch | 1 10 |

### 6564

tech. broch. 01198



Thermo-electric actuator  
with low power consumption.  
With opening position indicator.  
**Quick-coupling installation, with a clip adapter.**  
For distribution manifolds 662 and 663 series.  
Normally closed.  
**With auxiliary microswitch.**  
Supply: 230 V (AC) or 24 V (AC)/(DC).  
Auxiliary microswitch contact rating:  
0,8 A (230 V).  
Power consumption: 3 W.  
Starting current:  $\leq 250$  mA.  
Ambient temperature range: 0–50 °C.  
Protection class: IP 54.  
Cable length: 80 cm.

| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656412 | 230                 | 1                             | 10   |
| 656414 | 24                  | 1                             | 10   |
| 656402 | 230                 | without auxiliary microswitch | 1 10 |
| 656404 | 24                  | without auxiliary microswitch | 1 10 |

## ACCESSORIES



### 385

Shut-off ball cock, for distribution manifold outlets. Max. working pressure: 10 bar. Max. working temperature: 100 °C. With handle.

|        |                    |    |   |  |
|--------|--------------------|----|---|--|
| Code   |                    |    |   |  |
| 385000 | 23 p.1,5 M x F nut | 10 | - |  |



### 383

Female-female fitting.

|        |                     |    |   |  |
|--------|---------------------|----|---|--|
| Code   |                     |    |   |  |
| 383240 | 23 p.1,5 F x 1/2" F | 10 | - |  |



### 385

Shut-off ball cock, for distribution manifold outlets. Max. working pressure: 10 bar. Max. working temperature: 100 °C. Without handle.

|        |                    |    |     |  |
|--------|--------------------|----|-----|--|
| Code   |                    |    |     |  |
| 385010 | 23 p.1,5 M x F nut | 15 | 150 |  |



### 384

Male fitting to nut and olive coupling.

|        |                     |    |   |  |
|--------|---------------------|----|---|--|
| Code   |                     |    |   |  |
| 384030 | 3/8" M x 23 p.1,5 M | 10 | - |  |
| 384040 | 1/2" M x 23 p.1,5 M | 10 | - |  |
| 384050 | 3/4" M x 23 p.1,5 M | 10 | - |  |



### 386

Screw plug with nut for distribution manifold outlets.

|        |          |    |   |  |
|--------|----------|----|---|--|
| Code   |          |    |   |  |
| 386000 | 23 p.1,5 | 10 | - |  |



### 384

Male fitting to nut and olive coupling. Chrome plated.

|        |                     |    |   |  |
|--------|---------------------|----|---|--|
| Code   |                     |    |   |  |
| 384031 | 3/8" M x 23 p.1,5 M | 10 | - |  |
| 384041 | 1/2" M x 23 p.1,5 M | 10 | - |  |



### 383

Female fitting to nut and olive coupling.

|        |              |                      |    |   |
|--------|--------------|----------------------|----|---|
| Code   |              |                      |    |   |
| 383030 | 3/8" F x     | 23 p.1,5 M           | 10 | - |
| 383040 | 1/2" F x     | 23 p.1,5 M           | 10 | - |
| 383050 | 3/4" F x     | 23 p.1,5 M           | 10 | - |
| 383140 | 23 p.1,5 F x | 1/2" M               | 10 | - |
| 383150 | 23 p.1,5 F x | 3/4" M               | 10 | - |
| 383151 | 23 p.1,5 F x | 3/4" M chrome plated | 10 | - |



### 382

Fitting with 23 p.1,5 captive nut. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 100 °C.

|        |                             |    |   |  |
|--------|-----------------------------|----|---|--|
| Code   |                             |    |   |  |
| 382000 | 23 p.1,5 M x nut 23 p.1,5 F | 10 | - |  |



### 383

Connection fitting with O-Ring seal for use with 3/4" 347, 679 and 680 series.

|        |                   |    |     |  |
|--------|-------------------|----|-----|--|
| Code   |                   |    |     |  |
| 383550 | 3/4" M x 23 p.1,5 | 10 | 100 |  |



### 383

Adapter with flat seat with O-Ring. Transformation from 3/4" Euroconus to 3/4" flat seat.

|        |      |   |   |  |
|--------|------|---|---|--|
| Code   |      |   |   |  |
| 383000 | 3/4" | 1 | - |  |

## ACCESSORIES



### 392

Temperature gauge fitting.  
For distribution manifolds 592 and 350 series.  
Temperature gauge 0–80 °C, Ø 40 mm.

| Code          |              |                   |   |   |
|---------------|--------------|-------------------|---|---|
| <b>392600</b> | 1" F x M     | with PTFE seal    | 1 | – |
| <b>392700</b> | 1 1/4" F x M | without PTFE seal | 1 | – |



### 657

Temperature gauge fitting.  
Temperature gauge 0–80 °C, Ø 40 mm.

| Code          |                 |   |   |
|---------------|-----------------|---|---|
| <b>657400</b> | 1/2" M x 1/2" F | 5 | – |



### 657

Temperature gauge fitting.  
For distribution manifold outlets.  
Temperature gauge 0–80 °C, Ø 40 mm.

| Code          |                     |   |    |
|---------------|---------------------|---|----|
| <b>657050</b> | 3/4" M x 3/4" F nut | 1 | 12 |



### 669

Self cleaning flow meter.  
Flow rate scale: 1–4 l/min.  
Double reading scale.  
Max. working pressure: 6 bar.  
Max. working temperature: 80 °C.  
Accuracy: ± 10 %.

| Code          |                     |   |    |
|---------------|---------------------|---|----|
| <b>669050</b> | 3/4" M x 3/4" F nut | 1 | 10 |



### 688

Temperature gauge with pocket.  
Scale 0–80 °C.  
Ø 40 mm.

| Code          |      |   |   |
|---------------|------|---|---|
| <b>688002</b> | 1/4" | 2 | – |



### 3642

Reduction fitting.

| Code          |                 |   |   |
|---------------|-----------------|---|---|
| <b>364276</b> | 1" F x 1 1/4" M | 2 | – |



### 5991

End fitting.  
For distribution manifolds 349, 350, 592, 650  
and 663 series.

| Code          |                   |   |   |
|---------------|-------------------|---|---|
| <b>599153</b> | 3/4" F x 3/8" F   | 2 | – |
| <b>599154</b> | 3/4" F x 1/2" F   | 2 | – |
| <b>599163</b> | 1" F x 3/8" F     | 2 | – |
| <b>599164</b> | 1" F x 1/2" F     | 2 | – |
| <b>599173</b> | 1 1/4" F x 3/8" F | 2 | – |
| <b>599174</b> | 1 1/4" F x 1/2" F | 2 | – |



### 5993

Plug.  
For distribution manifolds 349, 350, 592, 650  
and 663 series.

| Code          |          |   |    |
|---------------|----------|---|----|
| <b>599350</b> | 3/4" F   | 2 | 10 |
| <b>599360</b> | 1" F     | 2 | 10 |
| <b>599370</b> | 1 1/4" F | 2 | 10 |



### 5994

Double radial end fitting.  
For distribution manifolds 349, 350, 592, 650  
and 663 series.

| Code          |                            |   |   |
|---------------|----------------------------|---|---|
| <b>599453</b> | 3/4" F x 1/2" F x 3/8" F   | 2 | – |
| <b>599454</b> | 3/4" F x 1/2" F x 1/2" F   | 2 | – |
| <b>599463</b> | 1" F x 1/2" F x 3/8" F     | 2 | – |
| <b>599464</b> | 1" F x 1/2" F x 1/2" F     | 2 | – |
| <b>599473</b> | 1 1/4" F x 1/2" F x 3/8" F | 2 | – |
| <b>599474</b> | 1 1/4" F x 1/2" F x 1/2" F | 2 | – |



### 5995

Single radial end fitting.  
For distribution manifolds 349, 350, 592, 650  
and 663 series.

| Code          |                   |   |   |
|---------------|-------------------|---|---|
| <b>599553</b> | 3/4" F x 3/8" F   | 2 | – |
| <b>599563</b> | 1" F x 3/8" F     | 2 | – |
| <b>599573</b> | 1 1/4" F x 3/8" F | 2 | – |



**NEW**

### 5996

Double radial end fitting. For distribution  
manifolds 662 series.

| Code          |  |   |   |
|---------------|--|---|---|
| <b>599660</b> |  | 2 | – |

## ACCESSORIES



### 586

Female blind end plug.

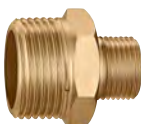
| Code   |        |    |   |
|--------|--------|----|---|
| 586300 | 3/8" F | 10 | – |
| 586400 | 1/2" F | 10 | – |
| 586600 | 1" F   | 10 | – |



### 583

Female compression fitting for outlets.

| Code   |                        |    |   |
|--------|------------------------|----|---|
| 583034 | 3/8" F x 1/2" M - Ø 16 | 10 | – |
| 583045 | 1/2" F x 3/4" M - Ø 18 | 10 | – |
| 583064 | 1" F x 1/2" M - Ø 16   | 10 | – |
| 583065 | 1" F x 3/4" M - Ø 18   | 10 | – |



### 584

Male compression fitting for outlets.

| Code   |                        |    |   |
|--------|------------------------|----|---|
| 584053 | 3/4" M x 3/8" M - Ø 12 | 10 | – |
| 584054 | 3/4" M x 1/2" M - Ø 16 | 10 | – |
| 584055 | 3/4" M x 3/4" M - Ø 18 | 10 | – |
| 584065 | 1" M x 3/4" M - Ø 18   | 10 | – |



### 585

Stiffener for copper pipe with wall thickness 0,75 and 1 mm.

| Code   |      | Thickness (mm) |     |   |
|--------|------|----------------|-----|---|
| 585010 | Ø 10 | 0,75           | 100 | – |
| 585012 | Ø 12 | 0,75           | 100 | – |
| 585014 | Ø 14 | 0,75           | 100 | – |
| 585015 | Ø 15 | 0,75           | 100 | – |
| 585016 | Ø 16 | 0,75           | 100 | – |
| 585018 | Ø 18 | 0,75           | 100 | – |
| 585110 | Ø 10 | 1              | 100 | – |
| 585115 | Ø 15 | 1              | 100 | – |
| 585116 | Ø 16 | 1              | 100 | – |
| 585118 | Ø 18 | 1              | 100 | – |



### 386

Screw plug with nut for distribution manifold outlets.

| Code   |      |    |   |
|--------|------|----|---|
| 386500 | 3/4" | 10 | – |

## FITTINGS 23 p.1,5



### 679 DARCAL

Fitting for multilayer plastic pipe for continuous high temperature use.  
Max. working pressure: 10 bar.  
Temperature range: 0–95 °C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 99).

| Code   |                      |    |     |
|--------|----------------------|----|-----|
| 679114 | 23 p.1,5 - Ø 14x2    | 10 | 100 |
| 679124 | 23 p.1,5 - Ø 16x2    | 10 | 100 |
| 679125 | 23 p.1,5 - Ø 16x2,25 | 10 | 100 |
| 679144 | 23 p.1,5 - Ø 18x2    | 10 | 100 |



### 446

Pre-assembled compression ends fitting, for annealed copper, hard copper, brass, mild steel and stainless steel pipes.  
With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.

| Code   |                 |     |   |
|--------|-----------------|-----|---|
| 446010 | 23 p.1,5 - Ø 10 | 100 | – |
| 446012 | 23 p.1,5 - Ø 12 | 100 | – |
| 446014 | 23 p.1,5 - Ø 14 | 100 | – |
| 446015 | 23 p.1,5 - Ø 15 | 100 | – |
| 446016 | 23 p.1,5 - Ø 16 | 100 | – |



### 680 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).

| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|----------|---------------------|----------------------|----|-----|
| 680000 | 23 p.1,5 | 7,5– 8              | 12–14                | 10 | 100 |
| 680002 | 23 p.1,5 | 9 – 9,5             | 14–16                | 10 | 100 |
| 680001 | 23 p.1,5 | 9,5–10              | 12–14                | 10 | 100 |
| 680006 | 23 p.1,5 | 9,5–10              | 14–16                | 10 | 100 |
| 680015 | 23 p.1,5 | 10,5–11             | 14–16                | 10 | 100 |
| 680017 | 23 p.1,5 | 10,5–11             | 16–18                | 10 | 100 |
| 680024 | 23 p.1,5 | 11,5–12             | 14–16                | 10 | 100 |
| 680026 | 23 p.1,5 | 11,5–12             | 16–18                | 10 | 100 |
| 680035 | 23 p.1,5 | 12,5–13             | 16–18                | 10 | 100 |
| 680044 | 23 p.1,5 | 13,5–14             | 16–18                | 10 | 100 |



### 347

Compression ends fitting, for annealed copper, hard copper, brass, mild steel and stainless steel pipes.  
With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.

| Code   |                 |     |   |
|--------|-----------------|-----|---|
| 347010 | 23 p.1,5 - Ø 10 | 100 | – |
| 347012 | 23 p.1,5 - Ø 12 | 100 | – |
| 347014 | 23 p.1,5 - Ø 14 | 100 | – |
| 347015 | 23 p.1,5 - Ø 15 | 100 | – |
| 347016 | 23 p.1,5 - Ø 16 | 100 | – |

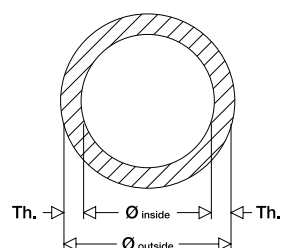


### 680 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).

| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|----------|---------------------|----------------------|----|-----|
| 680055 | 23 p.1,5 | 14,5–15             | 18–20                | 10 | 100 |
| 680064 | 23 p.1,5 | 15,5–16             | 18–20                | 10 | 100 |

#### Example: 680 series fitting selection



Known both the outside and inside diameters (ex.: 17 mm and 13 mm);  
or known the outside diameter (ex.: Øo 17 mm) and the thickness (ex.: th. 2 mm) and considering that:

$$\text{Ø}_{\text{outside}} - 2 \cdot \text{th.} = \text{Ø}_{\text{inside}}$$

$$17 - 2 \cdot 2 = 13 \text{ mm}$$

Look within the table for the code matching both diameters:

| Code   |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 680035 | 23 p.1,5 | 12,5–13             | 16–18                |



## FITTINGS 3/4"



### 679 DARGAL

Fitting for multilayer pipes with continuous high temperature use.  
Max. working pressure: 10 bar.  
Temperature range: 0–95 °C.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series (see page 99).

| Code   |                  |    |     |
|--------|------------------|----|-----|
| 679514 | 3/4" - Ø 14x2    | 10 | 100 |
| 679524 | 3/4" - Ø 16x2    | 10 | 100 |
| 679525 | 3/4" - Ø 16x2,25 | 10 | 100 |
| 679544 | 3/4" - Ø 18x2    | 10 | 100 |
| 679564 | 3/4" - Ø 20x2    | 10 | 100 |
| 679565 | 3/4" - Ø 20x2,25 | 10 | 100 |
| 679566 | 3/4" - Ø 20x2,5  | 10 | 100 |



### 680 DARGAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).

| Code   |      | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|------|---------------------|----------------------|----|-----|
| 680507 | 3/4" | 7,5– 8              | 10,5–12              | 10 | 100 |
| 680502 | 3/4" | 7,5– 8              | 12 –14               | 10 | 100 |
| 680503 | 3/4" | 8,5– 9              | 12 –14               | 10 | 100 |
| 680500 | 3/4" | 9 – 9,5             | 14 –16               | 10 | 100 |
| 680501 | 3/4" | 9,5–10              | 12 –14               | 10 | 100 |
| 680506 | 3/4" | 9,5–10              | 14 –16               | 10 | 100 |
| 680515 | 3/4" | 10,5–11             | 14 –16               | 10 | 100 |
| 680517 | 3/4" | 10,5–11             | 16 –18               | 10 | 100 |
| 680524 | 3/4" | 11,5–12             | 14 –16               | 10 | 100 |
| 680526 | 3/4" | 11,5–12             | 16 –18               | 10 | 100 |
| 680535 | 3/4" | 12,5–13             | 16 –18               | 10 | 100 |
| 680537 | 3/4" | 12,5–13             | 18 –20               | 10 | 100 |
| 680544 | 3/4" | 13,5–14             | 16 –18               | 10 | 100 |
| 680546 | 3/4" | 13,5–14             | 18 –20               | 10 | 100 |
| 680555 | 3/4" | 14,5–15             | 18 –20               | 10 | 100 |
| 680556 | 3/4" | 15 –15,5            | 18 –20               | 10 | 100 |
| 680564 | 3/4" | 15,5–16             | 18 –20               | 10 | 100 |
| 680505 | 3/4" | 17                  | 22,5                 | 10 | 100 |

### 680 DARGAL

Compression ends fitting for multilayer pipe with fitting M-F.



| Code   |                   |    |   |
|--------|-------------------|----|---|
| 680285 | 3/4" F - Ø 25x2,5 | 10 | – |
| 680296 | 3/4" F - Ø 26x3   | 10 | – |

### 347

Compression ends fitting, for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal.  
Max. working pressure: 10 bar.  
Temperature range: -25–120 °C.



| Code   |             |     |   |
|--------|-------------|-----|---|
| 347510 | 3/4" - Ø 10 | 100 | – |
| 347512 | 3/4" - Ø 12 | 100 | – |
| 347514 | 3/4" - Ø 14 | 100 | – |
| 347515 | 3/4" - Ø 15 | 100 | – |
| 347516 | 3/4" - Ø 16 | 100 | – |
| 347518 | 3/4" - Ø 18 | 10  | – |



### 680 DARGAL

Self-adjustable diameter fitting for plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range: 5–80 °C.

| Code   |    | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|----|---------------------|----------------------|----|-----|
| 680687 | 1" | 17,5                | 25                   | 10 | 100 |
| 680605 | 1" | 19,5                | 25                   | 10 | 100 |

## PLASTIC INSPECTION WALL BOXES



### 361

Plastic inspection wall port, with zinc plated sheet steel frame. White colour RAL 9010.

| Code   | Dim. (h x w) |   |    |
|--------|--------------|---|----|
| 361032 | 320 x 250    | 1 | 5  |
| 361050 | 500 x 250    | 1 | 10 |



### 360

Plastic inspection wall box. For distribution manifolds 349, 350, 592 and 354 series. Version with foldable side walls. White colour RAL 9010.

| Code   | Dim. (h x w x d) |   |    |
|--------|------------------|---|----|
| 360032 | 320 x 250 x 90   | 1 | 10 |
| 360050 | 500 x 250 x 90   | 1 | 10 |



### 363

tech. broch. 01091

Inspection wall port and frame in plastic. Ventilated. White colour RAL 9010.

| Code   | Dim. (h x w) |   |    |
|--------|--------------|---|----|
| 363036 | 360 x 270    | 1 | 10 |
| 363056 | 560 x 330    | 1 | 5  |
| 363073 | 730 x 360    | 1 | 5  |



### 362

tech. broch. 01091

Plastic inspection wall box. For dual distribution manifolds 356, 357 series and single distribution manifolds 349, 350, 592 and 354 series. Ventilated. Equipped with lateral protections. Adjustable depth from 100 to 80 mm. White colour RAL 9010.

| Code   | Dim. (h x w x d)   |   |    |
|--------|--------------------|---|----|
| 362036 | 360 x 270 x 100/80 | 1 | 10 |
| 362056 | 560 x 330 x 100/80 | 1 | 5  |
| 362073 | 730 x 360 x 100/80 | 1 | 5  |



### 360

tech. broch. 01091

Pair of mounting brackets for 3/4" and 1" dual distribution manifolds 356, 356 IS and 357 series. For plastic inspection boxes 360 and 362 series.

| Code   |   |   |
|--------|---|---|
| 360003 | 1 | — |



### 360

Pair of stainless steel mounting brackets for distribution manifolds 354 series. For plastic inspection boxes 360 and 362 series.

| Code   |   |    |
|--------|---|----|
| 360210 | 1 | 10 |



### 360

tech. broch. 01091

Mounting brackets for 1" single distribution manifolds 350 and 592 series, for 3/4" and 1" distribution manifolds 351 and 598 series. For plastic inspection boxes 360 and 362 series. In package:  
– N. 2 long brackets  
– N. 2 short brackets.

| Code   |   |    |
|--------|---|----|
| 360001 | 1 | 10 |



### 360

tech. broch. 01091

Mounting brackets for 3/4" single distribution manifolds 349, 350 and 592 series. For plastic inspection boxes 360 and 362 series. In package:  
– N. 2 long brackets  
– N. 2 short brackets.

| Code   |   |    |
|--------|---|----|
| 360002 | 1 | 10 |



### 362

tech. broch. 01091

Mounting brackets for dual distribution manifolds 356 and 357 series. For plastic inspection boxes 362 series.


| Code   |   |    |
|--------|---|----|
| 362001 | 1 | 10 |

## SHEET STEEL INSPECTION WALL BOXES



### 5890



Recessed inspection wall port with frame.  
In zinc plated sheet steel.

| Code   | Dim. (h x w) |  |  |
|--------|--------------|---|---|
| 589003 | 370 x 275    | 1   | 10  |
| 589005 | 540 x 275    | 1   | 10  |



### 5891

Recessed inspection wall box with frame.  
For dual distribution manifolds 356 series.  
In zinc plated sheet steel.  
Adjustable depth 70, 90 or 110 mm.  
Supplied with manifold mounting bracket.



| Code   | Dim. (h x w x d)      |  |  |
|--------|-----------------------|---|---|
| 589103 | 370 x 275 x 70/90/110 | 1   | 3   |
| 589105 | 540 x 275 x 70/90/110 | 1   | 3   |



### 659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 671, 664 and 665 series.  
Complete with specific support for manifold brackets.  
Closure with a push-fit clamp.  
In painted sheet steel.  
**Adjustable depth from 80 to 120 mm.**



| Code   | Dim. (h x w x d)    |  |  |
|--------|---------------------|---|---|
| 659045 | 500 x 400 x 80-120  | 1   | -   |
| 659065 | 500 x 600 x 80-120  | 1   | -   |
| 659085 | 500 x 800 x 80-120  | 1   | -   |
| 659105 | 500 x 1000 x 80-120 | 1   | -   |



### 659

tech. broch. 01144



Inspection wall port with frame.  
In painted sheet steel.

| Code   |            |  |  |
|--------|------------|---|---|
| 659504 | for 659045 | 1   | -   |
| 659506 | for 659065 | 1   | -   |
| 659508 | for 659085 | 1   | -   |
| 659510 | for 659105 | 1   | -   |



### 658

Pair of mounting brackets for distribution manifolds 592, 350 and 351 series.  
With insulating clamps, screws and wall anchors.  
To be used with boxes 659 series or directly wall mounted.

| Code   |  |  |  |
|--------|--|---|---|
| 658000 |  | 1   | 20  |



### 658



Pair of steel mounting brackets for distribution manifolds 662 and 664 series.  
To be used with boxes code 659..5 or directly wall mounted.

| Code   |  |  |  |
|--------|--|---|---|
| 658101 |  | 1   | -   |



### 658



Pair of mounting brackets for distribution manifolds 663 and 668...S1 series.  
With screws and wall anchors.  
To be used with boxes 659 series or directly wall mounted.

| Code   |  |  |  |
|--------|--|---|---|
| 658100 |  | 1   | 20  |



### 658

Pair of mounting brackets for 3/4" and 1" distribution manifolds 350 and 592 series.  
With clamps and screws.  
To connect manifolds to zone valves.  
To be used with boxes 659 series.



| Code   |  |  |  |
|--------|--|---|---|
| 658200 |  | 1   | -   |



### 659

tech. broch. 01144

Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 671, 668...S1, 664 and 665 series.  
Wall or floor installations (with 660 series).  
Closure with a push-fit clamp.  
In painted sheet steel.  
**Adjustable depth from 110 to 140 mm.**



| Code   | Dim. (h x w x d)     |  |  |
|--------|----------------------|---|---|
| 659044 | 500 x 400 x 110-140  | 1   | -   |
| 659064 | 500 x 600 x 110-140  | 1   | -   |
| 659084 | 500 x 800 x 110-140  | 1   | -   |
| 659104 | 500 x 1000 x 110-140 | 1   | -   |
| 659124 | 500 x 1200 x 110-140 | 1   | -   |



### 659

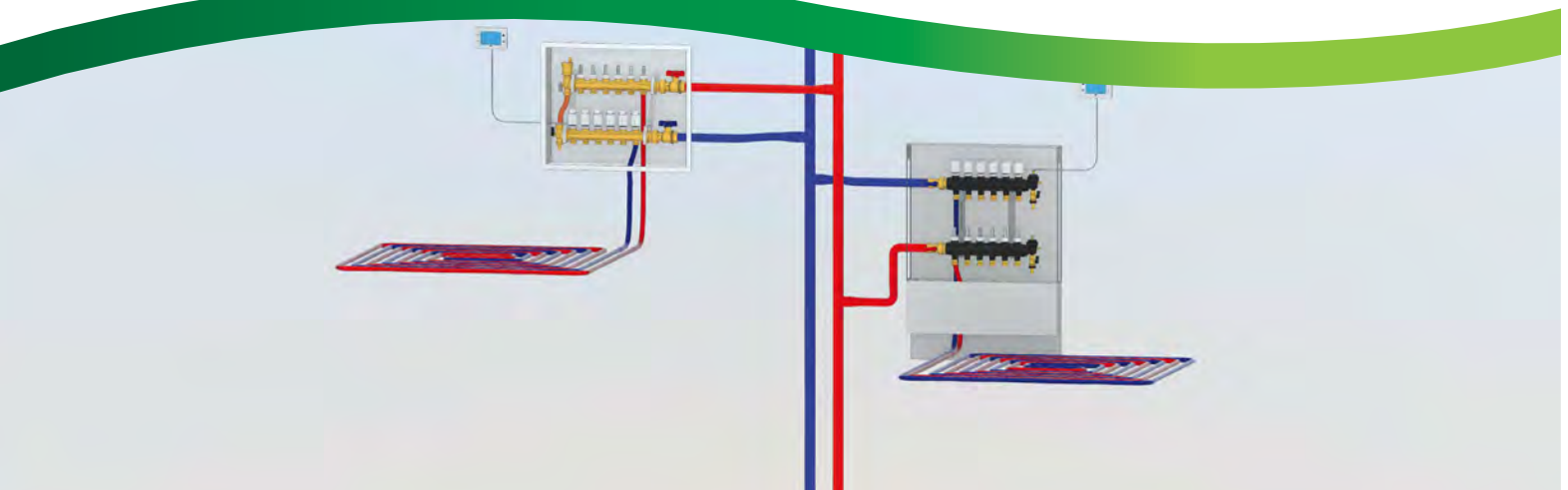
tech. broch. 01144

Inspection wall port with frame.  
In painted sheet steel.

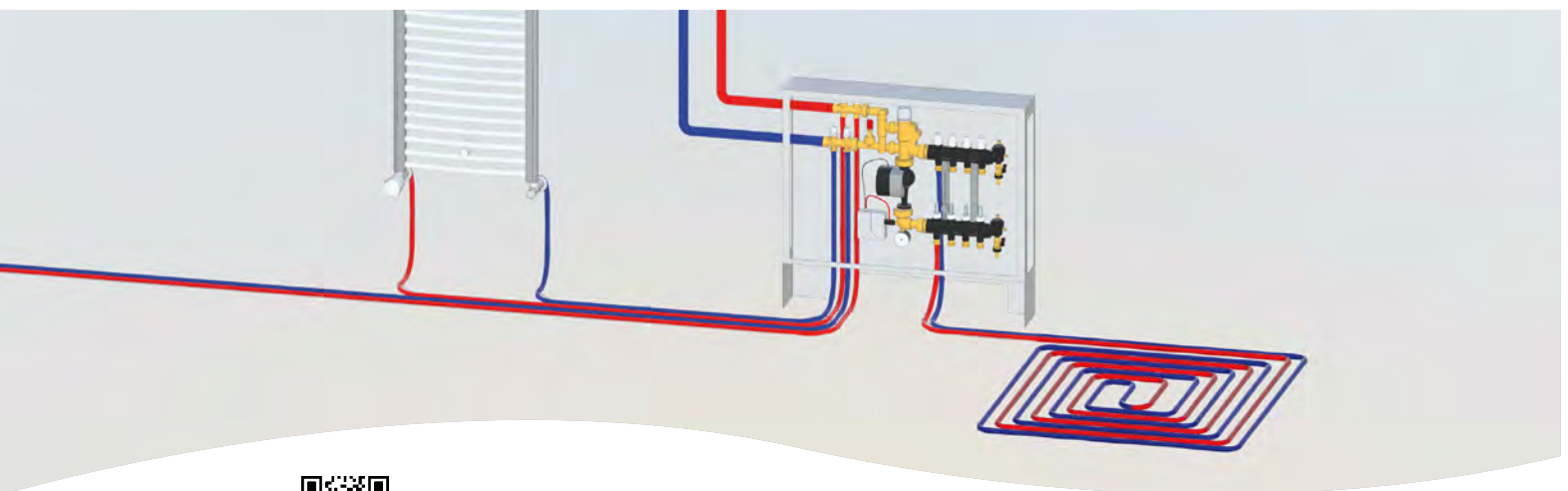
| Code   |            |  |  |
|--------|------------|---|---|
| 659304 | for 659044 | 1   | -   |
| 659306 | for 659064 | 1   | -   |
| 659308 | for 659084 | 1   | -   |
| 659310 | for 659104 | 1   | -   |
| 659312 | for 659124 | 1   | -   |



# DISTRIBUTION MANIFOLDS - DISTRIBUTION MANIFOLDS WITH REGULATING UNIT



5



**G BIM**  
bim.caleffi.com

**Composite distribution manifolds**

**Brass distribution manifolds**

**Dynamic distribution manifolds**

**Differential pressure control valve for distribution manifolds**

**Modulating temperature regulating unit**

**Modulating temperature regulating unit with medium distribution kit for primary circuit**

**Set point thermostatic regulating unit**

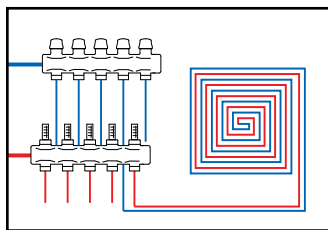
**Set point thermostatic regulating unit with medium distribution kit for primary circuit**

**Thermo-electric actuators**

**Boxes for distribution manifolds**



## MANIFOLDS FOR RADIANT PANEL SYSTEMS



Manifolds for radiant panel systems are used for optimal distribution of the heating medium in floor heating system circuits and ultimately to improve heat emission control.

They are composed of:

- flow manifold; complete with flow meters and built-in regulating valves;
- return manifold; complete with shut-off valves with facility for thermo-electric actuator;
- end fittings complete with automatic valve and manual air vent with filler/drain cocks.

Modulating temperature regulating units or set point thermostatic regulating units can be coupled with the distribution manifolds.

### Distribution manifolds

- Composite distribution manifolds
- Differential pressure control valve for distribution manifolds
- Accessories for distribution manifolds
- Brass distribution manifolds
- Dynamic distribution manifolds

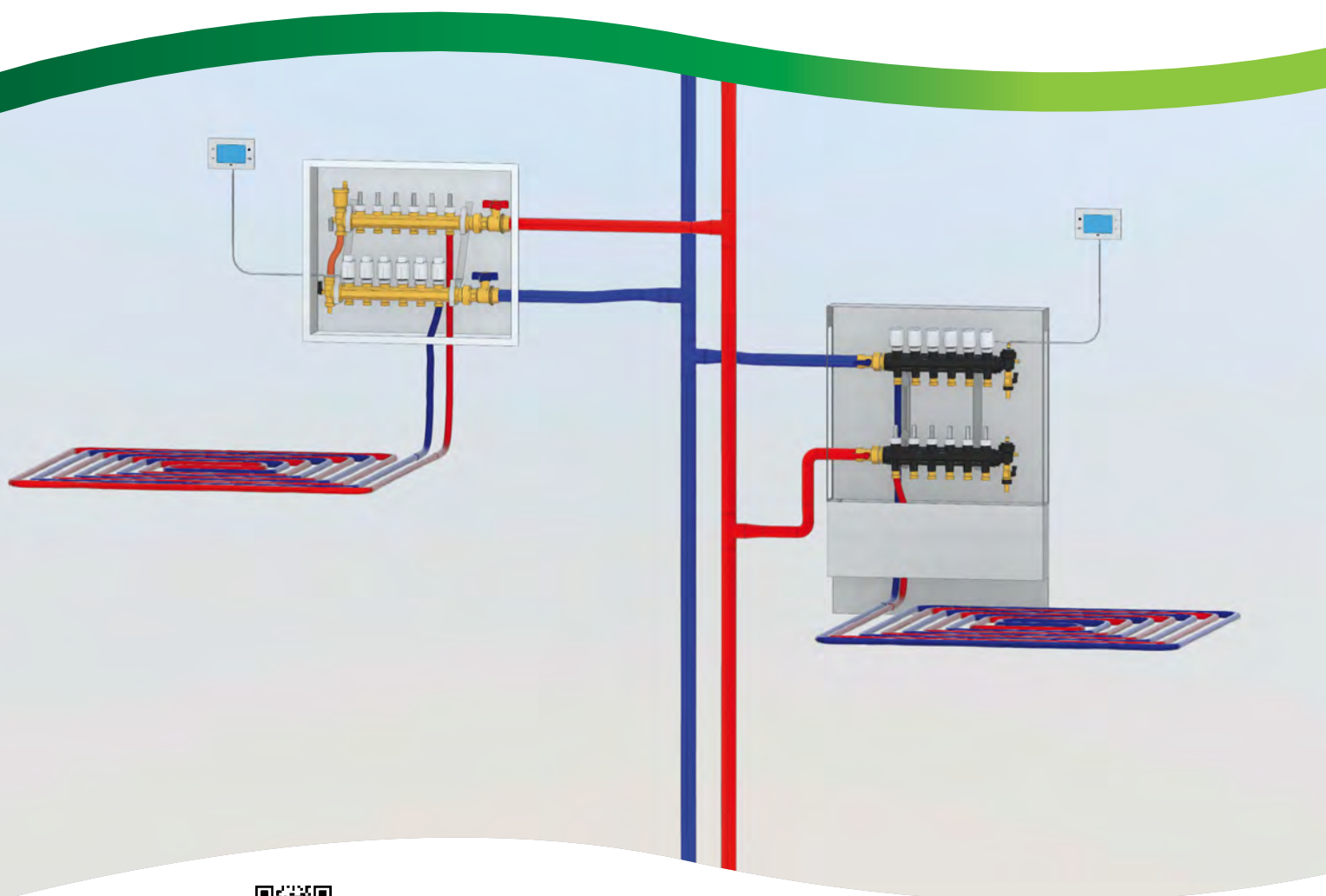
### Distribution manifolds with regulating unit

- Modulating temperature regulating unit with digital temperature
- Set point thermostatic regulating unit
- Set point thermostatic regulating unit with medium distribution kit for primary circuit
- Thermostatic mixing valve for radiant panel systems

### Thermo-electric actuators and boxes for distribution manifolds

- Thermo-electric actuators
- Boxes for distribution manifolds

# DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS



 **BIM**  
bim.caleffi.com

**Composite distribution manifolds**  
**Brass distribution manifolds**  
**Accessories for distribution manifolds**  
**Dynamic distribution manifolds**  
**Differential pressure control valve for distribution manifolds**

## COMPOSITE DISTRIBUTION MANIFOLDS

### CONNECTIONS 1"



#### 670

Pre-assembled distribution manifold.  
Max. working pressure: 6 bar.  
Temperature range: 5–60 °C.

Equipped with:

- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box installation;
- box with adjustable height and depth;
- coupling adapter with clip code 675850, for manifold outlets (in package);
- template for cutting pipe code 675002 (in package).



| Code          | Conn. | Outlet No. | Outlets | Box length (mm) |  |  |
|---------------|-------|------------|---------|-----------------|---|---|
| <b>6706C1</b> | 1" F  | x 3        | 3/4" M  | 600             | 1   | –   |
| <b>6706D1</b> | 1" F  | x 4        | 3/4" M  | 600             | 1   | –   |
| <b>6706E1</b> | 1" F  | x 5        | 3/4" M  | 600             | 1   | –   |
| <b>6706F1</b> | 1" F  | x 6        | 3/4" M  | 600             | 1   | –   |
| <b>6706G1</b> | 1" F  | x 7        | 3/4" M  | 800             | 1   | –   |
| <b>6706H1</b> | 1" F  | x 8        | 3/4" M  | 800             | 1   | –   |
| <b>6706I1</b> | 1" F  | x 9        | 3/4" M  | 800             | 1   | –   |
| <b>6706L1</b> | 1" F  | x 10       | 3/4" M  | 800             | 1   | –   |
| <b>6706M1</b> | 1" F  | x 11       | 3/4" M  | 800             | 1   | –   |
| <b>6706N1</b> | 1" F  | x 12       | 3/4" M  | 800             | 1   | –   |



#### 671

Pre-assembled distribution manifold.  
Max. working pressure: 6 bar.  
Temperature range: 5–60 °C.

Equipped with:

- technopolymer flow manifold with built-in flow meters and flow rate balancing valves;
- technopolymer return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- technopolymer end fittings with automatic air vent with hygroscopic cap, discharge valve and fill/drain cock;
- pair of ball shut-off valves;
- LCD thermometers on flow and return manifolds;
- adhesive labels indicating the rooms;
- pair of mounting brackets for box or wall mounting;
- coupling adapter with clip code 675850, for manifold outlets (in package);
- template for cutting pipe code 675002 (in package).



| Code          | Connections | Outlet No. | Outlets | Length for box choice (mm) |  |  |
|---------------|-------------|------------|---------|----------------------------|---|---|
| <b>6716C1</b> | 1" F        | x 3        | 3/4" M  | 600                        | 1   | –   |
| <b>6716D1</b> | 1" F        | x 4        | 3/4" M  | 600                        | 1   | –   |
| <b>6716E1</b> | 1" F        | x 5        | 3/4" M  | 600                        | 1   | –   |
| <b>6716F1</b> | 1" F        | x 6        | 3/4" M  | 600                        | 1   | –   |
| <b>6716G1</b> | 1" F        | x 7        | 3/4" M  | 600                        | 1   | –   |
| <b>6716H1</b> | 1" F        | x 8        | 3/4" M  | 800                        | 1   | –   |
| <b>6716I1</b> | 1" F        | x 9        | 3/4" M  | 800                        | 1   | –   |
| <b>6716L1</b> | 1" F        | x 10       | 3/4" M  | 800                        | 1   | –   |
| <b>6716M1</b> | 1" F        | x 11       | 3/4" M  | 800                        | 1   | –   |
| <b>6716N1</b> | 1" F        | x 12       | 3/4" M  | 800                        | 1   | –   |
| <b>6716O1</b> | 1" F        | x 13       | 3/4" M  | –                          | 1   | –   |
| <b>6716P1</b> | 1" F        | x 14       | 3/4" M  | –                          | 1   | –   |

## ACCESSORIES FOR COMPOSITE DISTRIBUTION MANIFOLDS



**675**

tech. broch. 01126

Technopolymer end fitting with automatic air vent with hygroscopic cap, discharge valve, fill/drain cock. Max. working pressure: 6 bar. Temperature range: 5–60 °C.

Code

**675800** 1 1/4"



1 20



**675**

tech. broch. 01126

Push-fit thermometer for panel piping. For pipes with outer diameter from 15 to 18 mm. Thermometer scale: 5–50 °C. Thermometer fluid: alcohol. Thermo-conductive paste supplied in package.

Code

**675900**



10 100



**675**

tech. broch. 01126

Coupling adapter with clip.

Code

**675850** 3/4" Ø 18 mm



1 40



**675**

tech. broch. 01126

Cutting pipe template.

Code

**675002**



10 –



**182**

Differential by-pass kit with fixed setting 25 kPa (2.500 mm w.g.) complete with flexible hose. For regulating units 182 series and manifolds 670 and 671 series. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

Code

**182000** 3/4"



1 5

## DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

### CONNECTIONS 1"

#### 664

Pre-assembled distribution manifold.  
Max. working pressure: 6 bar.  
Temperature range: 5–60 °C.  
Outlet centre distance: 50 mm.

Equipped with:

- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold complete **with flow meters 0–5 l/m scale** and flow rate balancing valves;
- end fittings with automatic air vent and drain cock;
- steel mounting brackets for use with box or for direct wall mounting.



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 6646B1 | 1"          | x 2        | 3/4" M  | 1 | – |
| 6646C1 | 1"          | x 3        | 3/4" M  | 1 | – |
| 6646D1 | 1"          | x 4        | 3/4" M  | 1 | – |
| 6646E1 | 1"          | x 5        | 3/4" M  | 1 | – |
| 6646F1 | 1"          | x 6        | 3/4" M  | 1 | – |
| 6646G1 | 1"          | x 7        | 3/4" M  | 1 | – |
| 6646H1 | 1"          | x 8        | 3/4" M  | 1 | – |
| 6646I1 | 1"          | x 9        | 3/4" M  | 1 | – |
| 6646L1 | 1"          | x 10       | 3/4" M  | 1 | – |
| 6646M1 | 1"          | x 11       | 3/4" M  | 1 | – |
| 6646N1 | 1"          | x 12       | 3/4" M  | 1 | – |
| 6646O1 | 1"          | x 13       | 3/4" M  | 1 | – |

tech. broch. 01260

#### 664

NEW

Pair of manifolds, with:  
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;  
- flow manifold complete **with flow meters 0–5 l/m scale** and flow rate balancing valves;  
Max. working pressure: 6 bar.  
Temperature range: 5–60 °C.  
Outlet centre distance: 50 mm.



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 664621 | 1"          | x 2        | 3/4" M  | 1 | – |
| 664631 | 1"          | x 3        | 3/4" M  | 1 | – |
| 664641 | 1"          | x 4        | 3/4" M  | 1 | – |
| 664651 | 1"          | x 5        | 3/4" M  | 1 | – |
| 664661 | 1"          | x 6        | 3/4" M  | 1 | – |



| Code   |   |   |
|--------|---|---|
| 658101 | 1 | – |

#### 658

Pair of steel mounting brackets for distribution manifolds 662 and 664 series.  
To be used with boxes code 659..5 or directly wall mounted.

NEW

#### 5996

tech. broch. 01144

Return end fitting complete with automatic air vent and drain cock.  
Max. working pressure: 6 bar.  
Max. discharge pressure: 2,5 bar.  
Temperature range: 0–100 °C.



| Code   |    |      |
|--------|----|------|
| 599678 | 1" | 1 10 |

NEW

#### 5996

tech. broch. 01144

Flow end fitting complete with manual air vent and drain cock.  
Max. working pressure: 6 bar.  
Max. discharge pressure: 2,5 bar.  
Temperature range: 5–60 °C.



| Code   |        |      |
|--------|--------|------|
| 599679 | 1 1/4" | 1 10 |



## DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

### CONNECTIONS 1"

#### 662

Pre-assembled distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: 5–80 °C.  
Outlet centre distance: 50 mm.

Equipped with:

- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold **with micrometric preregulating valves**;
- end fittings with automatic air vent and drain cock;
- polymer mounting brackets with adjustable centre distance for use with box 659 series or for direct wall mounting.



| Code          | Connections | Outlet No. | Outlets |   |   |
|---------------|-------------|------------|---------|---|---|
| <b>6626B6</b> | 1"          | x 2        | 3/4" M  | 1 | – |
| <b>6626C6</b> | 1"          | x 3        | 3/4" M  | 1 | – |
| <b>6626D6</b> | 1"          | x 4        | 3/4" M  | 1 | – |
| <b>6626E6</b> | 1"          | x 5        | 3/4" M  | 1 | – |
| <b>6626F6</b> | 1"          | x 6        | 3/4" M  | 1 | – |
| <b>6626G6</b> | 1"          | x 7        | 3/4" M  | 1 | – |
| <b>6626H6</b> | 1"          | x 8        | 3/4" M  | 1 | – |
| <b>6626I6</b> | 1"          | x 9        | 3/4" M  | 1 | – |
| <b>6626L6</b> | 1"          | x 10       | 3/4" M  | 1 | – |
| <b>6626M6</b> | 1"          | x 11       | 3/4" M  | 1 | – |
| <b>6626N6</b> | 1"          | x 12       | 3/4" M  | 1 | – |
| <b>6626O6</b> | 1"          | x 13       | 3/4" M  | 1 | – |

#### 662

NEW

tech. broch. 01260

Pair of manifolds, with:

- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold **with micrometric preregulating valves**;

Max. working pressure: 10 bar.  
Temperature range: 5–80 °C.  
Outlet centre distance: 50 mm.



| Code          | Connections | Outlet No. | Outlets |   |   |
|---------------|-------------|------------|---------|---|---|
| <b>662626</b> | 1"          | x 2        | 3/4" M  | 1 | – |
| <b>662636</b> | 1"          | x 3        | 3/4" M  | 1 | – |
| <b>662646</b> | 1"          | x 4        | 3/4" M  | 1 | – |
| <b>662656</b> | 1"          | x 5        | 3/4" M  | 1 | – |
| <b>662666</b> | 1"          | x 6        | 3/4" M  | 1 | – |

#### 658

tech. broch. 01180

Polymer mounting brackets with adjustable centre distance, for distribution manifolds 662 series.  
With screws and wall anchors.  
To be used with boxes code 659.4 (depth 110–140 mm) or directly wall mounted.



| Code          |   |   |
|---------------|---|---|
| <b>658400</b> | 1 | 5 |

NEW

#### 5996

tech. broch. 01144

Return end fitting complete with automatic air vent and drain cock.  
Max. working pressure: 6 bar.  
Max. discharge pressure: 2,5 bar.  
Temperature range: 0–100 °C.



| Code          |    |      |
|---------------|----|------|
| <b>599678</b> | 1" | 1 10 |

NEW

#### 5996

tech. broch. 01144

Flow end fitting complete with manual air vent and drain cock.  
Max. working pressure: 6 bar.  
Max. discharge pressure: 2,5 bar.  
Temperature range: 5–60 °C.



| Code          |        |      |
|---------------|--------|------|
| <b>599679</b> | 1 1/4" | 1 10 |

## ACCESSORIES FOR DISTRIBUTION MANIFOLDS

Insulation for distribution manifolds  
662, 664 and 665 series.  
For heating and cooling systems.  
**For use with box code 659..4**  
(adjustable depth from 110 to 140 mm).



Code

|                  |                                    |   |   |
|------------------|------------------------------------|---|---|
| <b>CBN6646F1</b> | for manifolds from 2 to 6 outlets  | 1 | – |
| <b>CBN6646N1</b> | for manifolds from 7 to 12 outlets | 1 | – |
| <b>CBN6646O1</b> | for manifolds with 13 outlets      | 1 | – |

### 391

Pair of ball shut-off valves with O-Ring seal.  
For distribution manifolds 664 and 665 series.  
Female - male connections with union  
with O-Ring seal.

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



Code

|               |    |   |   |
|---------------|----|---|---|
| <b>391066</b> | 1" | 1 | – |
|---------------|----|---|---|



### 680

#### DAR<sup>CAL</sup>

Self-adjustable diameter fitting  
for single and multilayer plastic pipes.  
Max. working pressure: 10 bar.  
Temperature range:  
5–80 °C (PE-X)  
5–75 °C (Multilayer marked 95 °C).



tech. broch. 01144

| Code          |      | $\varnothing_{\text{inside}}$ | $\varnothing_{\text{outside}}$ |  |  |
|---------------|------|-------------------------------|--------------------------------|---|---|
| <b>680507</b> | 3/4" | 7,5– 8                        | 10,5–12                        | 10  | 100   |
| <b>680502</b> | 3/4" | 7,5– 8                        | 12 –14                         | 10  | 100   |
| <b>680503</b> | 3/4" | 8,5– 9                        | 12 –14                         | 10  | 100   |
| <b>680500</b> | 3/4" | 9 – 9,5                       | 14 –16                         | 10  | 100   |
| <b>680501</b> | 3/4" | 9,5–10                        | 12 –14                         | 10  | 100   |
| <b>680506</b> | 3/4" | 9,5–10                        | 14 –16                         | 10  | 100   |
| <b>680515</b> | 3/4" | 10,5–11                       | 14 –16                         | 10  | 100   |
| <b>680517</b> | 3/4" | 10,5–11                       | 16 –18                         | 10  | 100   |
| <b>680524</b> | 3/4" | 11,5–12                       | 14 –16                         | 10  | 100   |
| <b>680526</b> | 3/4" | 11,5–12                       | 16 –18                         | 10  | 100   |
| <b>680535</b> | 3/4" | 12,5–13                       | 16 –18                         | 10  | 100   |
| <b>680537</b> | 3/4" | 12,5–13                       | 18 –20                         | 10  | 100   |
| <b>680544</b> | 3/4" | 13,5–14                       | 16 –18                         | 10  | 100   |
| <b>680546</b> | 3/4" | 13,5–14                       | 18 –20                         | 10  | 100   |
| <b>680555</b> | 3/4" | 14,5–15                       | 18 –20                         | 10  | 100   |
| <b>680556</b> | 3/4" | 15 –15,5                      | 18 –20                         | 10  | 100   |
| <b>680564</b> | 3/4" | 15,5–16                       | 18 –20                         | 10  | 100   |
| <b>680505</b> | 3/4" | 17                            | 22,5                           | 10  | 100   |

### 386

Screw plug with nut,  
for manifold outlets.

tech. broch. 01144



Code

|               |      |    |   |
|---------------|------|----|---|
| <b>386500</b> | 3/4" | 10 | – |
|---------------|------|----|---|

### 675

tech. broch. 01144

Push-fit thermometer for panel piping.  
For pipes with outer diameter  
from 15 to 18 mm.  
Thermometer scale: 5–50 °C.  
Thermometer fluid: alcohol.  
Thermo-conductive paste  
supplied in package.



Code

|               |  |    |     |
|---------------|--|----|-----|
| <b>675900</b> |  | 10 | 100 |
|---------------|--|----|-----|

## DIFFERENTIAL PRESSURE CONTROL VALVE FOR DISTRIBUTION MANIFOLDS

### 140

tech. broch. 01344

Differential pressure control valve for 1" distribution manifolds 671, 662 and 664 series.  
Complete with capillary pipe and metering device for connection.  
Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Length of capillary pipe Ø 3 mm: 1,5 m.



Code Differential pressure adjustable set (mbar)

|        |    |        |   |   |
|--------|----|--------|---|---|
| 140300 | 1" | 50–300 | 1 | – |
|--------|----|--------|---|---|

### Operating principle

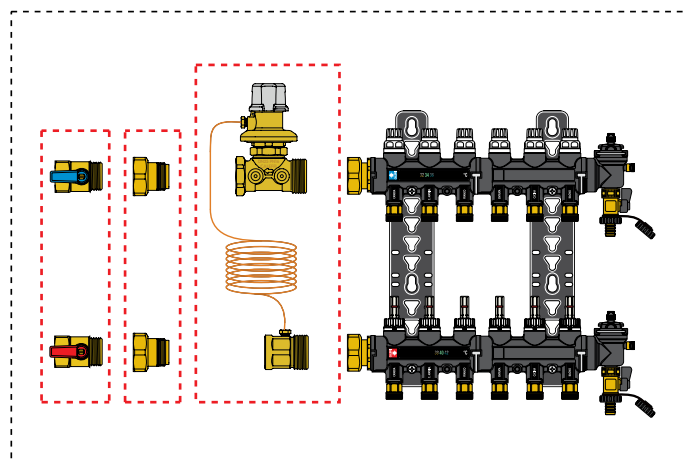
The  $\Delta p$  regulator, fitted at the inlet of the distribution manifold for a radiant panel system, allows the distribution system to operate in constant load conditions even when the system conditions change.

The differential pressure control valve acts proportionally to re-establish the preselected  $\Delta p$  conditions on the valve itself while the flow rate is varied by shut-off devices.

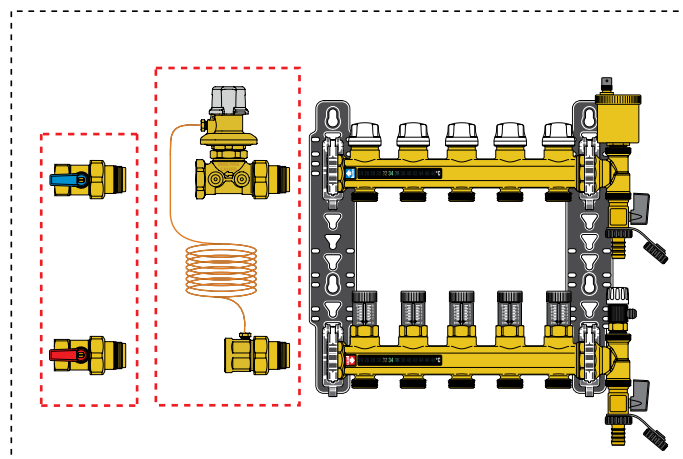
The flow pressure value is brought to the top surface of the membrane by means of the connecting capillary tube; the return pressure value is brought to the bottom surface of the membrane through the connecting passage inside the control stem. The force generated by the pressure differential on the membrane exerts a thrust on the obturator stem, closing the passage of medium on the return of the circuit zone until the thrust force of the membrane and the counter-thrust force of the counter-spring reach equilibrium on the set  $\Delta p$  value. This is the pressure differential value that is kept constant between flow and return of the circuit zone.

The regulator action allows the flow rate regulation valves, fitted to the flow manifold, to operate in constant load conditions; this means they can keep the flow rate at a constant level even when the operating conditions for the rest of the system change.

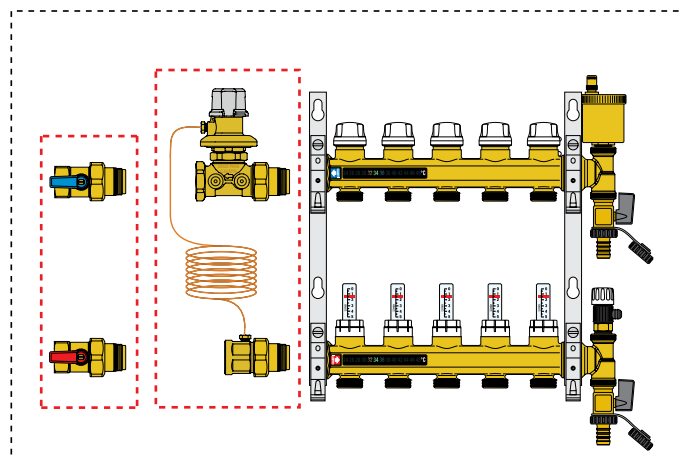
### Connection of differential pressure control valve 140 series with distribution manifold 671 series



### Connection of differential pressure control valve 140 series with distribution manifold 662 series



### Connection of differential pressure control valve 140 series with distribution manifold 664 series



### 662

Off-centre by-pass kit with fixed setting 25 kPa (2.500 mm w.g.).  
For distribution manifolds 662, 664 and 665 series.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.



Code

|        |   |    |
|--------|---|----|
| 662010 | 1 | 10 |
|--------|---|----|

## BRASS DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

### CONNECTIONS 1" - 1 1/4"

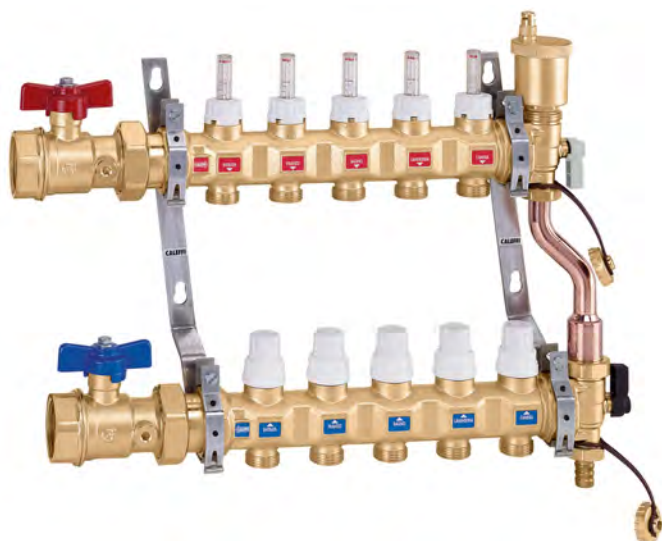
#### 668...S1

tech. broch. 01144

Pre-assembled distribution manifold.  
Max. working pressure: 10 bar.  
Temperature range: 0–80 °C.

Equipped with:

- flow manifold with built-in flow meters and flow rate balancing valves;
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- end fittings with multi-position ball valve, automatic air vent and fill/drain hose connection;
- off-centre by-pass kit with fixed setting and with connecting pipe;
- ball shut-off valves;
- mounting brackets for box or wall mounting.



| Code     | Conn.    | Outlet No. | Outlets | Length for box choice (mm) |   |   |
|----------|----------|------------|---------|----------------------------|---|---|
| 6686C5S1 | 1" F     | x 3        | 3/4" M  | 600                        | 1 | – |
| 6686D5S1 | 1" F     | x 4        | 3/4" M  | 600                        | 1 | – |
| 6686E5S1 | 1" F     | x 5        | 3/4" M  | 600                        | 1 | – |
| 6686F5S1 | 1" F     | x 6        | 3/4" M  | 600                        | 1 | – |
| 6686G5S1 | 1" F     | x 7        | 3/4" M  | 800                        | 1 | – |
| 6686H5S1 | 1" F     | x 8        | 3/4" M  | 800                        | 1 | – |
| 6686I5S1 | 1" F     | x 9        | 3/4" M  | 800                        | 1 | – |
| 6686L5S1 | 1" F     | x 10       | 3/4" M  | 800                        | 1 | – |
| 6686M5S1 | 1" F     | x 11       | 3/4" M  | 1000                       | 1 | – |
| 6686N5S1 | 1" F     | x 12       | 3/4" M  | 1000                       | 1 | – |
| 6686O5S1 | 1" F     | x 13       | 3/4" M  | 1000                       | 1 | – |
| 6686P5S1 | 1" F     | x 14       | 3/4" M  | 1000                       | 1 | – |
| 6687C5S1 | 1 1/4" F | x 3        | 3/4" M  | 600                        | 1 | – |
| 6687D5S1 | 1 1/4" F | x 4        | 3/4" M  | 600                        | 1 | – |
| 6687E5S1 | 1 1/4" F | x 5        | 3/4" M  | 600                        | 1 | – |
| 6687F5S1 | 1 1/4" F | x 6        | 3/4" M  | 600                        | 1 | – |
| 6687G5S1 | 1 1/4" F | x 7        | 3/4" M  | 800                        | 1 | – |
| 6687H5S1 | 1 1/4" F | x 8        | 3/4" M  | 800                        | 1 | – |
| 6687I5S1 | 1 1/4" F | x 9        | 3/4" M  | 800                        | 1 | – |
| 6687L5S1 | 1 1/4" F | x 10       | 3/4" M  | 800                        | 1 | – |
| 6687M5S1 | 1 1/4" F | x 11       | 3/4" M  | 1000                       | 1 | – |
| 6687N5S1 | 1 1/4" F | x 12       | 3/4" M  | 1000                       | 1 | – |
| 6687O5S1 | 1 1/4" F | x 13       | 3/4" M  | 1000                       | 1 | – |
| 6687P5S1 | 1 1/4" F | x 14       | 3/4" M  | 1000                       | 1 | – |

#### 666...S1

tech. broch. 01144

Return manifold, with built-in shut-off valves fitted for thermo-electric actuator.

Max. working pressure: 10 bar.  
Temperature range: 0–80 °C.  
Outlet centre distance: 50 mm.



| Code     | Connections | Outlet No. | Outlets |   |    |
|----------|-------------|------------|---------|---|----|
| 666735S1 | 1 1/4" F    | x 3        | 3/4" M  | 2 | 12 |
| 666745S1 | 1 1/4" F    | x 4        | 3/4" M  | 2 | 12 |
| 666755S1 | 1 1/4" F    | x 5        | 3/4" M  | 2 | 12 |
| 666765S1 | 1 1/4" F    | x 6        | 3/4" M  | 2 | –  |
| 666775S1 | 1 1/4" F    | x 7        | 3/4" M  | 2 | –  |
| 666785S1 | 1 1/4" F    | x 8        | 3/4" M  | 2 | –  |

#### 667...S1

tech. broch. 01144

Flow manifold, with built-in flow meters and flow rate balancing valves.

Max. working pressure: 10 bar.  
Temperature range: 0–80 °C.  
Outlet centre distance: 50 mm.



| Code     | Connections | Outlet No. | Outlets |   |    |
|----------|-------------|------------|---------|---|----|
| 667735S1 | 1 1/4" F    | x 3        | 3/4" M  | 2 | 12 |
| 667745S1 | 1 1/4" F    | x 4        | 3/4" M  | 2 | 12 |
| 667755S1 | 1 1/4" F    | x 5        | 3/4" M  | 2 | 12 |
| 667765S1 | 1 1/4" F    | x 6        | 3/4" M  | 2 | –  |
| 667775S1 | 1 1/4" F    | x 7        | 3/4" M  | 2 | –  |
| 667785S1 | 1 1/4" F    | x 8        | 3/4" M  | 2 | –  |

#### 668...S1

tech. broch. 01144

Pair of manifolds, with built-in flow meters and flow rate balancing valves and shut-off valves.

Max. working pressure: 10 bar.  
Temperature range: 0–80 °C.  
Outlet centre distance: 50 mm.



| Code     | Connections | Outlet No. | Outlets |   |   |
|----------|-------------|------------|---------|---|---|
| 668735S1 | 1 1/4" F    | x 3        | 3/4" M  | 1 | 6 |
| 668745S1 | 1 1/4" F    | x 4        | 3/4" M  | 1 | 6 |
| 668755S1 | 1 1/4" F    | x 5        | 3/4" M  | 1 | 5 |
| 668765S1 | 1 1/4" F    | x 6        | 3/4" M  | 1 | 3 |
| 668775S1 | 1 1/4" F    | x 7        | 3/4" M  | 1 | 3 |
| 668785S1 | 1 1/4" F    | x 8        | 3/4" M  | 1 | 3 |



## ACCESSORIES FOR DISTRIBUTION MANIFOLDS



### 668...S1

tech. broch. 01144

Off-centre by-pass kit with fixed setting 25 kPa (2.500 mm w.g.), complete with pipe for manifold connection. For manifolds 668...S1 series. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

Code

**668000S1** 1" nut x 3/4" nut



1 10



### 5996

tech. broch. 01144

Flow end fitting complete with double radial end fitting with two-position ball valve, automatic air vent and fill/drain hose connection. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Temperature range: 0–100 °C.

Code

**599674** 1 1/4"



1 10



### 391...S1

tech. broch. 01144

Pair of ball shut-off valves. Female - male connections with union with O-Ring seal.

With temperature gauge, scale 0–80 °C, Ø 40 mm. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

Code

**391167S1** 1" x 1 1/4"



1 5

**391177S1** 1 1/4" x 1 1/4"

1 5



### 5996

tech. broch. 01144

Return end fitting complete with double radial end fitting with three-position ball valve, by-pass connection with plug and fill/drain hose connection. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

Code

**599675** 1 1/4"



1 10



### 391...S1

tech. broch. 01144

Pair of ball shut-off valves. Female - male connections with union with O-Ring seal.

With temperature gauge connection. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

Code

**391067S1** 1" x 1 1/4"



1 -

**391077S1** 1 1/4" x 1 1/4"

1 -



### 347...S1

tech. broch. 01144

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal. Specific to be used with manifolds 668...S1 series. Max. working pressure: 10 bar. Temperature range: -25–120 °C.

Code

**347512S1** 3/4" - Ø 12



1 50

**347514S1** 3/4" - Ø 14

1 50



### 5020

tech. broch. 01144

Automatic air vent with hygroscopic cap. In hot-stamped brass. For manifolds end fittings 668...S1 series. Max. working pressure: 10 bar. Max. discharge pressure: 2,5 bar. Max. working temperature: 110 °C.

Code

**502043** 1/2" M



10 100



### 3642..S1

tech. broch. 01144

Reduction fitting.

Code

**364276S1** 1" F x 1 1/4" M



2 10



### 658

tech. broch. 01144

Pair of brackets for use with boxes, 659 and 661 series or directly on the wall. With screws and plugs.

Code

**658100**



1 20



## DYNAMIC DISTRIBUTION MANIFOLDS FOR RADIANT PANEL SYSTEMS

### CONNECTIONS 1"

#### 665

##### DYNAMICAL®

Pre-assembled distribution manifold.

Max. working pressure: 6 bar.

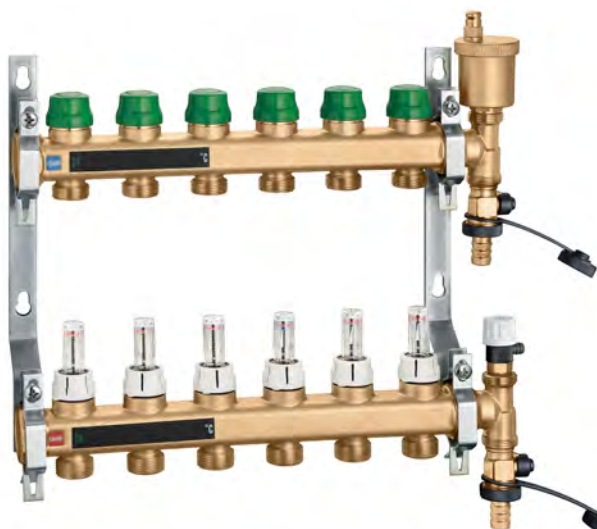
Temperature range: 5–60 °C.

Outlet centre distance: 50 mm.

Equipped with:

- return manifold complete with flow adjustment valves DYNAMICAL® fitted for thermo-electric actuator, with flow rate adjustment 25–150 l/h and shut-off valves;
- flow manifold complete with flow indicators;
- end fittings with automatic air vent with hygroscopic cap and drain cock;
- steel mounting brackets for use with box or for direct wall mounting. PATENT (Dynamical cartridge).

tech. broch. 01346



| Code   | Connections | Outlet No. | Outlets |   |   |
|--------|-------------|------------|---------|---|---|
| 6656D1 | 1"          | x 4        | 3/4" M  | 1 | – |
| 6656E1 | 1"          | x 5        | 3/4" M  | 1 | – |
| 6656F1 | 1"          | x 6        | 3/4" M  | 1 | – |
| 6656G1 | 1"          | x 7        | 3/4" M  | 1 | – |
| 6656H1 | 1"          | x 8        | 3/4" M  | 1 | – |
| 6656I1 | 1"          | x 9        | 3/4" M  | 1 | – |
| 6656L1 | 1"          | x 10       | 3/4" M  | 1 | – |
| 6656M1 | 1"          | x 11       | 3/4" M  | 1 | – |
| 6656N1 | 1"          | x 12       | 3/4" M  | 1 | – |

#### 391

Pair of ball shut-off valves with O-Ring seal. For distribution manifolds 664 and 665 series. Female - male connections with union with O-Ring seal.

Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.



| Code   |    |   |   |
|--------|----|---|---|
| 391066 | 1" | 1 | – |

Insulation for distribution manifolds

662, 664 and 665 series.

For heating and cooling systems.

**For use with box code 659..4**  
(adjustable depth from 110 to 140 mm).



Code

|           |                                    |   |   |
|-----------|------------------------------------|---|---|
| CBN6646F1 | for manifolds from 2 to 6 outlets  | 1 | – |
| CBN6646N1 | for manifolds from 7 to 12 outlets | 1 | – |
| CBN6646O1 | for manifolds with 13 outlets      | 1 | – |

#### 680

##### DARCAL

tech. broch. 01144

Self-adjustable diameter fitting

for single and multilayer plastic pipes.

Max. working pressure: 10 bar.

Temperature range:

5–80 °C (PE-X)

5–75 °C (Multilayer marked 95 °C).



| Code   |      | Ø <sub>inside</sub> | Ø <sub>outside</sub> |    |     |
|--------|------|---------------------|----------------------|----|-----|
| 680507 | 3/4" | 7,5– 8              | 10,5–12              | 10 | 100 |
| 680502 | 3/4" | 7,5– 8              | 12 –14               | 10 | 100 |
| 680503 | 3/4" | 8,5– 9              | 12 –14               | 10 | 100 |
| 680500 | 3/4" | 9 – 9,5             | 14 –16               | 10 | 100 |
| 680501 | 3/4" | 9,5–10              | 12 –14               | 10 | 100 |
| 680506 | 3/4" | 9,5–10              | 14 –16               | 10 | 100 |
| 680515 | 3/4" | 10,5–11             | 14 –16               | 10 | 100 |
| 680517 | 3/4" | 10,5–11             | 16 –18               | 10 | 100 |
| 680524 | 3/4" | 11,5–12             | 14 –16               | 10 | 100 |
| 680526 | 3/4" | 11,5–12             | 16 –18               | 10 | 100 |
| 680535 | 3/4" | 12,5–13             | 16 –18               | 10 | 100 |
| 680537 | 3/4" | 12,5–13             | 18 –20               | 10 | 100 |
| 680544 | 3/4" | 13,5–14             | 16 –18               | 10 | 100 |
| 680546 | 3/4" | 13,5–14             | 18 –20               | 10 | 100 |
| 680555 | 3/4" | 14,5–15             | 18 –20               | 10 | 100 |
| 680556 | 3/4" | 15 –15,5            | 18 –20               | 10 | 100 |
| 680564 | 3/4" | 15,5–16             | 18 –20               | 10 | 100 |
| 680505 | 3/4" | 17                  | 22,5                 | 10 | 100 |

#### 386

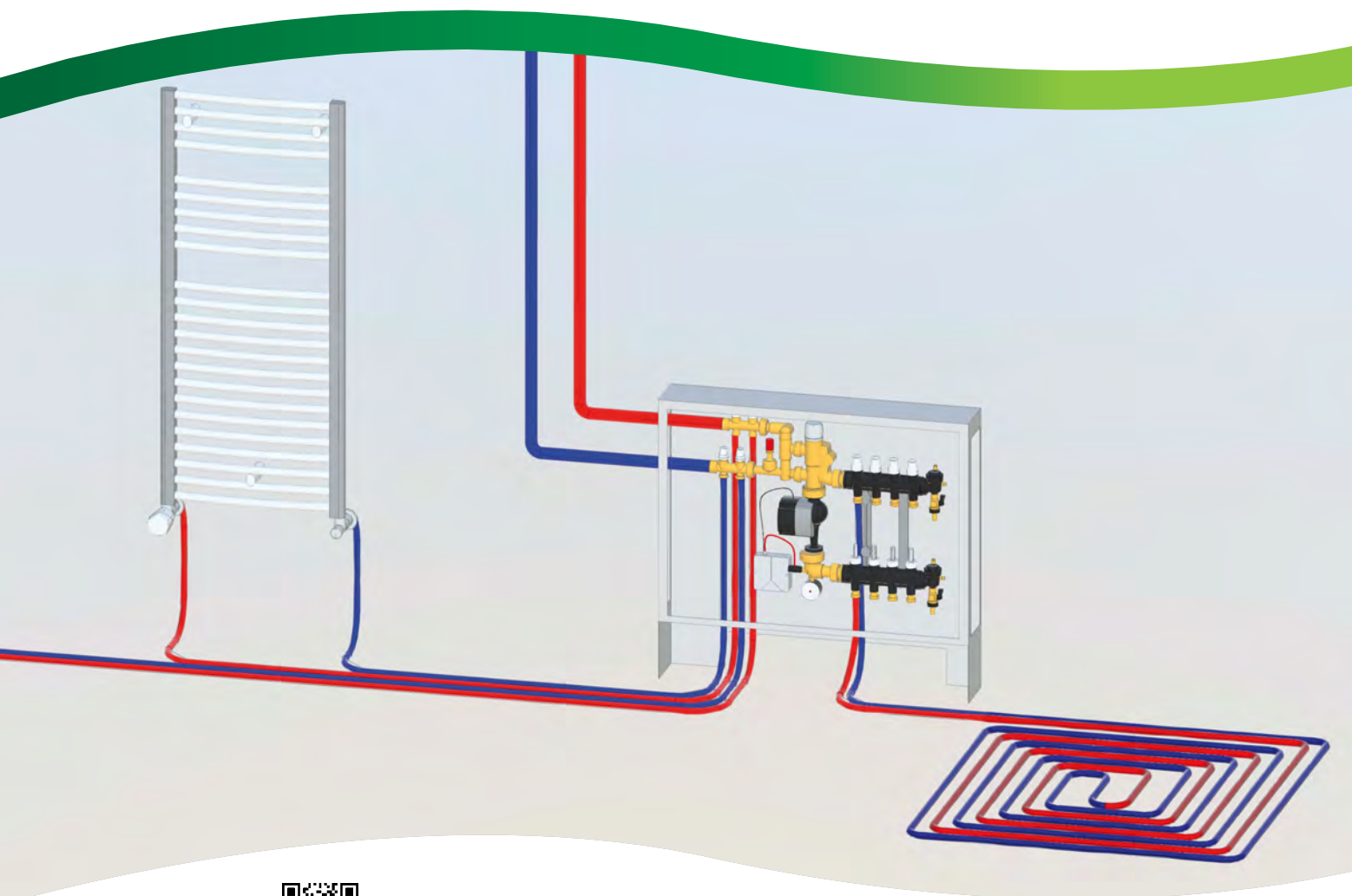
Screw plug with nut, for manifold outlets.

tech. broch. 01144



| Code   |      |    |   |
|--------|------|----|---|
| 386500 | 3/4" | 10 | – |

## DISTRIBUTION MANIFOLDS WITH REGULATING UNIT



**BIM**  
bim.caleffi.com

**Set point thermostatic regulating unit**

**Set point thermostatic regulating unit with medium distribution kit for primary circuit**

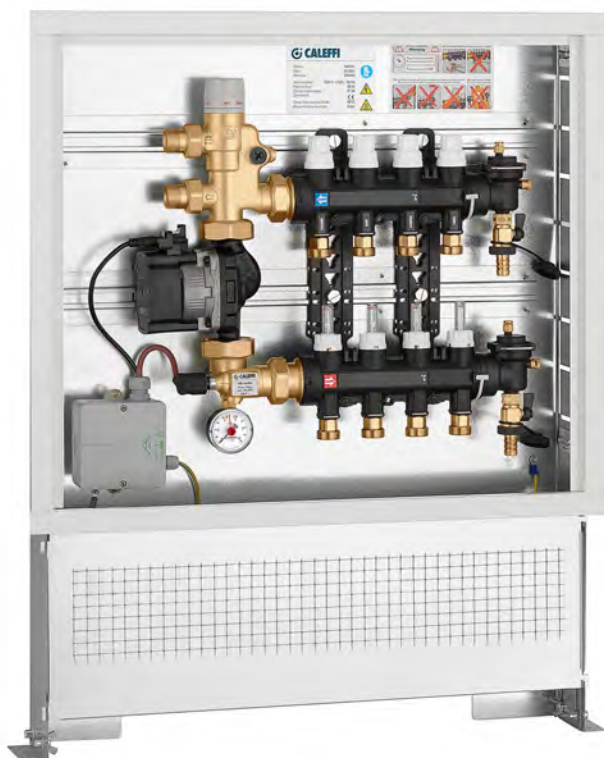
**Accessories for Set point thermostatic regulating unit**

**Modulating temperature regulating unit with digital regulator**

**Accessories and spare parts for modulating temperature regulating unit**

**Thermostatic mixing valve for radiant panel systems**

## SET POINT THERMOSTATIC REGULATING UNIT



### 182

tech. broch. 01190

Set point regulating unit.

Pre-assembled in inspection wall box. Equipped with:



- set point thermostatic regulating unit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

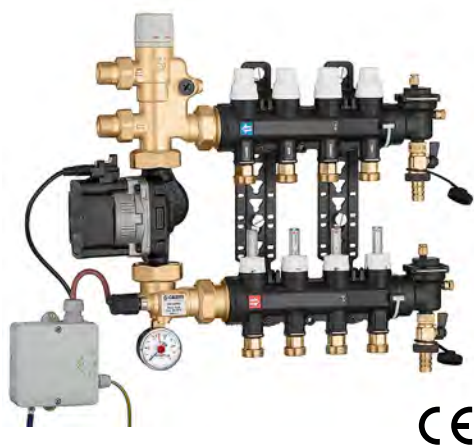
Max. working pressure: 6 bar.

Adjustment temperature range: 25-55 °C.

Supply: 230 V - 50/60 Hz.



| Code             | Conn.  | Outlet No. | Outlets | Box length (mm) |  |  |
|------------------|--------|------------|---------|-----------------|---|---|
| <b>1825C1A2L</b> | 3/4" M | x 3        | 3/4" M  | 600             | 1   | —   |
| <b>1825D1A2L</b> | 3/4" M | x 4        | 3/4" M  | 600             | 1   | —   |
| <b>1825E1A2L</b> | 3/4" M | x 5        | 3/4" M  | 600             | 1   | —   |
| <b>1825F1A2L</b> | 3/4" M | x 6        | 3/4" M  | 800             | 1   | —   |
| <b>1825G1A2L</b> | 3/4" M | x 7        | 3/4" M  | 800             | 1   | —   |
| <b>1825H1A2L</b> | 3/4" M | x 8        | 3/4" M  | 800             | 1   | —   |
| <b>1825I1A2L</b> | 3/4" M | x 9        | 3/4" M  | 800             | 1   | —   |
| <b>1825L1A2L</b> | 3/4" M | x 10       | 3/4" M  | 1000            | 1   | —   |
| <b>1825M1A2L</b> | 3/4" M | x 11       | 3/4" M  | 1000            | 1   | —   |
| <b>1825N1A2L</b> | 3/4" M | x 12       | 3/4" M  | 1200            | 1   | —   |
| <b>1825O1A2L</b> | 3/4" M | x 13       | 3/4" M  | 1200            | 1   | —   |



### 182

tech. broch. 01190

Pre-assembled set point thermostatic regulating unit.



Equipped with:

- set point thermostatic regulating unit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- safety thermostat,
- high efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 6 bar.

Adjustment temperature range: 25-55 °C.

Supply: 230 V - 50/60 Hz.

| Code             | Conn.  | Outlet No. | Outlets | Box choice (mm) |  |  |
|------------------|--------|------------|---------|-----------------|---|---|
| <b>1825C5A2L</b> | 3/4" M | x 3        | 3/4" M  | 600             | 1   | —   |
| <b>1825D5A2L</b> | 3/4" M | x 4        | 3/4" M  | 600             | 1   | —   |
| <b>1825E5A2L</b> | 3/4" M | x 5        | 3/4" M  | 600             | 1   | —   |
| <b>1825F5A2L</b> | 3/4" M | x 6        | 3/4" M  | 800             | 1   | —   |
| <b>1825G5A2L</b> | 3/4" M | x 7        | 3/4" M  | 800             | 1   | —   |
| <b>1825H5A2L</b> | 3/4" M | x 8        | 3/4" M  | 800             | 1   | —   |
| <b>1825I5A2L</b> | 3/4" M | x 9        | 3/4" M  | 800             | 1   | —   |
| <b>1825L5A2L</b> | 3/4" M | x 10       | 3/4" M  | 1000            | 1   | —   |
| <b>1825M5A2L</b> | 3/4" M | x 11       | 3/4" M  | 1000            | 1   | —   |
| <b>1825N5A2L</b> | 3/4" M | x 12       | 3/4" M  | 1200            | 1   | —   |
| <b>1825O5A2L</b> | 3/4" M | x 13       | 3/4" M  | 1200            | 1   | —   |

## SET POINT THERMOSTATIC REGULATING UNIT WITH MEDIUM DISTRIBUTION KIT FOR PRIMARY CIRCUIT



### 182



tech. broch. 01192

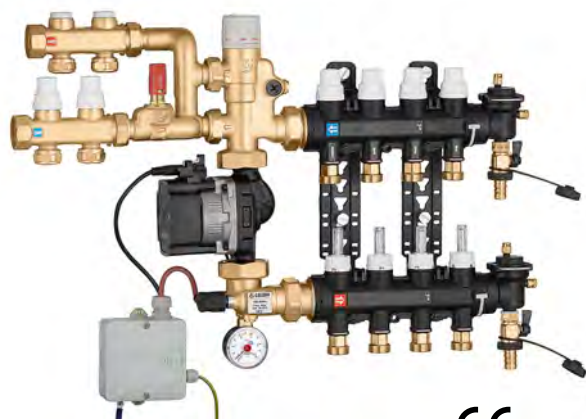
Set point regulating unit.  
Pre-assembled in inspection wall box. Equipped with:

- set point thermostatic regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.  
Adjustment temperature range: 25–55 °C.  
Supply: 230 V - 50/60 Hz.



| Code          | Conn. | Outlet No.<br>to panels | Outlet No.<br>to radiators | Box length<br>(mm) |  |  |
|---------------|-------|-------------------------|----------------------------|--------------------|---|---|
| 1826C1A2L 002 | 1" F  | 3 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826D1A2L 002 | 1" F  | 4 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826E1A2L 002 | 1" F  | 5 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826F1A2L 002 | 1" F  | 6 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826G1A2L 002 | 1" F  | 7 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826H1A2L 002 | 1" F  | 8 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826I1A2L 002 | 1" F  | 9 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826L1A2L 002 | 1" F  | 10 x 3/4" M             | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826M1A2L 002 | 1" F  | 11 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |
| 1826N1A2L 002 | 1" F  | 12 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |
| 1826O1A2L 002 | 1" F  | 13 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |





### 182

tech. broch. 01192

Pre-assembled set point regulating unit.  
Equipped with:

- thermostatic set point regulating unit,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- distribution manifolds in composite with built-in flow meters and shut-off valves,
- primary circuit by-pass kit,
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60.

Max. working pressure: 6 bar.  
Adjustment temperature range: 25–55 °C.  
Supply: 230 V - 50/60 Hz.

| Code          | Conn. | Outlet No.<br>to panels | Outlet No.<br>to radiators | Box choice<br>(mm) |  |  |
|---------------|-------|-------------------------|----------------------------|--------------------|---|---|
| 1826C5A2L 002 | 1" F  | 3 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826D5A2L 002 | 1" F  | 4 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826E5A2L 002 | 1" F  | 5 x 3/4" M              | 2 x 3/4" M                 | 800                | 1   | –   |
| 1826F5A2L 002 | 1" F  | 6 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826G5A2L 002 | 1" F  | 7 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826H5A2L 002 | 1" F  | 8 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826I5A2L 002 | 1" F  | 9 x 3/4" M              | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826L5A2L 002 | 1" F  | 10 x 3/4" M             | 2 x 3/4" M                 | 1000               | 1   | –   |
| 1826M5A2L 002 | 1" F  | 11 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |
| 1826N5A2L 002 | 1" F  | 12 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |
| 1826O5A2L 002 | 1" F  | 13 x 3/4" M             | 2 x 3/4" M                 | 1200               | 1   | –   |





## SET POINT THERMOSTATIC REGULATING UNIT

### 182

Set point regulating unit.

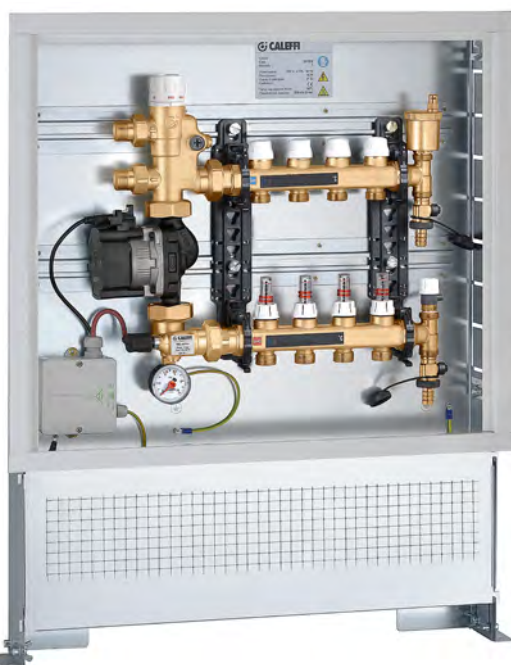
Pre-assembled in inspection wall box. Equipped with:

- set point thermostatic regulating unit,
- return manifold with built-in shut-off valves fitted for thermo-electric actuator;
- flow manifold complete with flow meters with 0-5 l/m scale and flow rate balancing valves;
- end fittings with automatic air vent and drain cock;
- safety thermostat,
- high-efficiency pump, UPM3S Auto 25-60,
- inspection wall box, with floor supports.

Max. working pressure: 6 bar.

Adjustment temperature range: 25-55 °C.

Supply: 230 V - 50/60 Hz.



| Code      | Conn.  | Outlet No. | Outlets | Box length (mm) |   |   |
|-----------|--------|------------|---------|-----------------|---|---|
| 1825C7A2L | 3/4" M | x 3        | 3/4" M  | 600             | 1 | - |
| 1825D7A2L | 3/4" M | x 4        | 3/4" M  | 600             | 1 | - |
| 1825E7A2L | 3/4" M | x 5        | 3/4" M  | 600             | 1 | - |
| 1825F7A2L | 3/4" M | x 6        | 3/4" M  | 800             | 1 | - |
| 1825G7A2L | 3/4" M | x 7        | 3/4" M  | 800             | 1 | - |
| 1825H7A2L | 3/4" M | x 8        | 3/4" M  | 800             | 1 | - |
| 1825I7A2L | 3/4" M | x 9        | 3/4" M  | 800             | 1 | - |
| 1825L7A2L | 3/4" M | x 10       | 3/4" M  | 1000            | 1 | - |
| 1825M7A2L | 3/4" M | x 11       | 3/4" M  | 1000            | 1 | - |
| 1825N7A2L | 3/4" M | x 12       | 3/4" M  | 1000            | 1 | - |
| 1825O7A2L | 3/4" M | x 13       | 3/4" M  | 1000            | 1 | - |

### 182

tech. broch. 01190

Pre-assembled set point regulating unit.

Equipped with:

- set point thermostatic regulating unit,
  - safety thermostat,
  - high-efficiency pump, UPM3S Auto 25-60.
- Max. working pressure: 10 bar.  
Adjustment temperature range: 25-55 °C.  
Supply: 230 V - 50/60 Hz.



Code Connections

182521A2L 3/4" M



1

-

### 182

tech. broch. 01192

Pre-assembled set point regulating unit.

Equipped with:

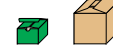
- set point thermostatic regulating unit,
  - medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
  - primary circuit by-pass kit,
  - safety thermostat,
  - high-efficiency pump, UPM3S Auto 25-60.
- Max. working pressure: 10 bar.  
Adjustment temperature range: 25-55 °C.  
Supply: 230 V - 50/60 Hz.



Code Connections Outlets

182621A2L 002 1" F 2

182621A2L 003 1" F 3



1

-

### 675

Pair of fittings with seals for connection of 182 series groups to 662 and 664 series manifolds.



Code  
675005 1 1/4" M x 1" M



1

-

### 675

Pair of fittings with seals for connection of 182 series groups to 670 and 671 series manifolds.



Code  
675004 1 1/4" M x 1 1/4" M



1

-

Spare parts for regulating units 172 and 182 series.

|          |  |
|----------|--|
| F0000972 | safety thermostat                              |
| F19153   | thermostatic mixing valve group for 172 series |
| F19267   | thermostatic mixing valve group for 182 series |
| 116010   | temperature gauge 0-80 °C                      |
| F0001252 | UPM3S Auto 25-60 pump                          |
| F19219   | spare electronic board                         |



## ACCESSORIES FOR SET POINT THERMOSTATIC REGULATING UNIT





### 661

Box for manifolds 662, 671 and 668...S1 series and regulating units 182 series. Closure with a push-fit clamp. In painted sheet steel. With supports for installation on floor. Adjustable depth from 110 to 150 mm. Adjustable height from 270 a 410 mm.



### 182

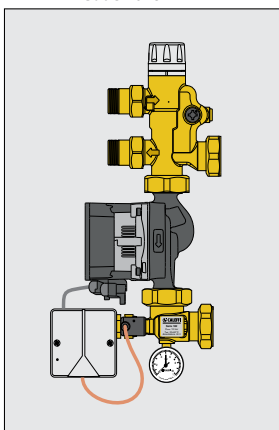
Differential by-pass kit with fixed setting 25 kPa (2.500 mm w.g.) complete with flexible hose. For regulating units 182 series and manifolds 670 and 671 series. Max. working pressure: 10 bar. Temperature range: 0–100 °C.

| Code   | Dim. (h x w x d)     |  |  |
|--------|----------------------|---|---|
| 661045 | 500 x 400 x 110–150  | 1   | –   |
| 661065 | 500 x 600 x 110–150  | 1   | –   |
| 661085 | 500 x 800 x 110–150  | 1   | –   |
| 661105 | 500 x 1000 x 110–150 | 1   | –   |
| 661125 | 500 x 1200 x 110–150 | 1   | –   |

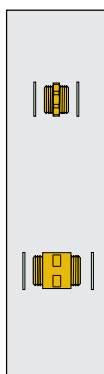
| Code   |      |  |  |
|--------|------|---|---|
| 182000 | 3/4" | 1   | 5   |

### Coupling regulating units and manifolds

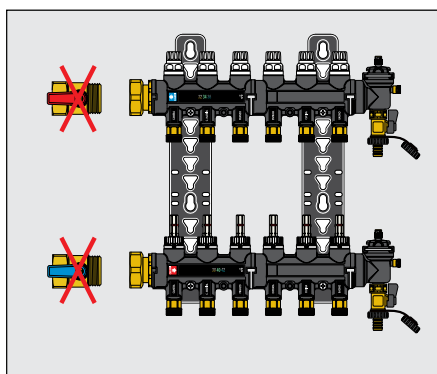
Code 182521A2L



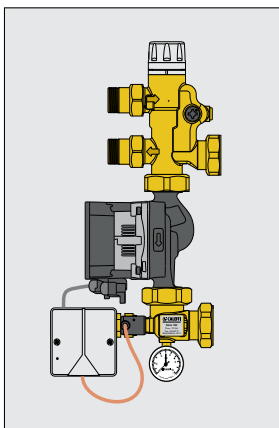
Code 675004



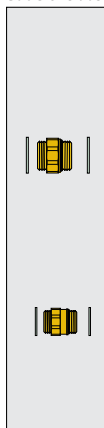
Code 6716..



Code 182521A2L



Code 675005



Code 662 / 664 / 665

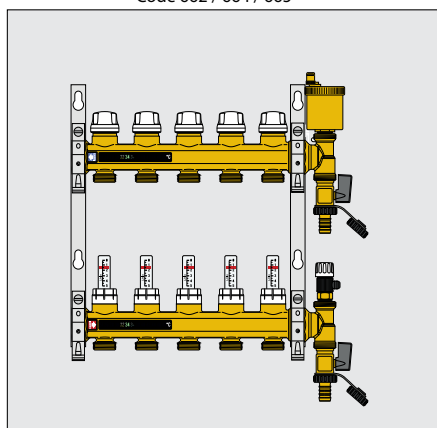


Diagram referred to installation in a box

## MODULATING TEMPERATURE REGULATING UNIT WITH DIGITAL REGULATOR

NEW

**171**

Modulating temperature regulating unit.

Equipped with:

- temperature regulating unit with compensated set point digital regulator, convertible outside compensated,
- primary circuit by-pass kit,
- primary circuit shut-off valves,
- high-efficiency pump UPM3S Auto 25-60.

Max. working pressure: 10 bar.

Temperature range: 5-95 °C.

Supply: 230 V - 50/60 Hz.

CE

| Code             | Connections |   |   |
|------------------|-------------|---|---|
| <b>171525A2L</b> | 3/4" M      | 1 | - |

NEW

**171**

Modulating temperature regulating unit.

Equipped with:

- temperature regulating unit with compensated set point digital regulator, convertible outside compensated,
- medium distribution kit with built-in lockshields and shut-off valves for primary circuit,
- primary circuit by-pass kit,
- primary circuit shut-off valves,
- high-efficiency pump UPM3S Auto 25-60.

Max. working pressure: 10 bar.

Temperature range: 5-95 °C.

Supply: 230 V - 50/60 Hz.

CE

| Code                 | Connections | Outlet no. |   |   |
|----------------------|-------------|------------|---|---|
| <b>171525A2L 002</b> | 3/4" M      | 2          | 1 | - |
| <b>171525A2L 003</b> | 3/4" M      | 3          | 1 | - |



**675**

Pair of fittings with seals for connection of 171 series groups to 671 series manifolds.

| Code          |                 |   |   |
|---------------|-----------------|---|---|
| <b>675003</b> | 1 1/4" M x 1" M | 1 | - |



**364**

Pair of fittings with seals for connection of 171 series groups to 668 series manifolds.

| Code          |  |   |   |
|---------------|--|---|---|
| <b>364377</b> |  | 1 | - |



**658**

Pair of steel mounting brackets for coupling of distribution manifolds 662/664/665 and 171 series group.

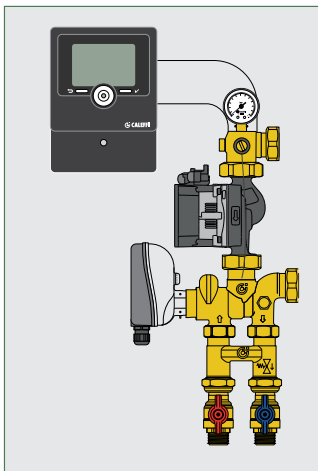
| Code          |  |   |   |
|---------------|--|---|---|
| <b>658011</b> |  | 1 | - |

Pair of fittings with seals for connection of 171 series groups to 662/664/665 series manifolds.

| Code            |  |  |  |
|-----------------|--|--|--|
| <b>F0000662</b> |  |  |  |

Coupling regulating units and manifolds

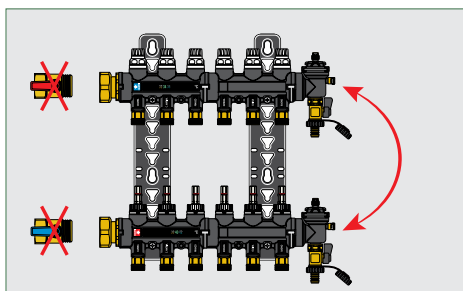
Code 171525A2L



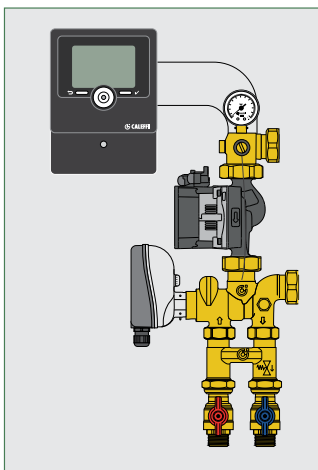
Code 675003



Code 6716..



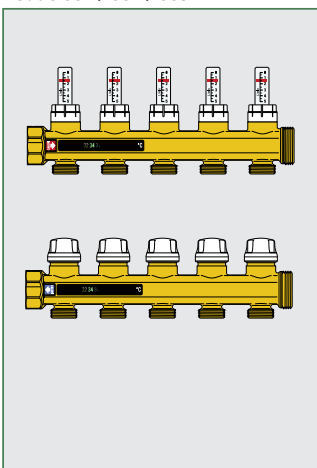
Code 171525A2L



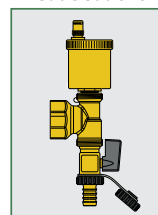
Code  
F0000662



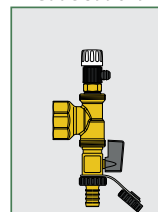
Code 662 / 664 / 665



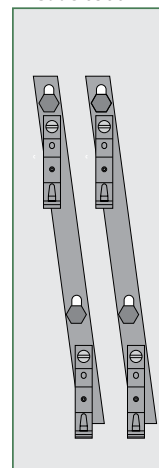
Code 599678



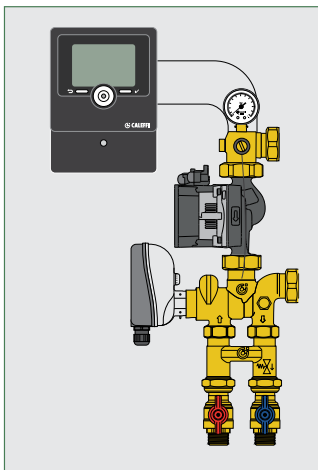
Code 599679



Code 658011



Code 171525A2L



Code 364377



Code 668...S1

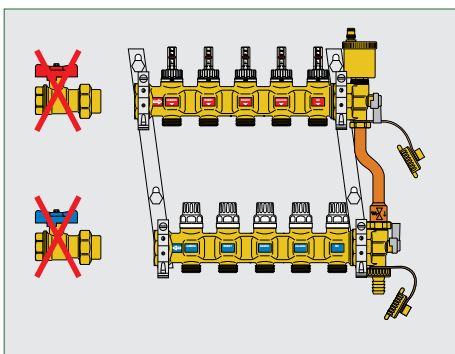


Diagram referred to installation in a box

## ACCESSORIES AND SPARE PARTS FOR MODULATING TEMPERATURE REGULATING UNIT



**161**

Outside compensated temperature probe.

Code

**161002**



1

–



**161**

Pressure safety switch complete with cable for wiring.  
Working range: 0,5–10 bar.  
Max. working temperature: 100 °C.  
Cable length: 1 m.

Code

**161003**



1

–



**161**

Dew point detector.  
Working range: 30–100 UR %.

Code

**161004**



1

–



**161**

Remote regulator.  
Functions:  
- translation of the regulating curves, from +15 K to -15 K,  
- maximum temperature,  
- OFF position.

Code

**161005**



1

–

Accessories for regulator code 161010.

Code

**161012** Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m

**161013** immersion pocket for Pt1000 probe 1/2" M, 60 mm

**161014** immersion pocket for Pt1000 probe 1/2" M, 100 mm

**161015** Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m

**161006** Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m

Spare parts for regulating units  
code 1715.5A2L.

Code

**161010** digital regulator

**F19223** mixing valve group with actuator support

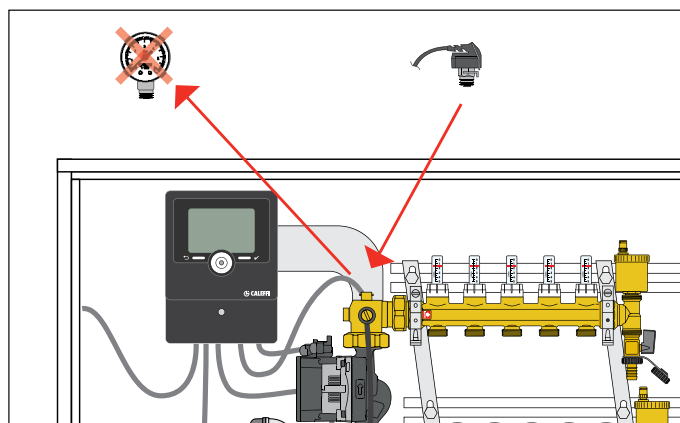
**645312** actuator for mixing valve for code 1715.5A2L

**F0001252** UPM3S pump (to replace the UPM3 Auto L pump)

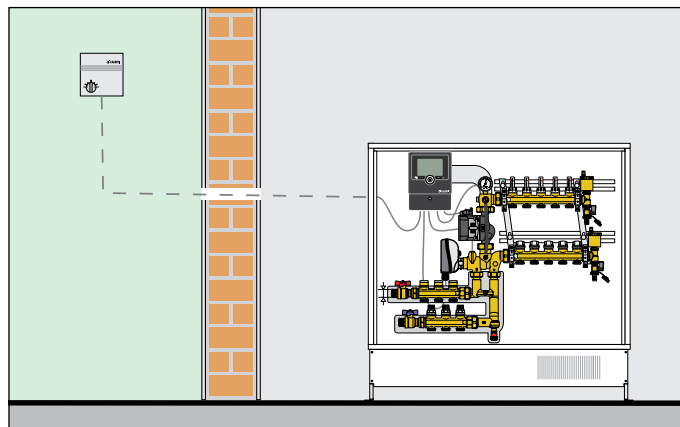
**F0000560** pocket 1/8" Ø 6 mm for probe Pt1000 L 20 mm

**161015** probe Pt1000 Ø 6 mm - L 20 mm, L cable 1,5 m

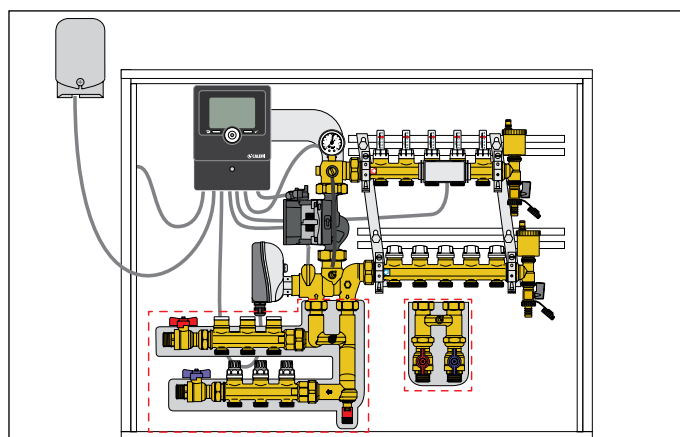
### Application diagram with code 161003



### Application diagram with code 161005



### Transformation from modulating for heating to compensated temperature for heating and cooling with codes 161002 and 161004



## THERMOSTATIC MIXING VALVE FOR RADIANT PANEL SYSTEMS

### 5202

Adjustable thermostatic mixing valve with knob.  
For radiant panel systems.

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.



Max. inlet temperature: 90 °C.



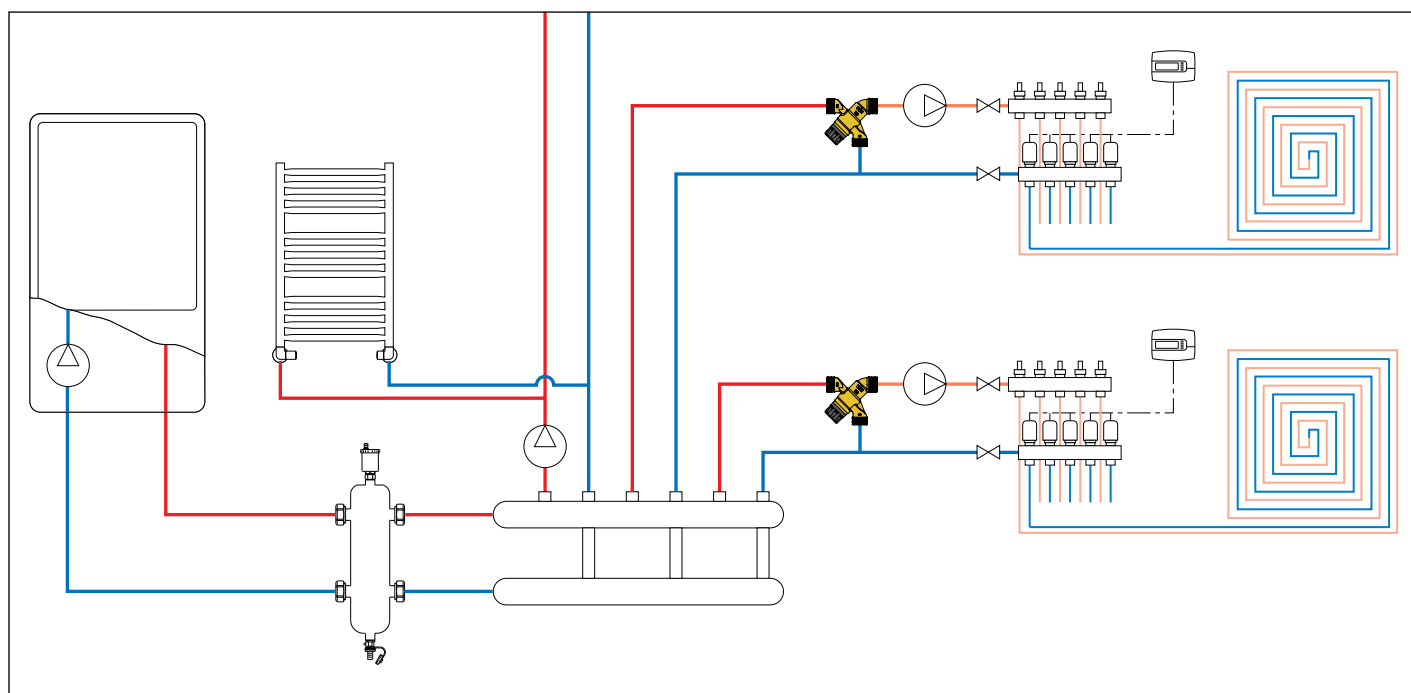
### Operating principle

The purpose of the thermostatic mixing valve is to adjust the temperature of the medium supplied to the radiant panels.

The thermostatic mixing valve mixes the hot and cold water at the inlet so as to maintain the mixed water constantly at the set temperature at the outlet. A thermostatic element is fully immersed in the mixed water flow. It contracts or expands, moving an obturator which controls the passage of hot or cold water at the inlet. If the inlet temperature changes, the internal element automatically reacts to restore the set temperature at the outlet. A circulator must be installed downstream of the mixing valve so as to allow correct distribution of the medium at the radiant panel system manifold.

| Code   | DN | Conn.  | Temperature adjustment | Kv (m³/h) |  |  |
|--------|----|--------|------------------------|-----------|---|---|
| 520251 | 20 | 3/4" M | 20-43 °C               | 1,4       | 1   | 10  |
| 520261 | 25 | 1" M   | 20-43 °C               | 4         | 1   | 5   |

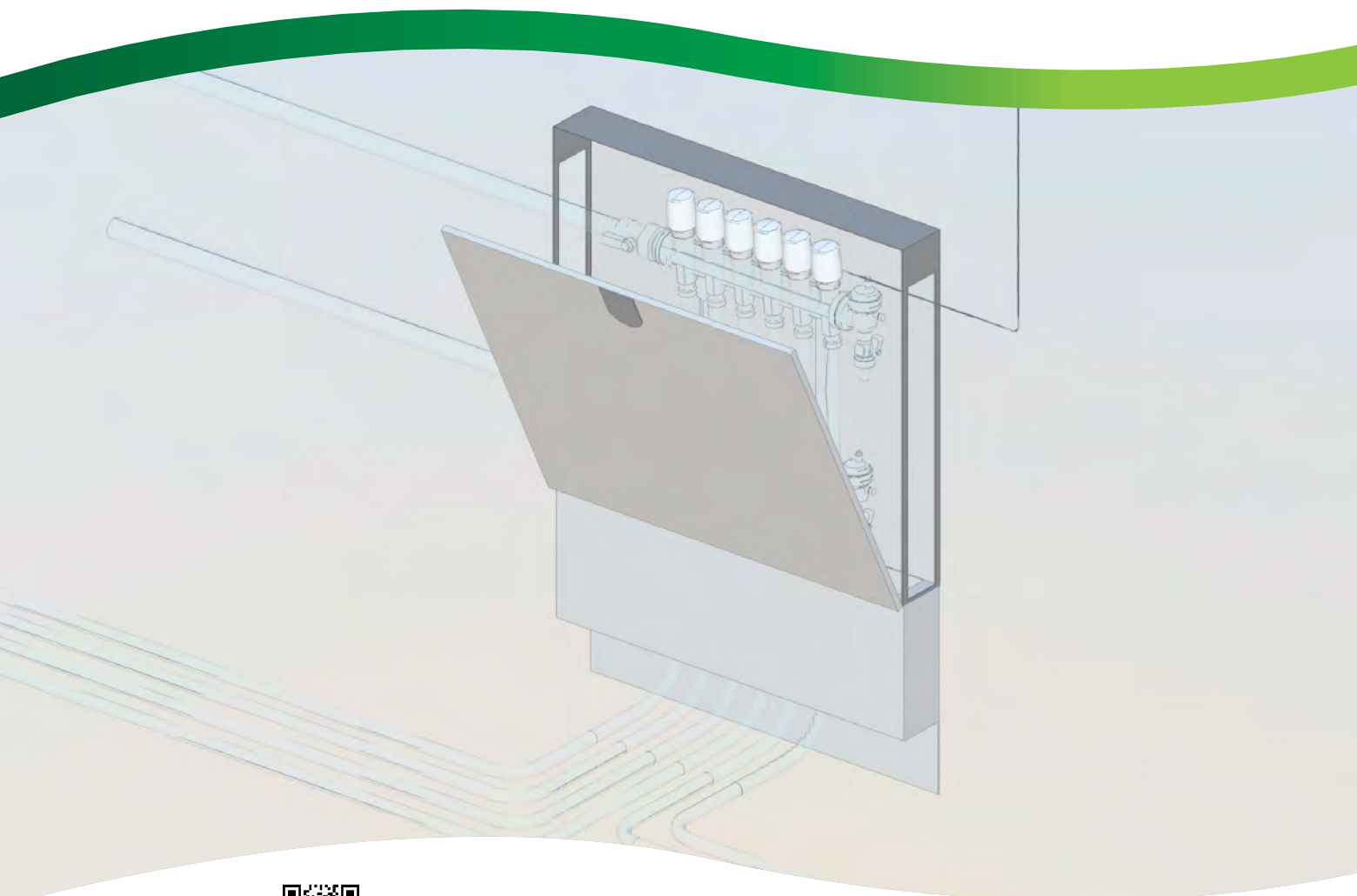
Application diagram of mixing valve 5202 series







# THERMO-ELECTRIC ACTUATORS AND BOXES FOR DISTRIBUTION MANIFOLD



bim.caleffi.com

**Thermo-electric actuators**  
**Control bar**  
**Boxes for distribution manifolds**

## THERMO-ELECTRIC ACTUATORS

### 6563

tech. broch. 01142



Thermo-electric actuator.  
With manual opening and position indicator.  
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC)/(DC).

Power consumption: 3 W.

Starting current:  $\leq 1$  A.

Starting current (656344/54):  $\leq 250$  mA.

Auxiliary microswitch contact rating:

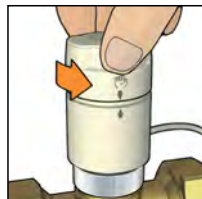
0,8 A (230 V).

Ambient temperature range: 0–50 °C.

Protection class: IP 40.

Cable length: 80 cm.

PATENT.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656312 | 230                 | 1                             | 10   |
| 656314 | 24                  | 1                             | 10   |
| 656302 | 230                 | without auxiliary microswitch | 1 10 |
| 656304 | 24                  | without auxiliary microswitch | 1 10 |

#### With low power consumption

| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656354 | 24                  | 1                             | 10   |
| 656344 | 24                  | without auxiliary microswitch | 1 10 |

### 6561

tech. broch. 01042



Thermo-electric actuator.  
For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.

**With auxiliary microswitch.**

Supply: 230 V (ac) or 24 V (ac)/(dc).

Auxiliary microswitch contact rating:

0,8 A (230 V).

Power consumption: 3 W.

Starting current:  $\leq 1$  A.

Max. ambient temperature: 50 °C.

Protection class: IP 44 (vertical stem).

Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656112 | 230                 | 1                             | 10   |
| 656114 | 24                  | 1                             | 10   |
| 656102 | 230                 | without auxiliary microswitch | 1 10 |
| 656104 | 24                  | without auxiliary microswitch | 1 10 |

### 6562

tech. broch. 01198



Thermo-electric actuator.

With opening position indicator.

**Quick-coupling installation, with a clip adapter.**

For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC)/(DC).

Auxiliary microswitch contact rating: 0,8 A (230 V).

Power consumption: 3 W.

Starting current:  $\leq 1$  A.

Ambient temperature range: 0–50 °C.

Protection class: IP 54.

Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656212 | 230                 | 1                             | 10   |
| 656214 | 24                  | 1                             | 10   |
| 656202 | 230                 | without auxiliary microswitch | 1 10 |
| 656204 | 24                  | without auxiliary microswitch | 1 10 |

### 6564

tech. broch. 01198



Thermo-electric actuator

with low power consumption.

With opening position indicator.

**Quick-coupling installation, with a clip adapter.**

For distribution manifolds 670, 671, 668...S1, 6626.6, 664 and 665 series. Normally closed.

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC)/(DC).

Auxiliary microswitch contact rating:

0,8 A (230 V).

Power consumption: 3 W.

Starting current:  $\leq 250$  mA.

Ambient temperature range: 0–50 °C.

Protection class: IP 54.

Cable length: 80 cm.



| Code   | Supply voltage<br>V |                               |      |
|--------|---------------------|-------------------------------|------|
| 656412 | 230                 | 1                             | 10   |
| 656414 | 24                  | 1                             | 10   |
| 656402 | 230                 | without auxiliary microswitch | 1 10 |
| 656404 | 24                  | without auxiliary microswitch | 1 10 |

### 6205

tech. broch. 01186



Control bar.

Supply: 230 V - 50/60 Hz.

Power consumption: 5,5 VA max (8 outputs).

Changeover contacts: 10 A.

Protection class: IP 30 (with rubber cable clamps).

Output command for pump.

Input for SUMMER - WINTER.

Input for timer.



| Code   |            |   |   |
|--------|------------|---|---|
| 620542 | 4 channels | 1 | – |
| 620582 | 8 channels | 1 | – |

## BOXES FOR DISTRIBUTION MANIFOLDS



### 659

tech. broch. 01144



Inspection wall box for distribution manifolds 349, 350, 592, 662, 663, 668...S1, 671, 664 and 665 series.

Wall or floor installation (with 660 series).

Closure with a push-fit clamp.

In painted sheet steel.

**Adjustable depth from 110 to 140 mm.**

| Code   | (h x w x d)          |  |  |
|--------|----------------------|---|---|
| 659044 | 500 x 400 x 110-140  | 1   | -   |
| 659064 | 500 x 600 x 110-140  | 1   | -   |
| 659084 | 500 x 800 x 110-140  | 1   | -   |
| 659104 | 500 x 1000 x 110-140 | 1   | -   |
| 659124 | 500 x 1200 x 110-140 | 1   | -   |



### 661

tech. broch. 01144

Box for manifolds

662, 671, 668...S1, 664 and 665 series and regulating units 182 series.



With supports for installation on floor.

Closure with a push-fit clamp.

In painted sheet steel.

Adjustable depth from 110 to 150 mm.

Adjustable height from 270 to 410 mm.

| Code   | (h x w x d)          |  |  |
|--------|----------------------|---|---|
| 661045 | 500 x 400 x 110-150  | 1   | -   |
| 661065 | 500 x 600 x 110-150  | 1   | -   |
| 661085 | 500 x 800 x 110-150  | 1   | -   |
| 661105 | 500 x 1000 x 110-150 | 1   | -   |
| 661125 | 500 x 1200 x 110-150 | 1   | -   |



### 660

tech. broch. 01144



Floor installation kit for box 659 series.

Consisting of:

- 2 supports height cm. 20,

- 2 side panels,

- 1 pipe-bending bar.

| Code   |            |  |  |
|--------|------------|---|---|
| 660040 | for 659044 | 1   | -   |
| 660060 | for 659064 | 1   | -   |
| 660080 | for 659084 | 1   | -   |
| 660100 | for 659104 | 1   | -   |
| 660120 | for 659124 | 1   | -   |



### 675



Box with adjustable depth and height.

**Equipped with mounting brackets for manifolds 671 series.**

Closure with a push-fit clamp.

Adjustable depth: 80 to 120 mm.

Adjustable height: 235 to 325 mm.

| Code   | Dim. (h x w x d)   |  |  |
|--------|--------------------|---|---|
| 675060 | 550 x 600 x 80-120 | 1   | -   |
| 675080 | 550 x 800 x 80-120 | 1   | -   |



### 659

tech. broch. 01144



Inspection wall box for distribution manifolds 349, 350, 592, 662, 671, 664 and 665 series.

Complete with specific support for manifold brackets.

Closure with a push-fit clamp.

In painted sheet steel.

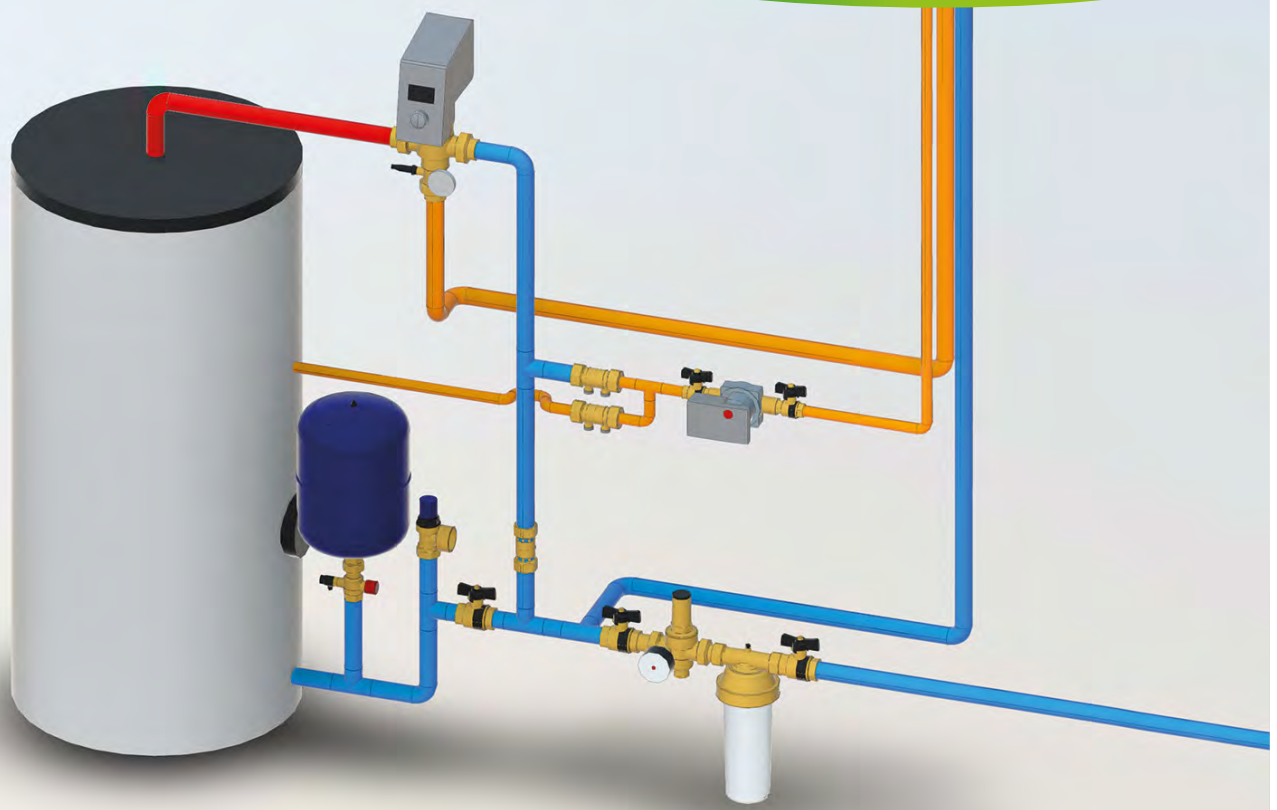
**Adjustable depth from 80 to 120 mm.**

| Code   | (h x w x d)         |  |  |
|--------|---------------------|---|---|
| 659045 | 500 x 400 x 80-120  | 1   | -   |
| 659065 | 500 x 600 x 80-120  | 1   | -   |
| 659085 | 500 x 800 x 80-120  | 1   | -   |
| 659105 | 500 x 1000 x 80-120 | 1   | -   |





## COMPONENTS FOR DOMESTIC WATER SYSTEMS



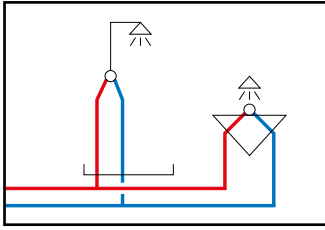
6



**BIM**  
bim.caleffi.com

**Pressure reducing valves**  
**Thermostatic Mixing valves**  
**Manifolds for domestic water systems**  
**Components for domestic water systems**

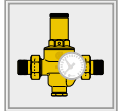
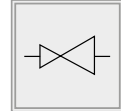
## COMPONENTS FOR DOMESTIC WATER SYSTEMS



Modern domestic cold and hot water distribution systems need special protective and control devices, which are chosen according to the intended use and security level to be guaranteed for the utilities. Depending on the application type, for example home, commercial or public use, different rules are used to dimension systems, and they are fitted with different equipment. Below we describe the most important device classifications to help make the right choice.

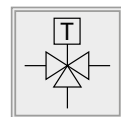
### Pressure adjustment

- Pressure reducing valves



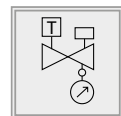
### Temperature adjustment

- Thermostatic and electronic mixing valves



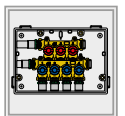
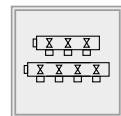
### Flow rate adjustment

- Thermostatic regulator for recirculation circuits



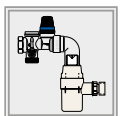
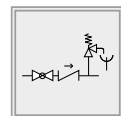
### Cold and hot water distribution

- Distribution manifolds



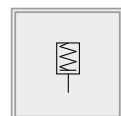
### Safety and protection of hot water storage

- Safety groups - Safety valves - Expansion vessels



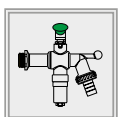
### Water hammer phenomenon

- Water hammer arrester



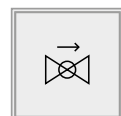
### Antifreeze protection

- Shut-off cock with antifreeze safety device

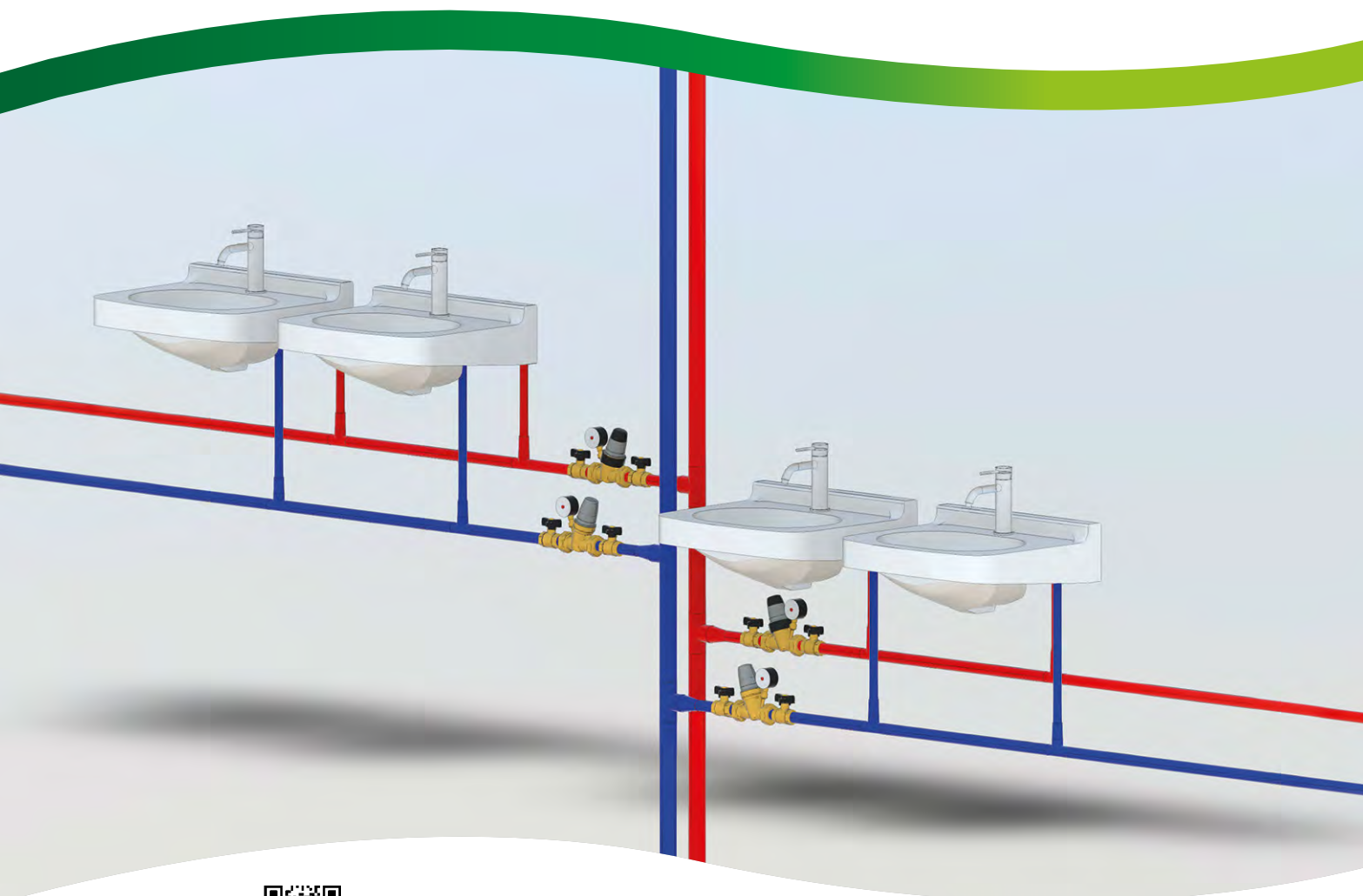


### Shut off medium

- Ball valves with built-in check valve



# PRESSURE REDUCING VALVES



**BIM**  
bim.caleffi.com

**Pressure reducing valves**  
**Pressure reducing and stabilising valves**



**Domestic Water Sizer**



**DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE**

Available on [www.caleffi.com](http://www.caleffi.com) and app for smartphone.

Download the version for your iOS and Android® mobile phone.

## INCLINED MICRO PRESSURE REDUCING VALVE FOR SPECIAL APPLICATIONS



### 533...H

tech. broch. 01332

Inclined micro pressure reducing valve for special applications: **for dispensing water, beverages and coffee machines.**

Replaceable cartridge and strainer.  
CR dezincification resistant alloy body  
"LOW LEAD".

Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 0,8–4 bar.  
Max. working temperature: 80 °C.  
Max. recommended flow rate: 6 l/min.  
**Certified to EN 1567.**  
PATENT PENDING.

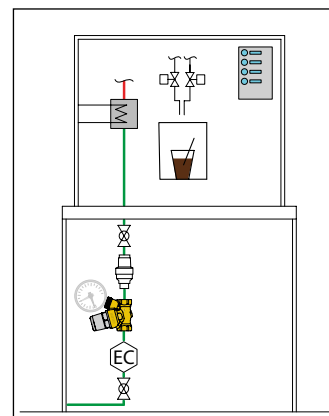
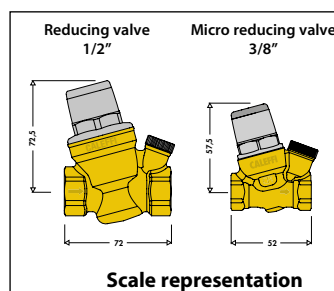


| Code     | DN                                  |   |    |
|----------|-------------------------------------|---|----|
| 533430H  | 8 3/8"                              | 1 | 20 |
| 533230H  | 8 3/8" with pressure gauge 0–10 bar | 1 | 20 |
| Code     |                                     |   |    |
| F0002665 | pressure gauge 0–10 bar             | 1 | –  |

### Applications

The 533...H series of micro pressure reducing valves has been specially created for applications where it is necessary to reduce and precisely stabilise the pressure arriving from the mains in the presence of low flow rate values. The 533...H series is typically installed for service in appliances that also have important dimensions and intermittent operation. The performance of this series of micro pressure reducing valves complies with the requirements of standard EN 1567, for use with cold water and hot water up to 80 °C.

**The typical applications of these micro pressure reducing valves are appliances for dispensing water, beverages and coffee machines.**



## INCLINED PRESSURE REDUCING VALVES



### 533



tech. broch. 01024

Inclined pressure reducing valve.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.



| Code   |      |   |    |
|--------|------|---|----|
| 533041 | 1/2" | 1 | 20 |
| 533051 | 3/4" | 1 | 20 |



### 5332



tech. broch. 01024

Inclined pressure reducing valve.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.  
With pressure gauge: 0–10 bar.



| Code   |      |   |    |
|--------|------|---|----|
| 533241 | 1/2" | 1 | 20 |
| 533251 | 3/4" | 1 | 20 |



### 5331



tech. broch. 01024

Inclined pressure reducing valve for safety group.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.



| Code   |                     |   |    |
|--------|---------------------|---|----|
| 533151 | 3/4" M x nut 3/4" F | 1 | 25 |



### 5334



tech. broch. 01024

Inclined pressure reducing valve.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.  
With 1/4" F pressure gauge connection.



| Code   |      |   |    |
|--------|------|---|----|
| 533441 | 1/2" | 1 | 20 |
| 533451 | 3/4" | 1 | 20 |
| 533461 | 1"   | 1 | 25 |

## INCLINED PRESSURE REDUCING VALVES



**5336**



tech. broch. 01024

Inclined pressure reducing valve with compression ends.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.



Code

**533641** Ø 15



1

25

**533651** Ø 22

1

25



**5335**



Inclined pressure reducing valve.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Max. upstream pressure: 1600 kPa.  
Downstream pressure setting range: 100–600 kPa.  
Max. working temperature: 40 °C.  
With 1/4" F pressure gauge connection.



Code

**533545 AUS** 1/2"



1

25

**533555 AUS** 3/4"

1

25



**5337**



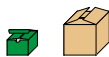
tech. broch. 01024

Inclined pressure reducing valve with compression ends.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.  
With 1/4" F pressure gauge connection.



Code

**533741** Ø 15



1

20

**533751** Ø 22

1

20



**5335**

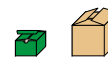


Three-way inclined pressure reducing valve.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Interchangeable outlet, with plug.  
Max. upstream pressure: 1600 kPa.  
Downstream pressure setting range: 100–600 kPa.  
Max. working temperature: 40 °C.



Code

**533550 AUS** 3/4"



1

30



**5338**



tech. broch. 01024

Inclined pressure reducing valve with compression ends.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–6 bar.  
Max. working temperature: 40 °C.  
With pressure gauge: 0–10 bar.



Code

**533841** Ø 15



1

20

**533851** Ø 22

1

20



**5339**



Inclined pressure reducing valve with compression ends and built-in safety relief valve.

Pressure reducing valve.  
CR dezincification resistant alloy body.  
Replaceable cartridge and strainer.  
Max. upstream pressure: 1600 kPa.  
Downstream pressure setting range: 100–600 kPa.  
Max. working temperature: 40 °C.

Safety relief valve.  
With stainless steel seat.  
CR dezincification resistant alloy body.



Code

**533944** Ø 15



1

25

**533954** Ø 22

1

25

**5330**



Spare cartridge.  
For inclined pressure reducing valves 5330, 5331, 5332, 5334, 5335, 5336, 5337, 5338 and 5339 series.

Code

**533000**



1

100



## INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE



### 5330..H



tech. broch. 01252

Inclined pressure reducing valve.  
For high temperature.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533041H | 1/2" | 1 | 20 |
| 533051H | 3/4" | 1 | 20 |



### 5331..H



tech. broch. 01252

Inclined pressure reducing valve  
for safety group.  
For high temperature.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



Code

|         |                   |   |    |
|---------|-------------------|---|----|
| 533159H | Ø 22 x nut 3/4" F | 1 | 30 |
|---------|-------------------|---|----|



### 5332..H



tech. broch. 01252

Inclined pressure reducing valve.  
For high temperature.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
With pressure gauge: 0–10 bar.  
**Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533241H | 1/2" | 1 | 20 |
| 533251H | 3/4" | 1 | 20 |



### 5332..H



tech. broch. 01252

Inclined pressure reducing valve.  
For high temperature.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
With pressure gauge: 0–10 bar.  
**Certified to EN 1567.**



Code

|             |      |   |    |
|-------------|------|---|----|
| 533241H LTC | 1/2" | 1 | 20 |
| 533251H LTC | 3/4" | 1 | 20 |



### 5334..H



tech. broch. 01252

Inclined pressure reducing valve.  
For high temperature.  
Replaceable cartridge and strainer.  
Brass body. Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
With 1/4" F pressure gauge connection.  
**Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533441H | 1/2" | 1 | 20 |
| 533451H | 3/4" | 1 | 20 |
| 533461H | 1"   | 1 | 25 |



### 5334..H



tech. broch. 01252

Inclined pressure reducing valve.  
For high temperature.  
Replaceable cartridge and strainer.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. upstream pressure: 16 bar.  
Downstream pressure setting range: 1–5,5 bar.  
Max. working temperature: 80 °C.  
With 1/4" F pressure gauge connection.  
**Certified to EN 1567.**



Code

|             |      |   |    |
|-------------|------|---|----|
| 533441H LTC | 1/2" | 1 | 20 |
| 533451H LTC | 3/4" | 1 | 20 |
| 533461H LTC | 1"   | 1 | 20 |

## INCLINED PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE



### 5336..H



tech. broch. 01252

Inclined pressure reducing valve with compression ends. For high temperature. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1–5,5 bar. Max. working temperature: 80 °C. **Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533641H | Ø 15 | 1 | 25 |
| 533651H | Ø 22 | 1 | 25 |



### 5335..H



Inclined pressure reducing valve. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Max. inlet pressure: 2000 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 80 °C. With 1/4" F pressure gauge connection.



Code

|             |      |   |    |
|-------------|------|---|----|
| 533545H AUS | 1/2" | 1 | 25 |
| 533555H AUS | 3/4" | 1 | 25 |
| 533565H AUS | 1"   | 1 | 10 |



### 5337..H



tech. broch. 01252

Inclined pressure reducing valve with compression ends. For high temperature. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1–5,5 bar. Max. working temperature: 80 °C. With 1/4" F pressure gauge connection. **Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533741H | Ø 15 | 1 | 20 |
| 533751H | Ø 22 | 1 | 20 |
| 533761H | Ø 28 | 1 | 20 |



### 5335..H



Three-way inclined pressure reducing valve. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Interchangeable outlet, with plug. Max. inlet pressure: 2000 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 80 °C.



Code

|             |      |   |    |
|-------------|------|---|----|
| 533550H AUS | 3/4" | 1 | 30 |
|-------------|------|---|----|



### 5338..H



tech. broch. 01252

Inclined pressure reducing valve with compression ends. For high temperature. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Chrome plated. Max. upstream pressure: 16 bar. Downstream setting pressure range: 1–5,5 bar. Max. working temperature: 80 °C. With pressure gauge: 0–10 bar. **Certified to EN 1567.**



Code

|         |      |   |    |
|---------|------|---|----|
| 533841H | Ø 15 | 1 | 20 |
| 533851H | Ø 22 | 1 | 20 |
| 533861H | Ø 28 | 1 | 20 |



### 5335..H



Two-way inclined pressure reducing valve. Replaceable cartridge and strainer. CR dezincification resistant alloy body. Interchangeable outlet, with plug. Max. inlet pressure: 2000 kPa. Downstream setting pressure: 500 kPa. Max. working temperature: 80 °C.



Code

|             |      |   |    |
|-------------|------|---|----|
| 533551H AUS | 3/4" | 1 | 30 |
|-------------|------|---|----|



### 5330..H

Spare cartridge. For inclined pressure reducing valves 5330H, 5331H, 5332H, 5334H, 5335H, 5336H, 5337H, 5338H and 5339H series.

Code

|         |  |   |     |
|---------|--|---|-----|
| 533000H |  | 1 | 100 |
|---------|--|---|-----|

## PRE-ADJUSTABLE PRESSURE REDUCING VALVES

### 5350



Pressure reducing valve with self-contained replaceable cartridge. CR dezincification resistant alloy body. With pressure regulating scale for manual pressure adjustment. Male union connections.

Max. upstream pressure: 25 bar.  
Downstream setting pressure range: 1–6 bar.

Max. working temperature: 40 °C.  
**Certified to EN 1567.**



#### With pressure gauge 0–10 bar

| Code    |                                  |   |   |
|---------|----------------------------------|---|---|
| 535041  | 1/2"                             | 1 | 5 |
| 535051  | 3/4"                             | 1 | 5 |
| 535061  | 1"                               | 1 | 5 |
| 535075* | 1 1/4" with 1" reduced cartridge | 1 | 5 |
| 535071  | 1 1/4"                           | 1 | 4 |
| 535081  | 1 1/2"                           | 1 | 4 |
| 535091  | 2"                               | 1 | 4 |

\* Without DVGW certification

#### With 1/4" F pressure gauge connection

| Code    |                                  |   |   |
|---------|----------------------------------|---|---|
| 535040  | 1/2"                             | 1 | 5 |
| 535050  | 3/4"                             | 1 | 5 |
| 535060  | 1"                               | 1 | 5 |
| 535074* | 1 1/4" with 1" reduced cartridge | 1 | 5 |
| 535070  | 1 1/4"                           | 1 | 4 |
| 535080  | 1 1/2"                           | 1 | 4 |
| 535090  | 2"                               | 1 | 4 |

\* Without DVGW certification

### 5350



Pressure reducing valve with self-contained replaceable cartridge. CR dezincification resistant alloy body. With pressure regulating scale for manual pressure adjustment. Ø 22 mm with compression ends. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1–6 bar. Max. working temperature: 40 °C.



#### With 1/4" F pressure gauge connection

| Code   |      |   |    |
|--------|------|---|----|
| 535022 | Ø 22 | 1 | 10 |

### 5351



Pressure reducing valve with self-contained replaceable cartridge. Brass body. With pressure regulating scale for manual pressure adjustment.

Stainless steel strainer cartridge with transparent housing.

Male union connections.

Max. upstream pressure: 25 bar.

Downstream setting pressure range: 1–6 bar.

Max. working temperature: 40 °C.

Strainer mesh size Ø: 0,28 mm.

**Certified to EN 1567.**

**With replacement strainer and key to service strainer and cartridge.**



#### With stainless steel pressure gauge 0–10 bar

| Code   |      |   |   |
|--------|------|---|---|
| 535141 | 1/2" | 1 | 5 |
| 535151 | 3/4" | 1 | 5 |
| 535161 | 1"   | 1 | 5 |

#### With 1/4" F pressure gauge connection

| Code   |      |   |   |
|--------|------|---|---|
| 535140 | 1/2" | 1 | 5 |
| 535150 | 3/4" | 1 | 5 |
| 535160 | 1"   | 1 | 5 |

### 5350

Spare cartridge and key to service strainer and cartridge. For pressure reducing valves 5350 and 5351 series.



| Code    |                                       |   |   |
|---------|---------------------------------------|---|---|
| 535004  | 1/2" - 3/4"                           | 1 | 8 |
| 535006  | 1"                                    | 1 | 8 |
| 535017  | 1 1/4" (535074 - 535075)              | 1 | 8 |
| 535007  | 1 1/4" - 1 1/2" - 2"                  | 1 | – |
| R52484* | key to service strainer and cartridge | 1 | – |

\* Only for 1/2", 3/4", 1" reducing valves

## PRE-ADJUSTABLE PRESSURE REDUCING VALVES FOR HIGH TEMPERATURE



### 5350..H



tech. broch. 01265

Pressure reducing valve with self-contained replaceable cartridge. For high temperature. **CR** dezincification resistant alloy body "LOW LEAD". With pressure regulating scale for manual pressure adjustment. Male union connections.

Max. inlet pressure: 25 bar (static - EN 1567).  
Max. inlet pressure: 16 bar (working - EN 1567).  
Downstream setting pressure range: 1-6 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



#### With pressure gauge 0-10 bar

| Code    |        |   |   |
|---------|--------|---|---|
| 535041H | 1/2"   | 1 | 5 |
| 535051H | 3/4"   | 1 | 5 |
| 535061H | 1"     | 1 | 5 |
| 535071H | 1 1/4" | 1 | 4 |
| 535081H | 1 1/2" | 1 | 4 |
| 535091H | 2"     | 1 | 4 |

#### With 1/4" F pressure gauge connection

| Code    |        |   |   |
|---------|--------|---|---|
| 535040H | 1/2"   | 1 | 5 |
| 535050H | 3/4"   | 1 | 5 |
| 535060H | 1"     | 1 | 5 |
| 535070H | 1 1/4" | 1 | 4 |
| 535080H | 1 1/2" | 1 | 4 |
| 535090H | 2"     | 1 | 4 |



### 5350..H



tech. broch. 01265

Pressure reducing valve with self-contained replaceable cartridge. For high temperature. **CR** dezincification resistant alloy body "LOW LEAD". With pressure regulating scale for manual pressure adjustment.

Compression ends connections.  
Max. inlet pressure: 25 bar (static - EN 1567).  
Max. inlet pressure: 16 bar (working - EN 1567).  
Downstream setting pressure range: 1-6 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



#### With 1/4" F pressure gauge connection

| Code    |      |   |   |
|---------|------|---|---|
| 535015H | Ø 15 | 1 | 5 |
| 535022H | Ø 22 | 1 | 5 |
| 535028H | Ø 28 | 1 | 5 |



### 5350..H



Pressure reducing valve with self-contained replaceable cartridge. For high temperature. **CR** dezincification resistant alloy body "LOW LEAD". With pressure regulating scale for manual pressure adjustment. Male union connections.

Max. upstream pressure: 2000 kPa.  
Downstream setting pressure range: 100-600 kPa.  
Max. working temperature: 80 °C.



#### With 1/4" F pressure gauge connection

| Code        |        |   |   |
|-------------|--------|---|---|
| 535040H AUS | 1/2"   | 1 | 5 |
| 535050H AUS | 3/4"   | 1 | 5 |
| 535060H AUS | 1"     | 1 | 5 |
| 535070H AUS | 1 1/4" | 1 | 4 |
| 535080H AUS | 1 1/2" | 1 | 4 |
| 535090H AUS | 2"     | 1 | 4 |

### 5350..H

Spare cartridge for pressure reducing valves 5350H series.



| Code    |                      |   |   |
|---------|----------------------|---|---|
| 535006H | 1/2" - 3/4" - 1"     | 1 | 8 |
| 535009H | 1 1/4" - 1 1/2" - 2" | 1 | - |

## PRESSURE REDUCING VALVE

### 539



tech. broch. 01188

Pressure reducing valve. **CR** dezincification resistant alloy body. Supplied with two female - male fittings. Max. upstream pressure: 25 bar. Downstream setting pressure range: 1-5,5 bar. Factory set: 3 bar. Max. working temperature: 80 °C.  
**Certified to EN 1567.**



#### With 1/4" F double pressure gauge connection

| Code   |      |   |    |
|--------|------|---|----|
| 539250 | 3/4" | 1 | 20 |



## PRESSURE REDUCING VALVES

### 5360



tech. broch. 01026



Pressure reducing valve with replaceable cartridge.  
CR dezincification resistant alloy body.  
Male union connections.  
Max. upstream pressure: 25 bar.  
Downstream setting pressure range: 0,5–6 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



#### With pressure gauge 0–10 bar

| Code   |        |   |   |
|--------|--------|---|---|
| 536041 | 1/2"   | 1 | 5 |
| 536051 | 3/4"   | 1 | 5 |
| 536061 | 1"     | 1 | 5 |
| 536071 | 1 1/4" | 1 | 4 |
| 536081 | 1 1/2" | 1 | 4 |

#### With 1/4" F pressure gauge connection

| Code   |        |   |   |
|--------|--------|---|---|
| 536040 | 1/2"   | 1 | 5 |
| 536050 | 3/4"   | 1 | 5 |
| 536060 | 1"     | 1 | 5 |
| 536070 | 1 1/4" | 1 | 4 |
| 536080 | 1 1/2" | 1 | 4 |

### 5362



tech. broch. 01026



Pressure reducing valve with replaceable cartridge.  
CR dezincification resistant alloy body.  
Female connections.  
Max. upstream pressure: 25 bar.  
Downstream setting pressure range: 0,5–6 bar.  
Max. working temperature: 80 °C.



#### With pressure gauge 0–10 bar

| Code   |      |   |   |
|--------|------|---|---|
| 536241 | 1/2" | 1 | 5 |
| 536251 | 3/4" | 1 | 5 |
| 536261 | 1"   | 1 | 5 |

#### With 1/4" F pressure gauge connection

| Code   |      |   |   |
|--------|------|---|---|
| 536240 | 1/2" | 1 | 5 |
| 536250 | 3/4" | 1 | 5 |
| 536260 | 1"   | 1 | 5 |

### 537

Soldering union connections.

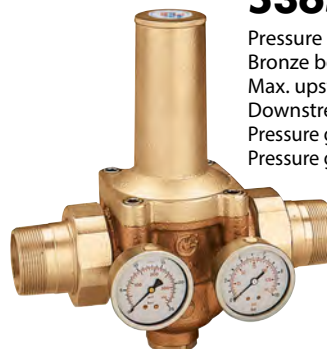


| Code   |               |   |   |
|--------|---------------|---|---|
| 537015 | 3/4" x Ø 15   | 1 | – |
| 537022 | 1" x Ø 22     | 1 | – |
| 537028 | 1 1/4" x Ø 28 | 1 | – |
| 537035 | 1 1/2" x Ø 35 | 1 | – |

### 5365



tech. broch. 01026



Pressure reducing valve with replaceable cartridge.  
Bronze body. Male union connections.  
Max. upstream pressure: 25 bar.  
Downstream setting pressure range: 0,5–6 bar.  
Pressure gauge upstream: 0–25 bar.  
Pressure gauge downstream: 0–10 bar.  
Max. working temperature: 80 °C.  
**Certified to EN 1567.**



#### With double pressure gauge in glycerine bath

| Code   |        |   |   |
|--------|--------|---|---|
| 536581 | 1 1/2" | 1 | – |
| 536591 | 2"     | 1 | – |

#### With 1/4" F double pressure gauge connection

| Code   |        |   |   |
|--------|--------|---|---|
| 536580 | 1 1/2" | 1 | – |
| 536590 | 2"     | 1 | – |

### 5366



tech. broch. 01026



Pressure reducing valve with replaceable cartridge.  
Bronze body. Flanged connections, PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
Max. upstream pressure: 16 bar.  
Downstream setting pressure range: 0,5–6 bar.  
**With double pressure gauge** in glycerine bath.  
Pressure gauge upstream: 0–25 bar.  
Pressure gauge downstream: 0–10 bar.  
Max. working temperature: 80 °C.



| Code   |       |   |   |
|--------|-------|---|---|
| 536660 | DN 65 | 1 | – |

### 5360

Spare cartridge  
for pressure reducing valves  
5360, 5362, 5365 and 5366 series.



| Code   |                            |   |   |
|--------|----------------------------|---|---|
| 536004 | 1/2"                       | 1 | – |
| 536005 | 3/4" - 1"                  | 1 | – |
| 536027 | 1 1/4" - 1 1/2" (5360)     | 1 | – |
| 536008 | 1 1/2" (5365) - 2" - DN 65 | 1 | – |



## PRESSURE REDUCING VALVES FOR FIRST STAGE CONTROL

### 5360

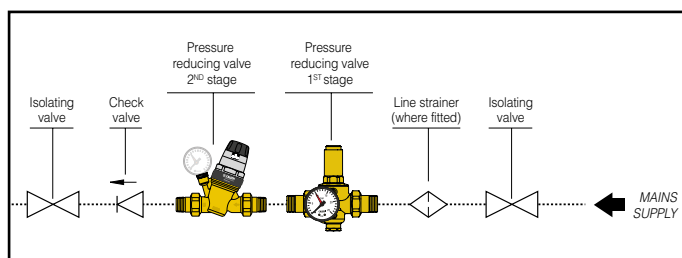


Pressure reducing valve for first stage control, with replaceable cartridge. Piston operation. CR dezincification resistant alloy body. Male union connections. Max. upstream pressure: 2500 kPa. Downstream setting pressure range: 600–1000 kPa. Pressure gauge: 0–2500 kPa. Max. working temperature: 80 °C.



| Code       |        |   |   |
|------------|--------|---|---|
| 536043 AUS | 1/2"   | 1 | 5 |
| 536053 AUS | 3/4"   | 1 | 5 |
| 536063 AUS | 1"     | 1 | 5 |
| 536073 AUS | 1 1/4" | 1 | 4 |
| 536083 AUS | 1 1/2" | 1 | 4 |

Application diagram of pressure reducing valve code 5360.3 AUS



## PRESSURE REDUCING VALVES FOR HIGH-RISE BUILDINGS

NEW

### 5335..HS



Inclined pressure reducing valve. Replaceable cartridge and strainer. Piston operation. CR dezincification resistant alloy body. Max. inlet pressure: 2000 kPa. Downstream setting pressure range: 100–600 kPa. Max. working temperature: 80 °C. With 1/4" F pressure gauge connection. For applications with higher pressure reduction ratio in hot and cold water distribution system.



| Code         |      |   |    |
|--------------|------|---|----|
| 533545HS AUS | 1/2" | 1 | 25 |
| 533555HS AUS | 3/4" | 1 | 25 |

## PRESSURE REDUCING AND STABILISING VALVES

### 576



Pressure reducing valve. Cast iron body, PN 16. Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1. Max. upstream pressure: 16 bar. Downstream setting pressure range: 2–14 bar. Max. working temperature: 60 °C. Supplied with double pressure gauge.

For combination with Y-strainer 579 series (see page 218).

Available on request PN 25 and PN 40.



| Code   |        |   |   |
|--------|--------|---|---|
| 576062 | DN 65  | 1 | – |
| 576082 | DN 80  | 1 | – |
| 576102 | DN 100 | 1 | – |
| 576122 | DN 125 | 1 | – |
| 576152 | DN 150 | 1 | – |

### 578

Pilot operated pressure reducing valves. Cast iron body, PN 16. Flanged connections. To be coupled with flat counterflanges EN 1092-1: DN 65–DN 150, PN 16; DN 200–DN 300, PN 10.

Max. upstream pressure: 16 bar. Downstream setting pressure range: 2–14 bar. Max. working temperature: 65 °C. Supplied with double pressure gauge.



| Code   |        |   |   |
|--------|--------|---|---|
| 578062 | DN 65  | 1 | – |
| 578082 | DN 80  | 1 | – |
| 578102 | DN 100 | 1 | – |
| 578122 | DN 125 | 1 | – |
| 578152 | DN 150 | 1 | – |
| 578202 | DN 200 | 1 | – |
| 578252 | DN 250 | 1 | – |
| 578302 | DN 300 | 1 | – |

## COMBINED GROUP FOR PRESSURE CONTROL IN DOMESTIC WATER SYSTEMS

NEW



### 539..H

tech. broch. 01389

Combined group for pressure control in domestic water systems with self-contained replaceable cartridge.

For high temperature.

CR dezincification resistant alloy body "LOW LEAD".

Shut-off valve with extended lever.

EA type check valve.

Max. upstream pressure: 16 bar.

Downstream setting pressure range:

1–5,5 bar.

Max. working temperature: 80 °C.

With G 1/4" upstream and downstream pressure test ports.

**Pressure reducing valve certified to EN 1567.**

**Check valve certified to EN 13959.**

PATENT PENDING



Code

**539050H** Rp 3/4" x G 1" with captive nut

1

5

#### Function

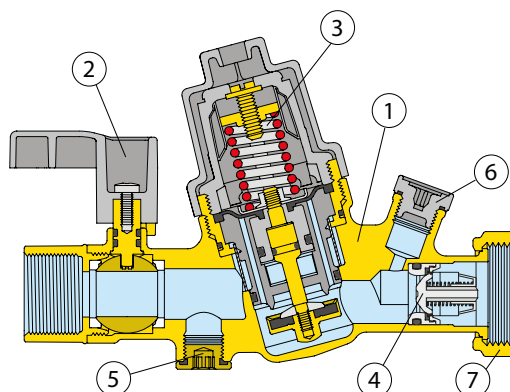
The combined group for pressure control in domestic water systems combines three different devices in a single component: a ball shut-off valve, a pressure reducing valve with filter and a EA type check valve. Installed on the pipe supplying hot or cold water to the users, it reduces the pressure of the water coming from the mains network, prevents the backflow of water into the mains system and allows users to be shut off during testing and maintenance procedures.

The cartridge containing the diaphragm, strainer, seat, obturator and compensating piston is pre-assembled as a self-contained unit with a cover. It is easy to remove, simplifying inspection and maintenance procedures. The internal strainer, cleanable, is part of the cartridge and cannot be removed.

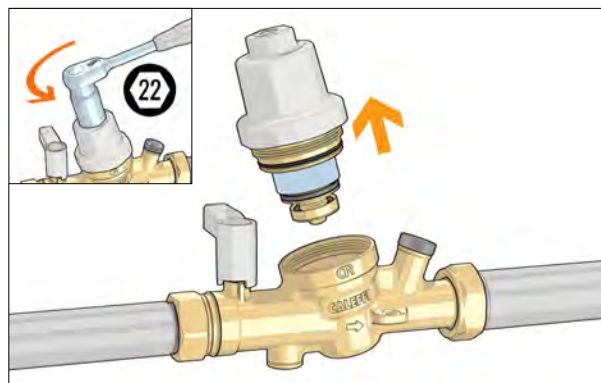
For further details relating to combined group for pressure and temperature control, please refer to page 180

#### Characteristic components

1. Compact, self-contained body
2. Shut-off valve
3. Pressure reducing valve with filter (EN 1567)
4. Check valve, EA type (EN 13959)
5. Upstream test port
6. Downstream test port
7. Captive nut



#### Removable self-contained cartridge



## ACCESSORIES FOR COMBINED GROUP FOR PRESSURE CONTROL 539H



### 557

tech. broch. 01389

Pressure gauge.

Ø 40 mm.

Accuracy class: UNI 2,5.

Code

bar

**557010** 0–10 1/4" central back conn.

1

-

**F0002665** 0–10 1/4" bottom conn.

1

-

NEW

### 539..H

tech. broch. 01389

Spare cartridge

for combined group for pressure control



Code

**539005H** 3/4"

1

8

NEW

tech. broch. 01389

Insulation for 539H series combined group.

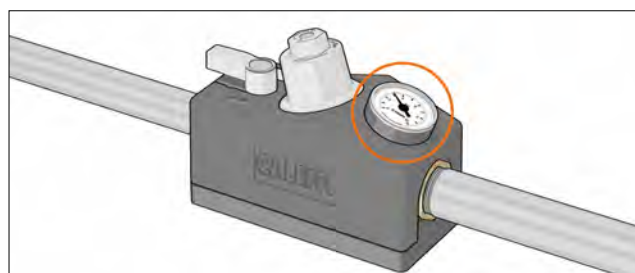


Code

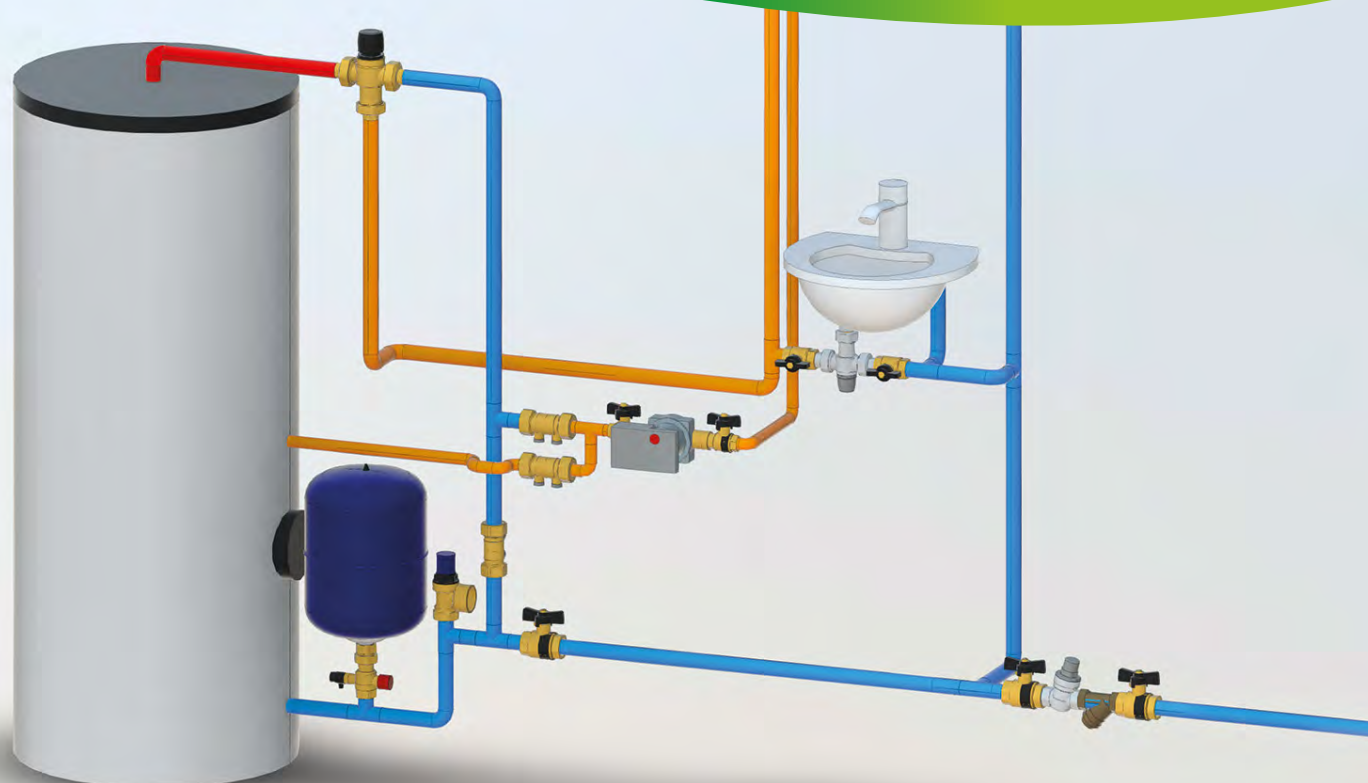
**CBN539050**

1

8



# THERMOSTATIC MIXING VALVES



**BIM**  
bim.caleffi.com

**Thermostatic mixing valves**

**Hybrid electronic mixing valves, LEGIOMIX® 2.0**

**Electronic mixing valves with thermal disinfection and interface, LEGIOMIX®**

**Anti-scald device**

**Unit for temperature control and thermal disinfection, LEGIOFLOW®**

**Timer for valves operation**

**Multi-function thermostatic regulator**



**Domestic Water Sizer**



**DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE**

Available on [www.caleffi.com](http://www.caleffi.com) and app for smartphone.

Download the version for your iOS and Android® mobile phone.

## THERMOSTATIC MIXING VALVES FOR SMALL APPLICATIONS



**520**

tech. broch. 01064

Adjustable thermostatic mixing valve.  
Brass body. Chrome plated.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.



| Code   | Temperature adjustment | Kv (m³/h) |   |    |
|--------|------------------------|-----------|---|----|
| 520430 | 1/2" 30–48 °C          | 1,30      | 1 | 50 |
| 520440 | 1/2" 40–60 °C          | 1,30      | 1 | 50 |
| 520530 | 3/4" 30–48 °C          | 1,80      | 1 | 50 |
| 520540 | 3/4" 40–60 °C          | 1,80      | 1 | 50 |
| 520630 | 1" 30–48 °C            | 2,75      | 1 | 10 |
| 520640 | 1" 40–60 °C            | 2,75      | 1 | 10 |



**521**

tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve with check valves.  
**CR** dezincification resistant alloy body.  
"LOW LEAD". Chrome plated.  
Max. working pressure: 14 bar.  
Max. inlet temperature: 85 °C.



| Code   | Temperature adjustment | Kv (m³/h) |   |    |
|--------|------------------------|-----------|---|----|
| 521503 | 3/4" 30–65 °C          | 2,6       | 1 | 10 |



**522**

tech. broch. 01064

Adjustable thermostatic mixing valve.  
For hot water storage heaters.  
Brass body. Chrome plated.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.

| Code   | Temperature adjustment | Kv (m³/h) |   |    |
|--------|------------------------|-----------|---|----|
| 522430 | 1/2" 30–48 °C          | 1,30      | 1 | 15 |
| 522440 | 1/2" 40–60 °C          | 1,30      | 1 | 15 |



**521**

tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve.  
**CR** dezincification resistant alloy body.  
"LOW LEAD". Chrome plated.  
Max. working pressure: 14 bar.  
Max. inlet temperature: 85 °C.



| Code   | Temperature adjustment | Kv (m³/h) |   |    |
|--------|------------------------|-----------|---|----|
| 521400 | 1/2" 30–65 °C          | 2,6       | 1 | 10 |
| 521500 | 3/4" 30–65 °C          | 2,6       | 1 | 10 |

**521**

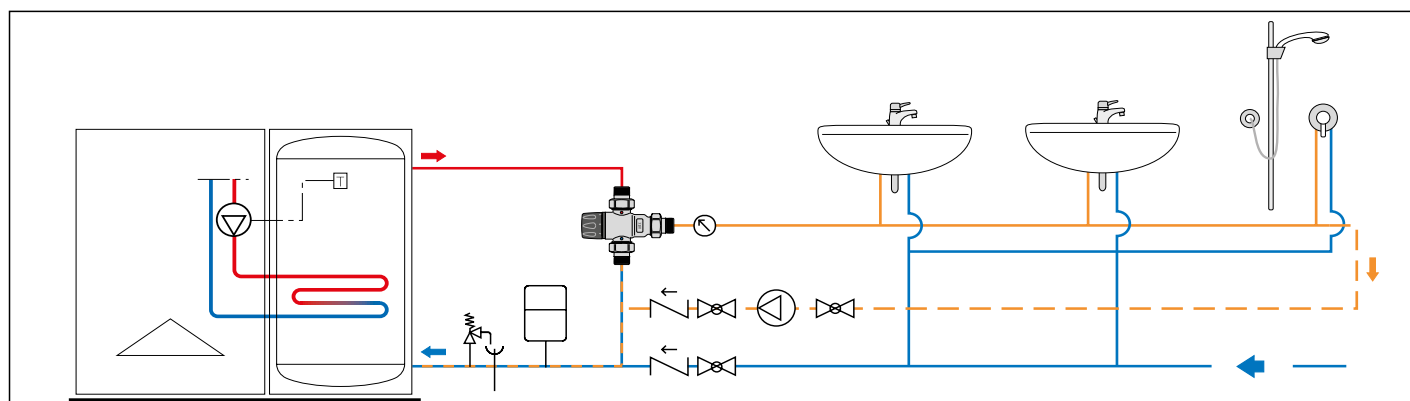
tech. broch. 01050

Adjustable **anti-scale** thermostatic mixing valve with check valves, strainers at the inlets and compression ends.  
**CR** dezincification resistant alloy body.  
Chrome plated.  
Max. working pressure: 14 bar.  
Max. inlet temperature: 85 °C.



| Code   | Temperature adjustment | Kv (m³/h) |   |    |
|--------|------------------------|-----------|---|----|
| 521115 | Ø 15 30–65 °C          | 2,6       | 1 | 10 |
| 521122 | Ø 22 30–65 °C          | 2,6       | 1 | 10 |

### Application diagram of thermostatic mixing valve 521 series



## TEMPERING VALVE FOR INSTALLATION AT THE POINT OF DISTRIBUTION



### 5219



Tempering valve adjustable with knob.  
For temperature control at the point of distribution.  
**With thermal shut-off function.**

CR dezincification resistant alloy body.  
"LOW LEAD". Chrome plated.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.  
PATENT.



### 5218



Tempering valve adjustable with knob,  
**with check valves and strainers.**

Specific to control the temperature  
at the point of distribution.

**With thermal shut-off function.**

CR dezincification resistant alloy body.  
"LOW LEAD". Chrome plated.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.  
**Certified to EN 15092.**  
PATENT.



| Code   | Temperature adjustment | Kv (m³/h) |     |      |
|--------|------------------------|-----------|-----|------|
| 521934 | 1/2"                   | 35-65 °C  | 1,5 | 1 10 |
| 521935 | 3/4"                   | 35-65 °C  | 1,7 | 1 10 |
| 521936 | 1"                     | 35-65 °C  | 3,0 | 1 5  |

| Code   | Temperature adjustment | Kv (m³/h) |     |      |
|--------|------------------------|-----------|-----|------|
| 521814 | 1/2"                   | 45-65 °C  | 1,5 | 1 10 |
| 521815 | 3/4"                   | 45-65 °C  | 1,7 | 1 10 |
| 521816 | 1"                     | 45-65 °C  | 3,0 | 1 5  |

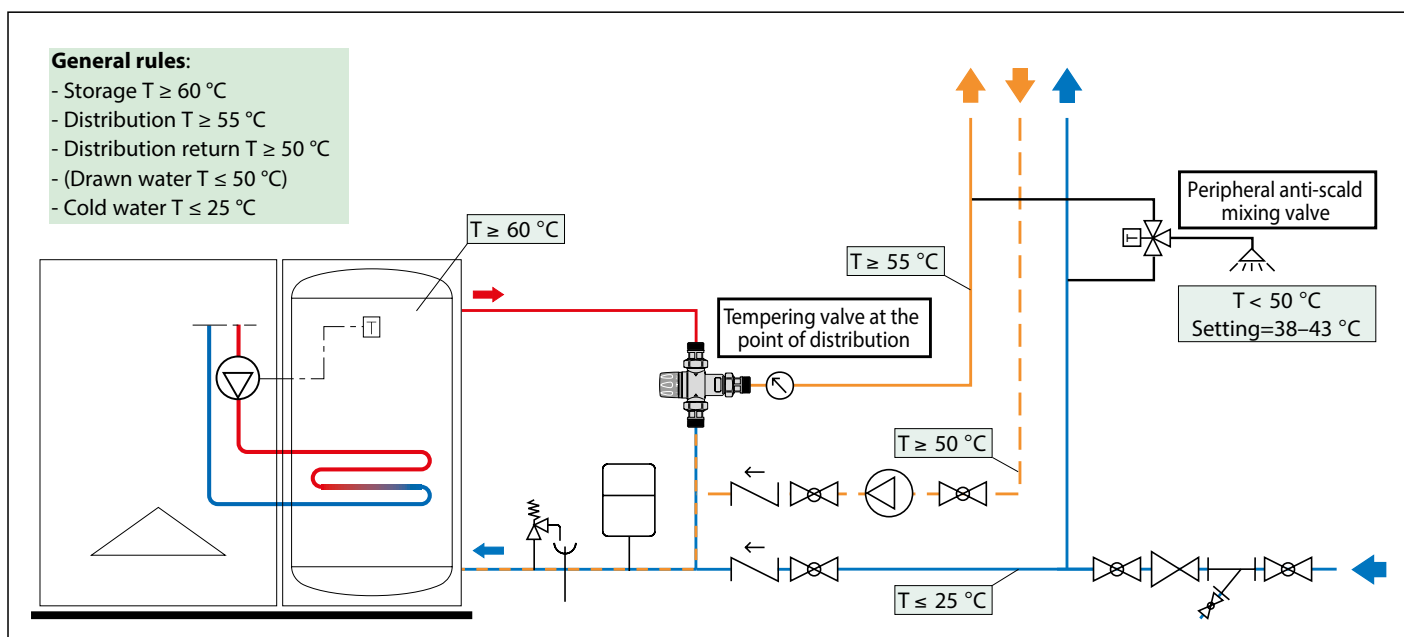
#### With check valves and strainers

| Code   | Temperature adjustment | Kv (m³/h) |     |      |
|--------|------------------------|-----------|-----|------|
| 521914 | 1/2"                   | 35-65 °C  | 1,5 | 1 10 |
| 521915 | 3/4"                   | 35-65 °C  | 1,7 | 1 10 |
| 521916 | 1"                     | 35-65 °C  | 3,0 | 1 5  |

#### European certification

European standard EN 15092 "Inline hot water supply tempering valves. - Tests and requirements" specifies the performance characteristics for tempering valves installed at the point of distribution in domestic water systems made in accordance with the recent European standards EN 806-1/2/3/4/5. The 5218 series tempering valves are certified as compliant with these standards by the certification Scheme NSF DTC (UK).

#### Application diagram of thermostatic mixing valve at the point of distribution





## ANTI-SCALD THERMOSTATIC MIXING VALVES FOR INSTALLATION AT THE POINT OF USE

### 5213

tech. broch. 01092



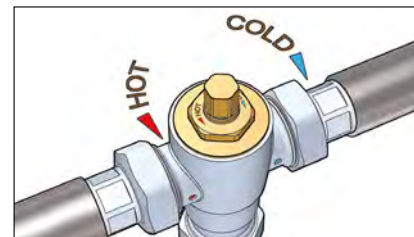
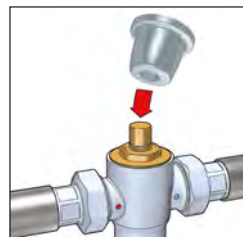
Adjustable thermostatic mixing valve with check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function.  
**CR** dezincification resistant alloy body. Chrome plated.  
 Max. working pressure: 10 bar.  
 Max. inlet temperature: 85 °C.  
**Certified to NHS D08, BS 7942, EN 1111 and EN 1287.**



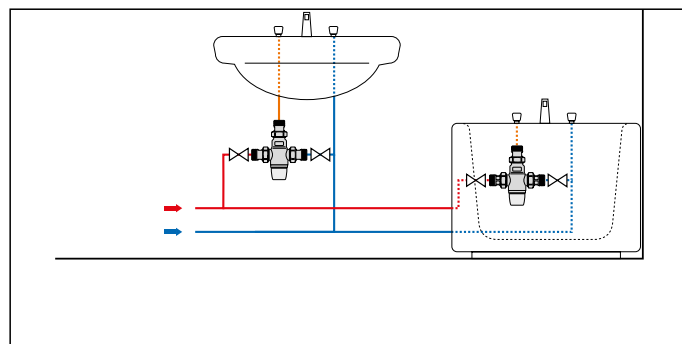
| Code           | Temperature adjustment | Kv (m³/h) |     |      |
|----------------|------------------------|-----------|-----|------|
| <b>521304</b>  | 1/2"                   | 30–50 °C  | 1,5 | 1 10 |
| <b>521303</b>  | 3/4"                   | 30–50 °C  | 1,7 | 1 10 |
| <b>521306*</b> | 1"                     | 30–50 °C  | 3,0 | 1 10 |

\* Certified WRAS only

#### Adjustment temperature of mixing valve 5213 series



#### Application diagram of mixing valves 5213 or 5217 series



### 5213

tech. broch. 01092

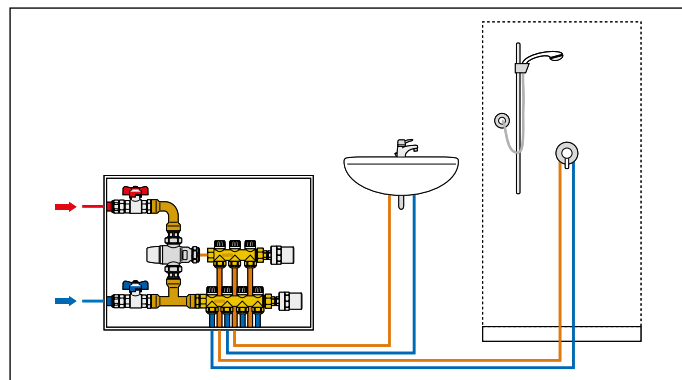


Adjustable thermostatic mixing valve with check valves, strainers and compression ends. Enhanced thermal performance device with anti-scald safety function.  
**CR** dezincification resistant alloy body. Chrome plated.  
 Max. working pressure: 10 bar.  
 Max. inlet temperature: 85 °C.  
**Certified to NHS D08, BS 7942, EN 1111 and EN 1287.**



| Code          | Temperature adjustment | Kv (m³/h) |     |      |
|---------------|------------------------|-----------|-----|------|
| <b>521315</b> | Ø 15                   | 30–50 °C  | 1,5 | 1 10 |
| <b>521322</b> | Ø 22                   | 30–50 °C  | 1,7 | 1 10 |

#### Application diagram of mixing valves 5213 or 5217 series with distribution group



### 5217

tech. broch. 01145



Thermostatic mixing valve, adjustable with knob, with check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function.  
 Brass body. Chrome plated.  
 Max. working pressure: 10 bar.  
 Max. inlet temperature: 85 °C.  
**Certified to NF 079 Doc. 8.**



| Code          | Temperature adjustment | Kv (m³/h) |      |      |
|---------------|------------------------|-----------|------|------|
| <b>521714</b> | 1/2"                   | 30–50 °C  | 1,50 | 1 10 |
| <b>521713</b> | 3/4"                   | 30–50 °C  | 1,85 | 1 10 |



Pre-formed shell insulation for 1/2" and 3/4" thermostatic mixing valves 5213, 5217, 5218 and 5219 series.

| Code             |   |    |
|------------------|---|----|
| <b>CBN521814</b> | 1 | 25 |
| <b>CBN521815</b> | 1 | 25 |

## ADJUSTABLE THERMOSTATIC MIXING VALVE FOR UNDER SINK INSTALLATION

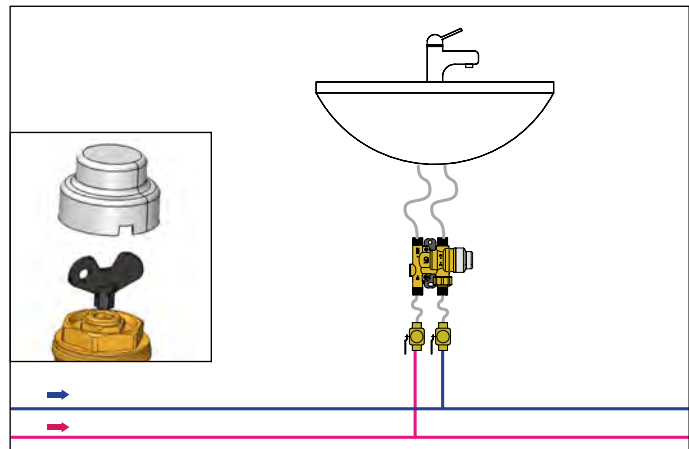


### 5212

Adjustable thermostatic mixing valve for under sink installation. With check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function. Complete with mounting brackets and adjustment key. **CR** dezincification resistant alloy body. **"LOW LEAD"**.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.  
**Certified to ASSE 1070.**



Application diagram of mixing valve code 521201



| Code   |      | Temperature adjustment | Kv (m³/h) |   |   |
|--------|------|------------------------|-----------|---|---|
| 521201 | 3/8" | 35–50 °C               | 0,45      | 1 | – |

## ANTI-SCALD TEMPERING AND THERMOSTATIC MIXING VALVES

### 5213



Adjustable anti-scald tempering valve with check valves and strainers at the inlets. **CR** dezincification resistant alloy body. Chrome plated. Male union connections.  
Max. working pressure: 1400 kPa.  
Max. inlet temperature: 85 °C.  
**Certified to AS 4032.2.**



| Code       |       | Temperature adjustment | Kv (m³/h) |   |    |
|------------|-------|------------------------|-----------|---|----|
| 521312 AUS | DN 15 | 30–50 °C               | 1,5       | 1 | 10 |
| 521319 AUS | DN 20 | 30–50 °C               | 1,7       | 1 | 10 |
| 521325 AUS | DN 25 | 20–50 °C               | 4,2       | 1 | 10 |

### 5213



Adjustable thermostatic mixing valve with isolating valves, check valves and strainers at the inlets. Enhanced thermal performance device with anti-scald safety function. **CR** dezincification resistant alloy body. Chrome plated.  
Max. working pressure: 1400 kPa.  
Max. inlet temperature: 85 °C.  
**Certified to AS 4032.1.**



| Code          |      | Temperature adjustment | Kv (m³/h) |   |    |
|---------------|------|------------------------|-----------|---|----|
| 521312TMX AUS | 1/2" | 30–50 °C               | 1,3       | 1 | 10 |
| 521319TMX AUS | 3/4" | 30–50 °C               | 1,4       | 1 | 10 |

## "L" PATTERN ADJUSTABLE THERMOSTATIC MIXING VALVE



**5200**



tech. broch. 01266

Adjustable thermostatic mixing valve with knob, complete with check valves and strainers at the inlets.

**Enhanced performance with thermal shut-off function.**

CR dezincification resistant alloy body "LOW LEAD".

Male union connections.

Max. working pressure: 10 bar.

Max. inlet temperature: 90 °C.

Certified to EN 1111 and EN 1287.



kiwa

1.59/20511

| Code   | Body DN | Conn. | Temperature adjustment | Kv (m³/h) |   |    |
|--------|---------|-------|------------------------|-----------|---|----|
| 520040 | 15      | 1/2"  | 35–65 °C               | 1,5       | 1 | 10 |
| 520050 | 20      | 3/4"  | 35–65 °C               | 1,7       | 1 | 10 |
| 520060 | 25      | 1"    | 35–65 °C               | 3,0       | 1 | 5  |



**NEW**

**520**



tech. broch. 01389



Connection tee for 5200 series thermostatic mixing valve complete with check valve.

CR dezincification resistant alloy body "LOW LEAD".

Connections: inlet G 1"

side G 1" with nut

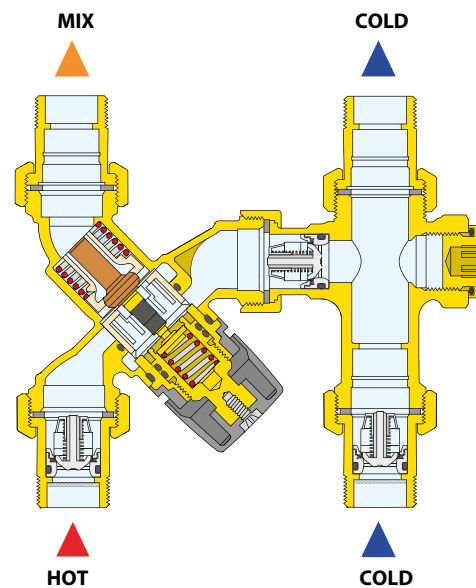
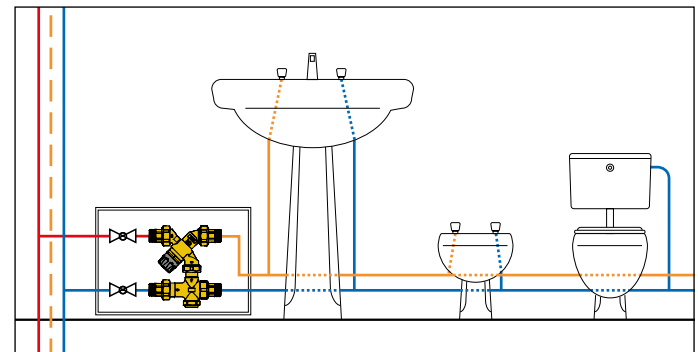
outlet G 3/4" with union

Max. working pressure: 10 bar.

Max. inlet temperature: 90 °C.

| Code   | Body DN | Conn.                                    |   |   |
|--------|---------|--|---|---|
| 520004 | 20      | G 1" x G 1" with nut x G 3/4" with union | 1 | - |

Application diagram of 5200.



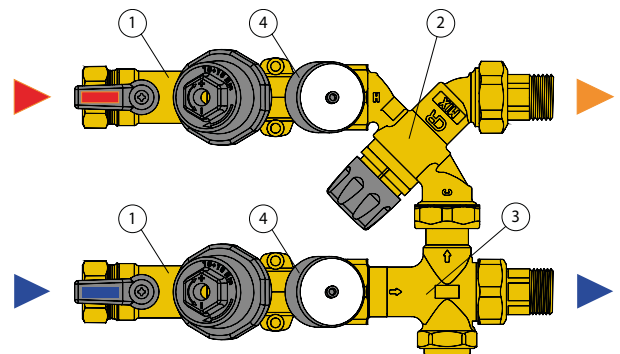
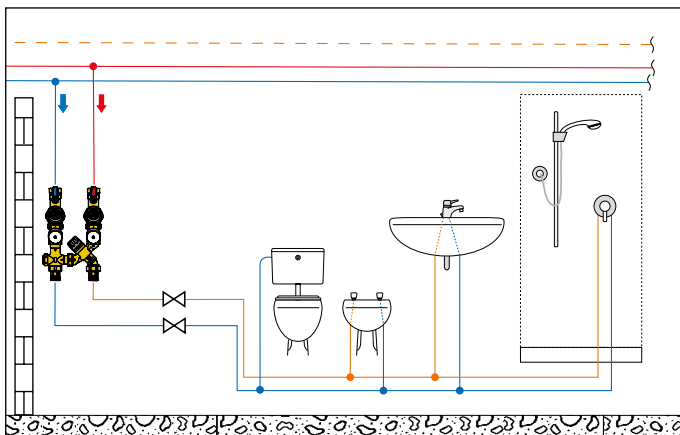
## COMBINED GROUP FOR PRESSURE AND TEMPERATURE CONTROL

It is essential to install various components capable of fulfilling all the required functions at the inlet of individual housing units, hotel rooms or hospital rooms, where it is necessary to control both the pressure and the temperature. In these applications, **the 539H combined group can be paired with the 520050 mixing valve using the special connection tee.**

The mixing valve, thanks to its thermal shut-off function, is able to protect the user from the risk of dangerous burns and is beneficial in applications at the point of use. In the event of accidental cold water supply failure, the obturator shuts off the hot water passage, thus preventing the delivery of mixed water.

For further details relating to combined group for pressure control, please refer to page 174

Application diagram of combined group.



1. Combined group for pressure control in domestic water systems code 539050H;
2. Thermostatic mixing valve code 520050;
3. Connection tee code 520004;
4. Pressure gauge code 557010.

## CONTROL UNIT FOR DOMESTIC HOT WATER TEMPERATURE



### 5201



Control unit for domestic hot water temperature at the point of distribution.

- Consisting of:
- thermostatic mixing valve with thermal shut-off function,
  - tee for cold water connection complete with check valves.

Max. working pressure: 10 bar.

Max. inlet temperature: 90 °C.

**Mixing valve certified to EN 1111 and EN 1287 standards.**



| Code    | Body DN | Conn. | Temperature adjustment | Kv (m³/h) |   |   |
|---------|---------|-------|------------------------|-----------|---|---|
| 520150  | 20      | 3/4"  | 35–65 °C               | 1,7       | 1 | – |
| 520160  | 25      | 1"    | 35–65 °C               | 3,0       | 1 | – |
| 520162* | 25      | 1"    | 35–65 °C               | 3,0       | 1 | – |

\* With off-centre fittings



### 520



Accessory kit for recirculation connection complete with check valves.

Max. working pressure: 10 bar.

Max. inlet temperature: 90 °C.

| Code   | Body DN | Conn. |   |   |
|--------|---------|-------|---|---|
| 520005 | 20      | 3/4"  | 1 | – |



Pre-formed shell insulation for control unit for domestic hot water temperature at the point of distribution 5201 series.

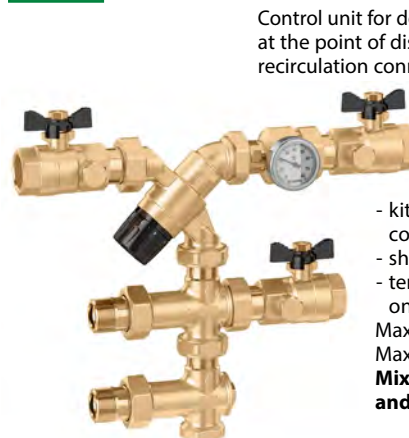
| Code      |   |    |
|-----------|---|----|
| CBN520150 | 1 | 25 |
| CBN520160 | 1 | 25 |



### 6480

Pair of off-centre fittings for connecting temperature control unit to any storage with outlet centre distance between 100 and 120 mm.

| Code   | Conn. |   |   |
|--------|-------|---|---|
| 648005 | 3/4"  | 1 | – |
| 648006 | 1"    | 1 | – |



### 5201



Control unit for domestic hot water temperature at the point of distribution, complete with recirculation connection. Consisting of:

- thermostatic mixing valve with thermal shut-off function,
- tee for cold water connection complete with check valves,
- kit for recirculation connection complete with check valves,
- shut-off valves,
- temperature gauge with pocket on the mixed water outlet.

Max. working pressure: 10 bar.

Max. inlet temperature: 90 °C.

**Mixing valve certified to EN 1111 and EN 1287 standards.**

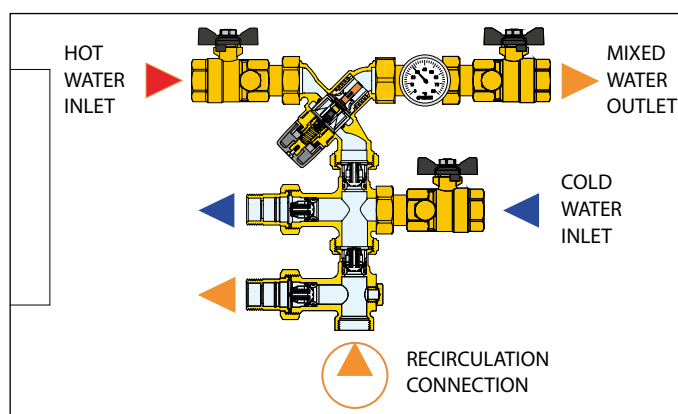
| Code   | Body DN | Conn. | Temperature adjustment | Kv (m³/h) |   |   |
|--------|---------|-------|------------------------|-----------|---|---|
| 520155 | 20      | 3/4"  | 35–65 °C               | 1,7       | 1 | – |

### Specifications

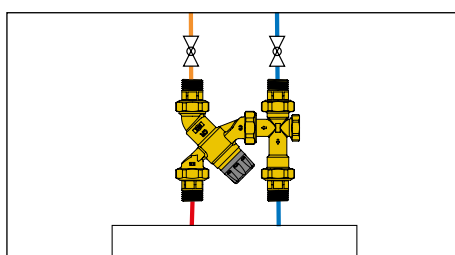
The control unit for domestic hot water temperature is equipped with a high performance thermostatic mixing valve with a thermal shut-off function. This makes it possible to maintain a flow temperature at the distribution point that is perfectly stable at the required value.

The domestic hot water temperature control unit allows easy **connection between pipes serving the domestic hot water and storage system**, making it possible to minimise space requirements for installation. The unit is supplied with the **check valves that allow correct operation of the mixing valve in the presence of recirculation**. The group's modularity makes it extremely flexible, since it allows orientation of the various pipe connections in accordance with installation requirements. The shut-off valves with connection ports and temperature gauge on the mixed water outlet facilitate commissioning, checking and maintenance operations.

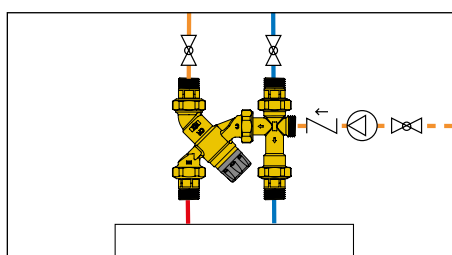
### Interchangeable cold/recirculation connections



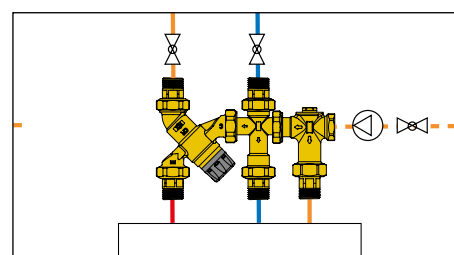
### Without recirculation circuit



### Storage without recirculation connection



### Storage with recirculation connection



## THERMOSTATIC MIXING VALVES FOR MEDIUM-LARGE APPLICATIONS

### 5231

tech. broch. 01256

Adjustable thermostatic mixing valve, for centralised systems.  
 dezincification resistant alloy body.  
 Antiscale inner regulator in technopolymer.  
 Max. working pressure: 14 bar.  
 Max. inlet temperature: 90 °C.



| Code   | Temperature adjustment | Kv (m³/h)     |   |   |
|--------|------------------------|---------------|---|---|
| 523140 | 1/2"                   | 35-65 °C 4,3  | 1 | 5 |
| 523150 | 3/4"                   | 35-65 °C 4,5  | 1 | 5 |
| 523160 | 1"                     | 35-65 °C 5,5  | 1 | - |
| 523170 | 1 1/4"                 | 35-65 °C 7,6  | 1 | - |
| 523180 | 1 1/2"                 | 35-65 °C 11,0 | 1 | - |
| 523190 | 2"                     | 35-65 °C 13,3 | 1 | - |

#### With check valves and compression ends

| Code   | Temperature adjustment | Kv (m³/h)    |   |   |
|--------|------------------------|--------------|---|---|
| 523162 | Ø 28                   | 35-65 °C 7,6 | 1 | - |

### 5230

tech. broch. 01080

Adjustable thermostatic mixing valve, with replaceable cartridge, for centralised systems.  
 Brass body.  
 Max. working pressure: 14 bar.  
 Max. inlet temperature: 85 °C.



| Code   | Temperature adjustment | Kv (m³/h)     |   |   |
|--------|------------------------|---------------|---|---|
| 523040 | 1/2"                   | 30-65 °C 4,0  | 1 | - |
| 523050 | 3/4"                   | 30-65 °C 4,5  | 1 | - |
| 523060 | 1"                     | 30-65 °C 6,9  | 1 | - |
| 523070 | 1 1/4"                 | 30-65 °C 9,1  | 1 | - |
| 523080 | 1 1/2"                 | 36-60 °C 14,5 | 1 | - |
| 523090 | 2"                     | 36-60 °C 19,0 | 1 | - |

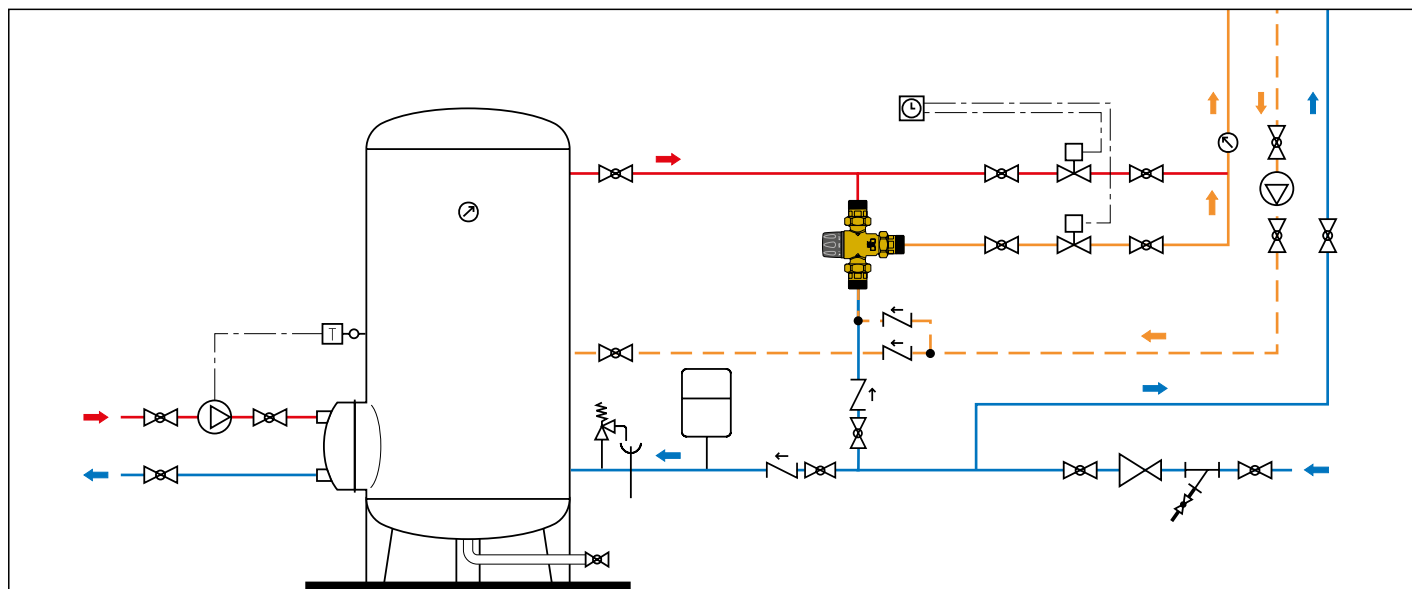
#### With check valves

| Code   | Temperature adjustment | Kv (m³/h)    |   |   |
|--------|------------------------|--------------|---|---|
| 523043 | 1/2"                   | 30-65 °C 4,0 | 1 | - |
| 523053 | 3/4"                   | 30-65 °C 4,5 | 1 | - |
| 523063 | 1"                     | 30-65 °C 6,9 | 1 | - |
| 523073 | 1 1/4"                 | 30-65 °C 9,1 | 1 | - |

#### With check valves and compression ends

| Code   | Temperature adjustment | Kv (m³/h)    |   |   |
|--------|------------------------|--------------|---|---|
| 523052 | Ø 22                   | 30-65 °C 4,5 | 1 | - |
| 523062 | Ø 28                   | 30-65 °C 6,9 | 1 | - |

#### Application diagram of mixing valve 5231 series





## THERMOSTATIC MIXING VALVE FOR MEDIUM-LARGE APPLICATIONS



### 524



Adjustable thermostatic mixing valve for centralised systems.  
With recirculation connection.  
Male threaded connections.  
Brass body.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.

| Code    | Body DN   | Temperature adjustment | Kv (m³/h) |   |   |
|---------|-----------|------------------------|-----------|---|---|
| 524400* | 15 1 1/8" | 30–65 °C               | 1,4       | 1 | – |
| 524500  | 20 1 1/4" | 30–65 °C               | 2,5       | 1 | – |
| 524600  | 25 1 1/2" | 30–65 °C               | 4,0       | 1 | – |
| 524700  | 32 2"     | 30–65 °C               | 7,7       | 1 | – |
| 524800  | 40 2 1/4" | 36–60 °C               | 11,5      | 1 | – |
| 524900  | 50 2 3/4" | 36–60 °C               | 15,0      | 1 | – |

\* Without recirculation connection



### 524

Connection kit for mixing valves with threaded connections, 524 series.  
Complete with:  
- 2 female unions with check valves, strainers and seals;  
- 1 female union with seal.

| Code   |        |            |   |   |
|--------|--------|------------|---|---|
| 524004 | 1/2"   | for 524400 | 1 | – |
| 524005 | 3/4"   | for 524500 | 1 | – |
| 524006 | 1"     | for 524600 | 1 | – |
| 524007 | 1 1/4" | for 524700 | 1 | – |
| 524008 | 1 1/2" | for 524800 | 1 | – |
| 524009 | 2"     | for 524900 | 1 | – |

### 524



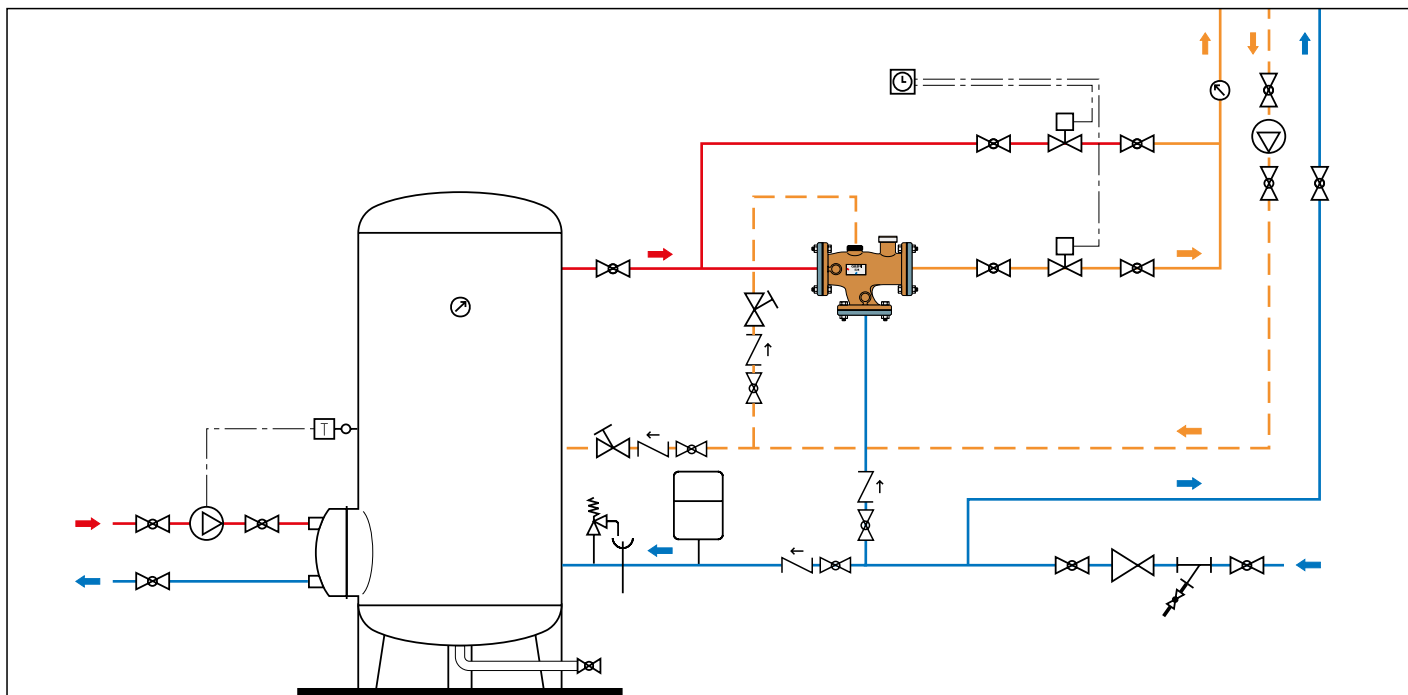
tech. broch. 01063

Adjustable thermostatic mixing valve.  
Bronze body, PN 10.  
Flanged connections.  
Equipped with flat counterflanges EN 1092-1, PN 10.  
Recirculation pipe connections.  
Factory setting: 48 °C.  
Max. working pressure: 10 bar.  
Max. inlet temperature: 90 °C.



| Code   | Temperature adjustment  | Kv (m³/h) |   |   |
|--------|-------------------------|-----------|---|---|
| 524060 | DN 65 36–53 °C (± 2 °C) | 32,0      | 1 | – |
| 524080 | DN 80 36–53 °C (± 2 °C) | 43,0      | 1 | – |

Application diagram of mixing valve 524 series



## HYBRID ELECTRONIC MIXING VALVE

### 6000 LEGIOMIX® 2.0

**Hybrid** electronic mixing valve.

Complete with:

- hybrid mixing valve with motorised actuator
- electronic regulator with programming of temperature levels and thermal disinfection cycles, built into the actuator casing
- integrated flow temperature probe
- circuit return temperature probe
- flow temperature gauge.

Fitted for data saving function (optional),  
with recording of temperatures and functional parameters.  
Fitted for connection to remote control system (optional).

CR dezincification resistant alloy body.

Electric supply: 230 V - 50/60 Hz.

Max working pressure: 10 bar.

Max. inlet temperature: 90 °C.

Adjustment temperature range in mixing mode: 35–65 °C.

Disinfection temperature range: 50–85 °C.

Protection class: IP 54.

PATENT PENDING.



| Code       | Body DN | Conn.  | Kv (m³/h) |   |   |
|------------|---------|--------|-----------|---|---|
| 600045 EST | 15      | 1/2"   | 4,3       | 1 | – |
| 600055 EST | 20      | 3/4"   | 4,3       | 1 | – |
| 600065 EST | 25      | 1"     | 7,6       | 1 | – |
| 600075 EST | 32      | 1 1/4" | 10,0      | 1 | – |
| 600085 EST | 40      | 1 1/2" | 13,0      | 1 | – |
| 600095 EST | 50      | 2"     | 18,0      | 1 | – |



Spare parts for electronic mixing valve 6000 series, LEGIOMIX® 2.0.

Code

|                 |                               |
|-----------------|-------------------------------|
| <b>F0000964</b> | body without unions for DN 15 |
| <b>F0000965</b> | body without unions for DN 20 |
| <b>F0000966</b> | body without unions for DN 25 |
| <b>F0000967</b> | body without unions for DN 32 |
| <b>F0000968</b> | body without unions for DN 40 |
| <b>F0000969</b> | body without unions for DN 50 |

tech. broch. 01334

### Operating principle

The electronic hybrid mixing valve combines the typical function of the mechanical thermostatic mixing valve and the management efficiency of an electronic mixing valve in a single device.

The thermostatic mixing valve uses the mechanical action performed by the internal control thermostatic element, which responds promptly to any variation in temperature, pressure and inlet flow rate to quickly restore the mixed water temperature value at the outlet.

Fast and accurate temperature control guaranteed, indispensable for use in domestic hot water distribution circuits.

This basic mixer is effectively managed by a motor-controlled actuator that, based on a signal coming from the temperature probes and under the control of a specific regulator, modifies the set point temperature of the mixed water. The latter is monitored continuously by means of temperature probes, which indicate the operation status of the domestic water circuit.

The electronic regulator, directly on the actuator, allows the mixed water temperature control according to different functional programs, both for normal control and for the thermal disinfection for the prevention of Legionella. This phase can be controlled and checked automatically in terms of temperatures and disinfection times, for optimal system management.

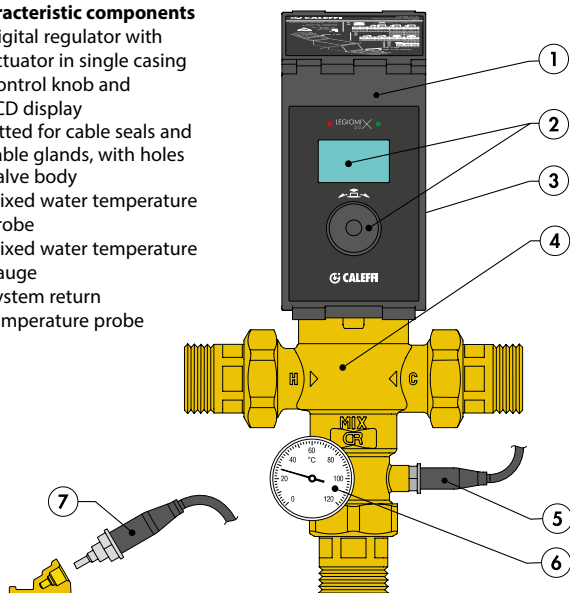
An optional memory system allows continuous recording of flow temperature, return temperature, alarm and functional statuses, useful for monitoring the operating status of the entire system.

Appropriate relays are used to manage the alarms and external appliances, for example for loading accumulation hot water and switching on/off the recirculation pump.

The regulator is fitted for remote control with specific MODBUS-RTU transmission protocols, through optional board, for use in Building Management Systems (BMS).

### Characteristic components

- 1 Digital regulator with actuator in single casing
- 2 Control knob and LCD display
- 3 Fitted for cable seals and cable glands, with holes
- 4 Valve body
- 5 Mixed water temperature probe
- 6 Mixed water temperature gauge
- 7 System return temperature probe



Spare parts for electronic mixing valve 6000 series, LEGIOMIX® 2.0.

Code

|                 |   |
|-----------------|---|
| <b>F69807</b>   | mixed water probe for 1/2"–2"                   |
| <b>F69591</b>   | recirculation probe for check on disinfection   |
| <b>F69531</b>   | contact probe holder for check on disinfection  |
| <b>F29571</b>   | temperature gauge 0–120 °C                      |
| <b>F0000970</b> | digital regulator with actuator for DN 15–DN 20 |
| <b>F0000971</b> | digital regulator with actuator for DN 25–DN 50 |

## ACCESSORIES FOR HYBRID ELECTRONIC MIXING VALVE

### Code 600001

#### Optional board MODBUS-RTU transmission and logs

By installing the board on the device, it will be possible to manage the device through a specific MODBUS-RTU transmission protocol for use in Building Management Systems (BMS). The package includes the optional board, main board connection cable and logs.

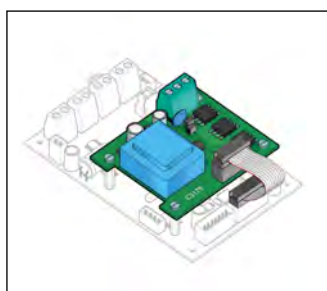
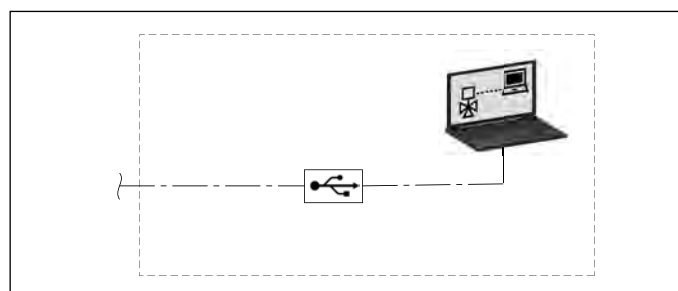
|        |                         |   |   |  |
|--------|-------------------------|---|---|--|
| Code   |                         |   |   |  |
| 600001 | optional board and logs | 1 | – |  |

### Code 600002

#### RS-485 USB cable and Caleffi Software

Using the cable with RS-485 USB interface and the Caleffi Software included in the package, it is possible to manage the device from PC. The two Software are used to manage the mixing valves LEGIOMIX® 24 V and LEGIOMIX® 2.0.

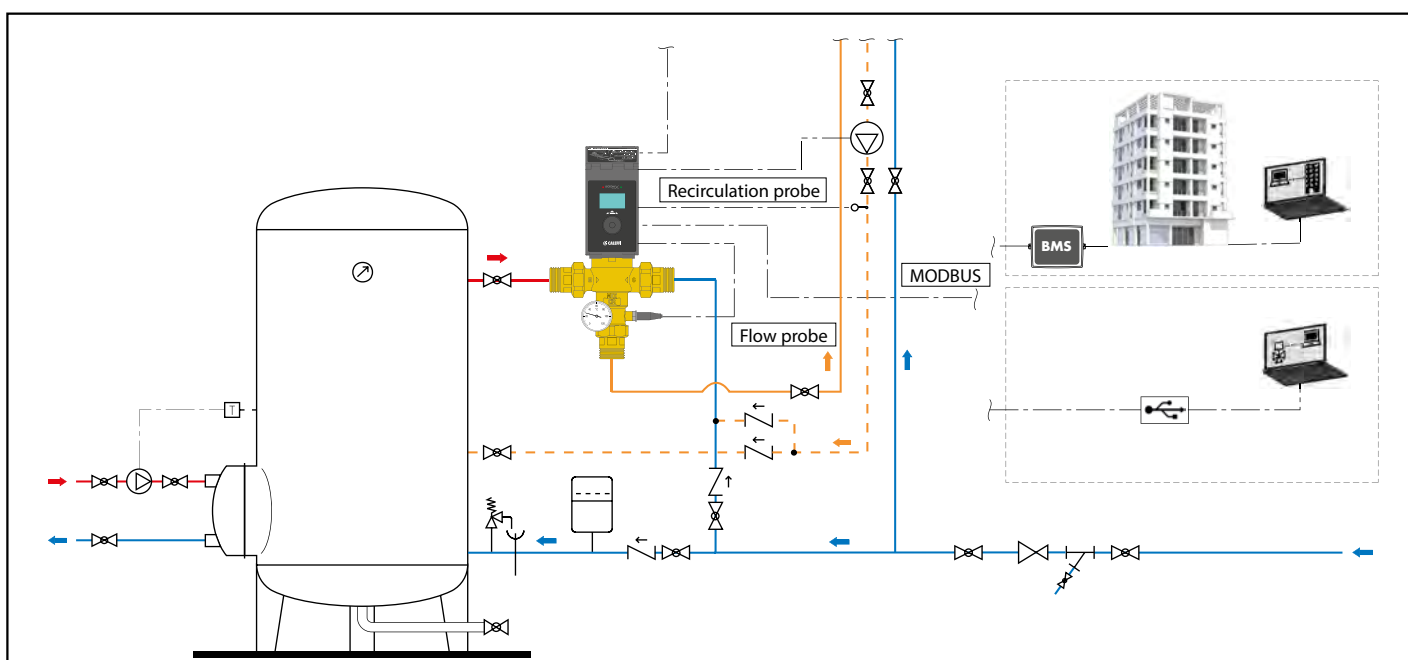
|        |                                       |   |   |  |
|--------|---------------------------------------|---|---|--|
| Code   |                                       |   |   |  |
| 600002 | RS-485 USB cable and Caleffi Software | 1 | – |  |



| BUS | TYPE | DESCRIPTION | VALUE |
|-----|------|-------------|-------|
| 1   | 1    | 1           | 1     |
| 2   | 2    | 2           | 2     |
| 3   | 3    | 3           | 3     |
| 4   | 4    | 4           | 4     |
| 5   | 5    | 5           | 5     |
| 6   | 6    | 6           | 6     |
| 7   | 7    | 7           | 7     |
| 8   | 8    | 8           | 8     |
| 9   | 9    | 9           | 9     |
| 10  | 10   | 10          | 10    |
| 11  | 11   | 11          | 11    |
| 12  | 12   | 12          | 12    |
| 13  | 13   | 13          | 13    |
| 14  | 14   | 14          | 14    |
| 15  | 15   | 15          | 15    |
| 16  | 16   | 16          | 16    |
| 17  | 17   | 17          | 17    |
| 18  | 18   | 18          | 18    |
| 19  | 19   | 19          | 19    |
| 20  | 20   | 20          | 20    |
| 21  | 21   | 21          | 21    |
| 22  | 22   | 22          | 22    |
| 23  | 23   | 23          | 23    |
| 24  | 24   | 24          | 24    |
| 25  | 25   | 25          | 25    |
| 26  | 26   | 26          | 26    |
| 27  | 27   | 27          | 27    |
| 28  | 28   | 28          | 28    |
| 29  | 29   | 29          | 29    |
| 30  | 30   | 30          | 30    |
| 31  | 31   | 31          | 31    |
| 32  | 32   | 32          | 32    |
| 33  | 33   | 33          | 33    |
| 34  | 34   | 34          | 34    |
| 35  | 35   | 35          | 35    |
| 36  | 36   | 36          | 36    |
| 37  | 37   | 37          | 37    |
| 38  | 38   | 38          | 38    |
| 39  | 39   | 39          | 39    |
| 40  | 40   | 40          | 40    |
| 41  | 41   | 41          | 41    |
| 42  | 42   | 42          | 42    |
| 43  | 43   | 43          | 43    |
| 44  | 44   | 44          | 44    |
| 45  | 45   | 45          | 45    |
| 46  | 46   | 46          | 46    |
| 47  | 47   | 47          | 47    |
| 48  | 48   | 48          | 48    |
| 49  | 49   | 49          | 49    |
| 50  | 50   | 50          | 50    |
| 51  | 51   | 51          | 51    |
| 52  | 52   | 52          | 52    |
| 53  | 53   | 53          | 53    |
| 54  | 54   | 54          | 54    |
| 55  | 55   | 55          | 55    |
| 56  | 56   | 56          | 56    |
| 57  | 57   | 57          | 57    |
| 58  | 58   | 58          | 58    |
| 59  | 59   | 59          | 59    |
| 60  | 60   | 60          | 60    |
| 61  | 61   | 61          | 61    |
| 62  | 62   | 62          | 62    |
| 63  | 63   | 63          | 63    |
| 64  | 64   | 64          | 64    |
| 65  | 65   | 65          | 65    |
| 66  | 66   | 66          | 66    |
| 67  | 67   | 67          | 67    |
| 68  | 68   | 68          | 68    |
| 69  | 69   | 69          | 69    |
| 70  | 70   | 70          | 70    |
| 71  | 71   | 71          | 71    |
| 72  | 72   | 72          | 72    |
| 73  | 73   | 73          | 73    |
| 74  | 74   | 74          | 74    |
| 75  | 75   | 75          | 75    |
| 76  | 76   | 76          | 76    |
| 77  | 77   | 77          | 77    |
| 78  | 78   | 78          | 78    |
| 79  | 79   | 79          | 79    |
| 80  | 80   | 80          | 80    |
| 81  | 81   | 81          | 81    |
| 82  | 82   | 82          | 82    |
| 83  | 83   | 83          | 83    |
| 84  | 84   | 84          | 84    |
| 85  | 85   | 85          | 85    |
| 86  | 86   | 86          | 86    |
| 87  | 87   | 87          | 87    |
| 88  | 88   | 88          | 88    |
| 89  | 89   | 89          | 89    |
| 90  | 90   | 90          | 90    |
| 91  | 91   | 91          | 91    |
| 92  | 92   | 92          | 92    |
| 93  | 93   | 93          | 93    |
| 94  | 94   | 94          | 94    |
| 95  | 95   | 95          | 95    |
| 96  | 96   | 96          | 96    |
| 97  | 97   | 97          | 97    |
| 98  | 98   | 98          | 98    |
| 99  | 99   | 99          | 99    |
| 100 | 100  | 100         | 100   |



### Application diagram of electronic mixing valve 6000 EST LEGIOMIX® 2.0 series



## ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 230 V

### 6000 LEGIOMIX®

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.

Consisting of:

- **three-way ball valve,**
- **actuator,**
- **regulator,**
- **flow temperature probe,**
- **return temperature probe.**

With auxiliary microswitches for disinfection management and other devices. Suitable for remote control connection with interface code 600100 and proprietary protocol.

Electric supply: 230 V - 50/60 Hz - (6,5+6) VA.

Max. working pressure: 10 bar.

Max. inlet temperature: 100 °C.

Adjustment temperature range: 20–85 °C.

Disinfection temperature range: 40–85 °C.

Protection class: IP 65 (actuator).

PATENT.



tech. broch. 01086

#### Function

This particular series of electronic mixing valves is equipped with a special regulator **that controls a set of programs for circuit thermal disinfection**. In addition it enables checking the temperature and time for thermal disinfection are actually reached and undertaking the appropriate corrective action. All the parameters are updated every day and logged, recording the temperatures by time.

Spare parts for mixing valve.

Consisting of:

- **three-way ball valve,**
- **actuator,**
- **flow temperature probe,**
- **temperature gauge,**
- **holder accessories fitting.**



#### Code

**600251** for code 600051

**600261** for code 600061

**600271** for code 600071

**600281** for code 600081

**600291** for code 600091

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with threaded connections, 230 V.

#### Code

**645112** actuator 230 V (AC) for 600051–600091

**F69798** valve body without unions and probe holder for 3/4"

**F69799** valve body without unions and probe holder for 1"

**F69801** valve body without unions and probe holder for 1 1/4"

**F69803** valve body without unions and probe holder for 1 1/2"-2"

**F69807** flow probe for 3/4"-1"-1 1/4"

**F69804** flow probe for 1 1/2"-2"

**F69591** recirculation probe for check on disinfection

**F69531** contact probe holder for recirculation loop

**F69433** regulator with check on disinfection

**R19101** temperature gauge 0–80 °C

**F69752** electronic board

**F69888** spare battery

| Code          |        | Kv (m³/h) |   |   |
|---------------|--------|-----------|---|---|
| <b>600051</b> | 3/4"   | 8,4       | 1 | – |
| <b>600061</b> | 1"     | 10,6      | 1 | – |
| <b>600071</b> | 1 1/4" | 21,2      | 1 | – |
| <b>600081</b> | 1 1/2" | 32,5      | 1 | – |
| <b>600091</b> | 2"     | 41,0      | 1 | – |

## ANTI-SCALD DEVICE

### 6001

tech. broch. 01086

Anti-scald device for domestic hot water use. Brass body. Chrome plated. Setting temperature: 48 °C (± 1 °C).



#### Function

The purpose of the anti-scald device is to cut off the flow of water if its temperature reaches the setting value.

Designed to be used in domestic hot water systems with electronic mixing valves with programmable thermal disinfection.

Installed directly at the point of use, it prevents the hot water from scalding the user during the thermal disinfection period (T>50 °C).

| Code          |      |   |    |
|---------------|------|---|----|
| <b>600140</b> | 1/2" | 1 | 10 |

## ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 230 V

### 6000 LEGIOMIX®



tech. broch. 01086

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connection PN 16. Consisting of:

- **three-way ball valve,**
- **actuator,**
- **regulator,**
- **flow temperature probe,**
- **return temperature probe.**

With auxiliary microswitches for disinfection management and other devices. Suitable for remote control connection with interface code 600100 and proprietary protocol.

Electric supply: 230 V - 50/60 Hz - (6,5+10,5) VA.

Max. working pressure: 10 bar.

Max. inlet temperature: 100 °C.

Adjustment temperature range: 20–85 °C.

Disinfection temperature range: 40–85 °C.

To be coupled with counterflanges EN 1092-1.

Protection class: IP 65 (actuator).

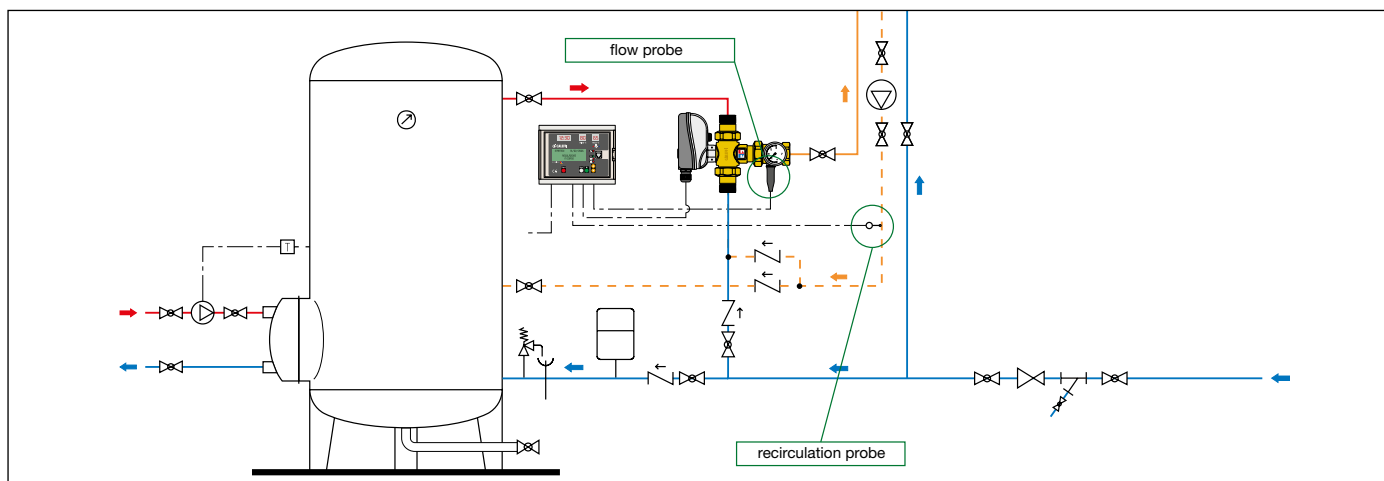
PATENT.



| Code          | Kv (m³/h) |       |   |   |
|---------------|-----------|-------|---|---|
| <b>600006</b> | DN 65     | 90,0  | 1 | – |
| <b>600008</b> | DN 80     | 120,0 | 1 | – |



#### Application diagram of electronic mixing valve 6000 series



Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with flanged connections.

#### Code

|               |   |
|---------------|---|
| <b>F69381</b> | flow temperature probe                                    |
| <b>F69393</b> | three-way valve with flanged connections for codes 6000.6 |
| <b>F69394</b> | three-way valve with flanged connections for codes 6000.8 |
| <b>F69395</b> | actuator 230 V (AC) for codes 600006 and 600008           |
| <b>F69433</b> | regulator with check on disinfection                      |
| <b>F69591</b> | recirculation probe for check on disinfection             |
| <b>F69531</b> | contact probe holder for recirculation loop               |
| <b>F69888</b> | spare battery   |



## ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 24 V

Suitable for BMS with MODBUS-RTU management

### 6000 LEGIOMIX®



Electronic mixing valve with programmable thermal disinfection and check on disinfection. Male threaded connections with union.

Consisting of:

- three-way ball valve,
- actuator,
- regulator,
- flow temperature probe,
- return temperature probe.

With auxiliary microswitches for disinfection management and other devices. Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.

Electric supply: 24 V - 50/60 Hz - (6,5+6) VA.

Max. working pressure: 10 bar.

Max. inlet temperature: 100 °C.

Adjustment temperature range: 20–85 °C.

Disinfection temperature range: 40–85 °C.

Protection class: IP 65 (actuator).

PATENT.



### Function

This particular series of electronic mixing valves is equipped with a special regulator **that controls a set of programs for circuit thermal disinfection**. In addition it enables checking the temperature and time for thermal disinfection are actually reached and undertaking the appropriate corrective action. All the parameters are updated every day and logged, recording the temperatures by time.

Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with threaded connections, 24 V.

### Code

|                 |  |
|-----------------|--|
| <b>645114</b>   | actuator 24 V (AC) for 600054–600094                     |
| <b>F69798</b>   | valve body without unions and probe holder for 3/4"      |
| <b>F69799</b>   | valve body without unions and probe holder for 1"        |
| <b>F69801</b>   | valve body without unions and probe holder for 1 1/4"    |
| <b>F69803</b>   | valve body without unions and probe holder for 1 1/2"-2" |
| <b>F69807</b>   | flow probe for 3/4"-1"-1 1/4"                            |
| <b>F69804</b>   | flow probe for 1 1/2"-2"                                 |
| <b>F69591</b>   | recirculation probe for check on disinfection            |
| <b>F69531</b>   | contact probe holder for recirculation loop              |
| <b>F0000961</b> | regulator with check on disinfection                     |
| <b>R19101</b>   | temperature gauge 0–80 °C                                |
| <b>F69888</b>   | spare battery  |

| Code          |        | Kv (m³/h) |   |   |
|---------------|--------|-----------|---|---|
| <b>600054</b> | 3/4"   | 8,4       | 1 | – |
| <b>600064</b> | 1"     | 10,6      | 1 | – |
| <b>600074</b> | 1 1/4" | 21,2      | 1 | – |
| <b>600084</b> | 1 1/2" | 32,5      | 1 | – |
| <b>600094</b> | 2"     | 41,0      | 1 | – |

## ELECTRONIC MIXING VALVE WITH THERMAL DISINFECTION - 24 V

Suitable for BMS with MODBUS-RTU management

### 6000 LEGIOMIX®



tech. broch. 01347

Electronic mixing valve with programmable thermal disinfection and check on disinfection. Flanged connection PN 16. Consisting of:

- three-way ball valve,
- actuator,
- regulator,
- flow temperature probe,
- return temperature probe.

With auxiliary microswitches for disinfection management and other devices. Fitted for remote control connection with RS-485 and MODBUS-RTU protocols.

Electric supply: 24 V - 50/60 Hz - (6,5+10,5) VA.

Max. working pressure: 10 bar.

Max. inlet temperature: 100 °C.

Adjustment temperature range: 20–85 °C.

Disinfection temperature range: 40–85 °C.

To be coupled with counterflanges EN 1092-1.

Protection class: IP 65 (actuator).

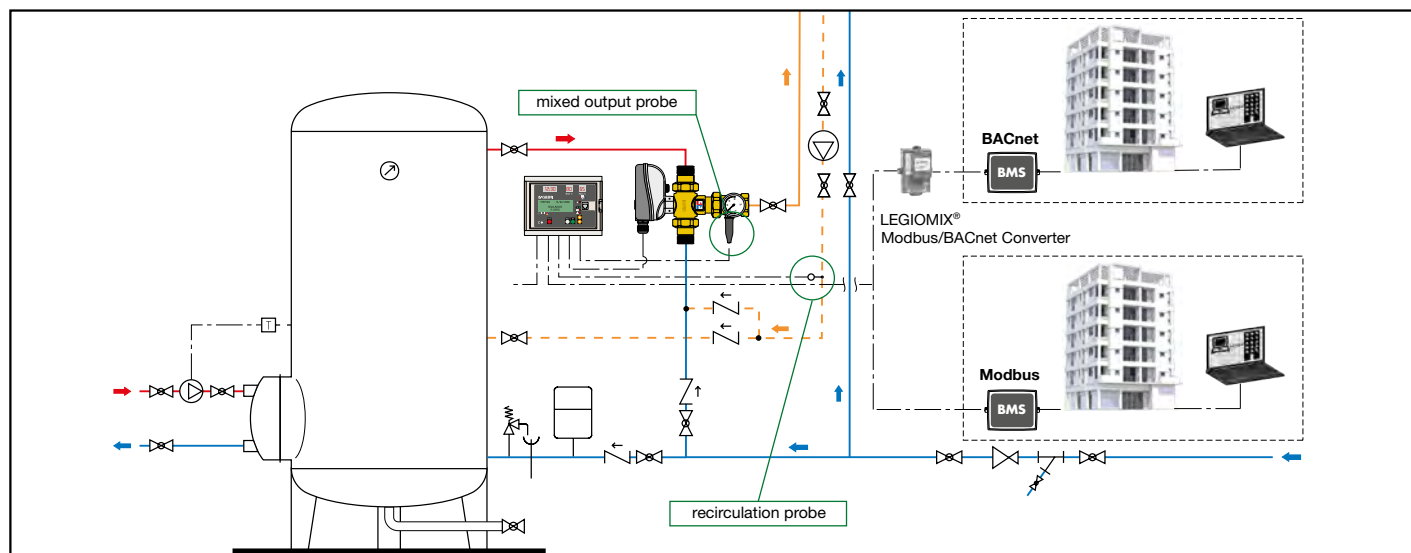
PATENT.

CE



| Code   |       | Kv (m³/h) |   |   |
|--------|-------|-----------|---|---|
| 600016 | DN 65 | 90,0      | 1 | – |
| 600018 | DN 80 | 120,0     | 1 | – |

Application diagram of electronic mixing valve 6000 series



Spare parts for electronic mixing valve with programmable thermal disinfection 6000 series with flanged connections.

Code

|          |   |
|----------|---|
| F69381   | flow temperature probe                                    |
| F69393   | three-way valve with flanged connections for codes 6000.6 |
| F69394   | three-way valve with flanged connections for codes 6000.8 |
| F0000995 | actuator 24 V (AC) for codes 600016 and 600018            |
| F0000961 | regulator with check on disinfection                      |
| F69591   | recirculation probe for check on disinfection             |
| F69531   | contact probe holder for recirculation loop               |
| F69888   | spare battery   |

### 7550

MODBUS-RTU/BACnet converter for connection with BMS systems. Interface for products with MODBUS-RTU transmission with systems using BACnet protocol.

Supply:

9–30 V (dc), 12–24 V (AC), 50/60 Hz

2,5 W / a 12 V 150 mA.

Certification: CE, IEC, FCC, RHOS.

Inputs/Outputs:

Ethernet port 10/100

RS-485 port + / - / GND.

Working temperature: -40–75 °C.

Relative humidity: 5–90 % without condensation.

The converter is preconfigured for use with the following products:

- LEGIOMIX® 6000 series (for MODBUS-RTU version)
- LEGIOMIX® 2.0 6000 EST series
- CONTECA EASY 750. series.

CE

| Code   |   |   |
|--------|---|---|
| 755052 | 1 | – |

## UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

### 6005 LEGIOFLOW®

tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:

- anti-scald thermostatic mixing valve,
- automatic flushing valve for thermal disinfection with thermo-electric actuator,
- shut-off ball valve with built-in strainers and check valves,
- cold water circuit outlet kit.

Inlet connections: 3/4" M.

Outlet connections: 3/4" M with union.



#### Mixing valve

CR dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Adjustment temperature range: 30–50 °C.  
Factory setting: 43 °C.  
Max. inlet temperature at primary circuit: 85 °C.  
Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

#### Thermo-electric actuator

Normally closed.  
Supply: 230 V (AC).  
Power consumption: 3 W.  
Protection class: IP 44.  
Cable length: 80 cm.



#### With thermo-electric actuator

| Code   | Connections | Kv (m³/h)<br>mixing valve | Kv (m³/h)<br>flushing valve |   |   |
|--------|-------------|---------------------------|-----------------------------|---|---|
| 600500 | 3/4"        | 1,75                      | 1,80                        | 1 | 6 |

#### Without thermo-electric actuator

| Code   | Connections | Kv (m³/h)<br>mixing valve | Kv (m³/h)<br>flushing valve |   |   |
|--------|-------------|---------------------------|-----------------------------|---|---|
| 600501 | 3/4"        | 1,75                      | 1,80                        | 1 | 6 |



#### Version without cold water circuit outlet kit.

For applications with push button or photo-cell activated user taps.



#### With thermo-electric actuator

| Code   | Connections | Kv (m³/h)<br>mixing valve | Kv (m³/h)<br>flushing valve |   |   |
|--------|-------------|---------------------------|-----------------------------|---|---|
| 600502 | 3/4"        | 1,75                      | 1,80                        | 1 | 6 |

#### Without thermo-electric actuator

| Code   | Connections | Kv (m³/h)<br>mixing valve | Kv (m³/h)<br>flushing valve |   |   |
|--------|-------------|---------------------------|-----------------------------|---|---|
| 600503 | 3/4"        | 1,75                      | 1,80                        | 1 | 6 |

### 6005 LEGIOFLOW®

tech. broch. 01160

Multi-function compact unit for temperature control, thermal disinfection and distribution for domestic water system. Consisting of:

- anti-scald thermostatic mixing valve,
- automatic flushing valve for thermal disinfection with thermo-electric actuator,
- shut-off ball valve with built-in strainers and check valves,
- cold water circuit outlet kit,
- distribution manifolds with built-in shut-off valves,
- box code 362056 (560x330x80 mm).

#### Mixing valve

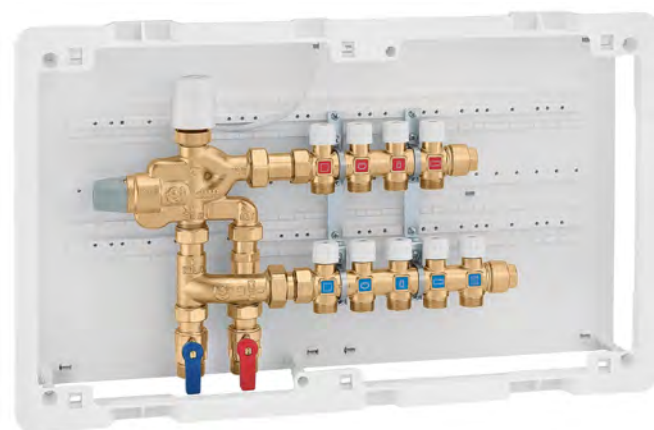
CR dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Adjustment temperature range: 30–50 °C.  
Factory set: 43 °C.  
Max. inlet temperature at primary circuit: 85 °C.  
Performance to standards NF 079 doc. 8, EN 1111 and EN 1287.

#### Thermo-electric actuator

Normally closed.  
Supply: 230 V (ac).  
Power consumption: 3 W.  
Protection class: IP 44.  
Cable length: 80 cm.

#### Distribution manifolds

CR dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Working temperature range: 5–100 °C.  
Outlet centre distance: 35 mm.



#### With thermo-electric actuator

| Code   | Connections | Outlets No.<br>cold hot | Outlets    |   |   |
|--------|-------------|-------------------------|------------|---|---|
| 600530 | 3/4"        | 3 2                     | 23 p.1,5 M | 1 | – |
| 600540 | 3/4"        | 4 3                     | 23 p.1,5 M | 1 | – |
| 600550 | 3/4"        | 5 4                     | 23 p.1,5 M | 1 | – |

#### Without thermo-electric actuator

| Code   | Connections | Outlets No.<br>cold hot | Outlets    |   |   |
|--------|-------------|-------------------------|------------|---|---|
| 600531 | 3/4"        | 3 2                     | 23 p.1,5 M | 1 | – |
| 600541 | 3/4"        | 4 3                     | 23 p.1,5 M | 1 | – |
| 600551 | 3/4"        | 5 4                     | 23 p.1,5 M | 1 | – |

## UNIT FOR TEMPERATURE CONTROL AND THERMAL DISINFECTION

### Thermal disinfection

To be more certain that there is no growth of Legionella, all sections of the network must be subjected to thermal disinfection. Even in the section downstream of the mixing valve, as far as the user tap, it must be possible to flush the system at temperatures exceeding 60 °C. This means by-passing the thermostatic mixing valve, which is set at lower values, and activating another valve that allows the taps to be fed directly with the hot water arriving from the distribution network.

### Function

The multi-function unit is used in domestic water systems to control the hot and cold water delivered to user taps, serving a bathroom or a dwelling. A high-performance adjustable thermostatic mixing valve keeps the hot water temperature at the desired level and protects the user from the danger of scalding.

A flushing valve is used for the circuit thermal disinfection all the way to the tap, in compliance with anti-Legionella regulations.

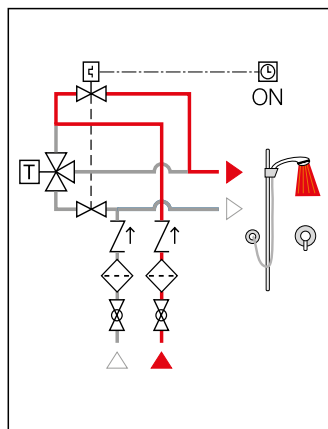
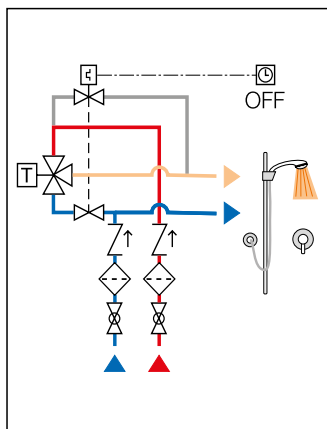
### Hydraulic diagram

#### With mixing

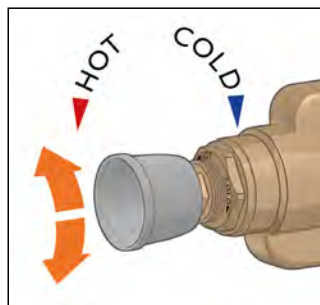
- Flushing valve closed
- Cold water valve open

#### With thermal disinfection

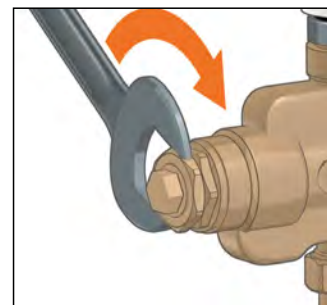
- Flushing valve open
- Cold water valve closed



### Temperature adjustment



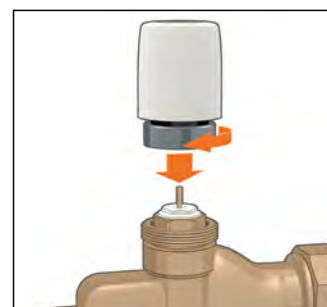
### Adjustment locking using the locking nut



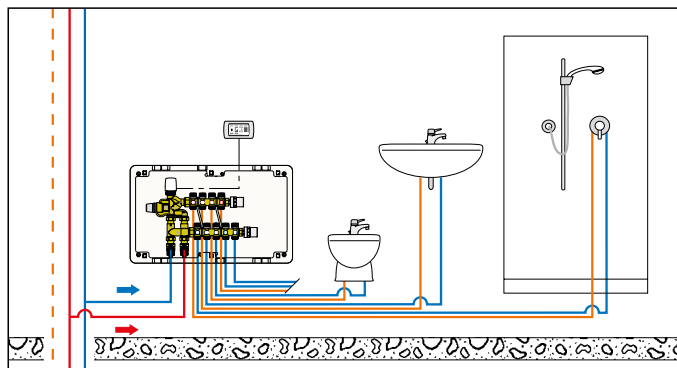
### Manual opening



### Thermo-electric actuator



### Application diagram multi-function unit code 600550



## TIMER FOR VALVE OPERATION

### 6002

Timer with programmable key, settings from 0,25 to 15 minutes. To operate the valves used to carry out thermal disinfection of circuit sections, up to the taps. Supply: 230 V (AC).



Code

600200



1

-

## MULTI-FUNCTION THERMOSTATIC REGULATOR



**116**

tech. broch. 01325

Thermostatic regulator for domestic hot water recirculation circuits. Complete with automatic thermostatic thermal disinfection function. With temperature gauge for circuit temperature check.

CR dezincification resistant alloy body "LOW LEAD".

Female connections.

Max. working pressure: 16 bar.

Adjustment temperature range: 35–60 °C.

Disinfection temperature: 70°C.



| Code   | DN | Conn.     |   |    |
|--------|----|-----------|---|----|
| 116240 | 15 | Rp 1/2"   | 1 | 10 |
| 116250 | 20 | Rp 3/4"   | 1 | 10 |
| 116260 | 25 | Rp 1"     | 1 | –  |
| 116270 | 32 | Rp 1 1/4" | 1 | –  |



**116**

tech. broch. 01325

Thermostatic regulator for domestic hot water recirculation circuits. Fitted for automatic or controlled thermal disinfection function. With pocket for temperature gauge.

CR dezincification resistant alloy body "LOW LEAD".

Female connections.

Max. working pressure: 16 bar.

Adjustment temperature range: 35–60 °C.



| Code   | DN | Conn.     |   |    |
|--------|----|-----------|---|----|
| 116140 | 15 | Rp 1/2"   | 1 | 10 |
| 116150 | 20 | Rp 3/4"   | 1 | 10 |
| 116160 | 25 | Rp 1"     | 1 | –  |
| 116170 | 32 | Rp 1 1/4" | 1 | –  |



Insulation for multifunction thermostatic regulator 116 series.

| Code      | Use         |   |    |
|-----------|-------------|---|----|
| CBN116140 | 1/2" - 3/4" | 1 | 20 |
| CBN116160 | 1" - 1 1/4" | 1 | 20 |



**116**

tech. broch. 01325

Cartridge for thermal disinfection function controlled by an actuator. For use with 116 series combined with 656. series actuators.

| Code   |   |    |  |
|--------|---|----|--|
| 116000 | 1 | 10 |  |



**116**

tech. broch. 01325

Accessory temperature gauge for thermostatic regulators 116 series. Temperature gauge scale: 0–80 °C.

| Code   |   |    |  |
|--------|---|----|--|
| 116010 | 1 | 20 |  |

### Function

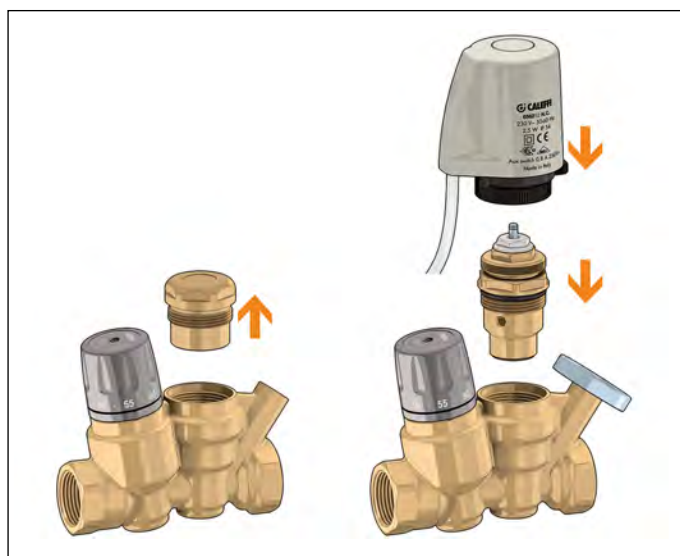
In domestic hot water distribution circuits, to respect modern plant requirements for the prevention of Legionnaires' disease, it is essential to ensure that all sections are kept at the correct temperature. The recirculation network must be balanced, to avoid non-uniform temperature distribution, with cold sections at risk of Legionella proliferation.

The thermostatic regulator, installed on each return branch of the recirculation circuit, automatically maintains the set temperature. This device modulates the medium flow rate in accordance with the water inlet temperature by means of the action of a dedicated internal thermostatic cartridge. When the water temperature approaches the set value, the obturator progressively reduces the passage. The medium flow rate supplied by the recirculation pump is thus distributed to the other network branches, resulting in effective automatic thermal balancing.

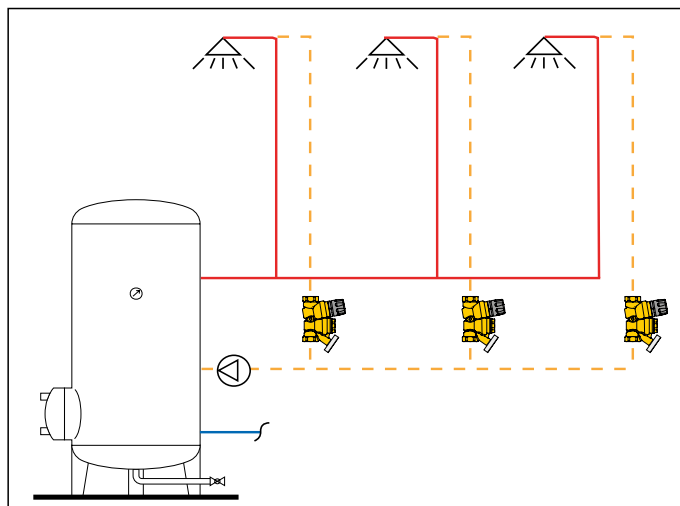
If necessary, the regulator is already equipped with a thermal disinfection function, which is useful if the system temperature is to be increased to values over 55–60 °C.

This function can be completely automatic, activated by a dedicated second thermostatic cartridge that trips at 70 °C, or controlled with a thermo-electric actuator.

### Cartridge replacement for electrically controlled disinfection



### Application diagram of thermostatic regulator 116 series





## MULTI-FUNCTION THERMOSTATIC REGULATOR

### Operating modes

Here following the regulator's operating modes according to the variation of the water temperature of the circuit it is installed on.

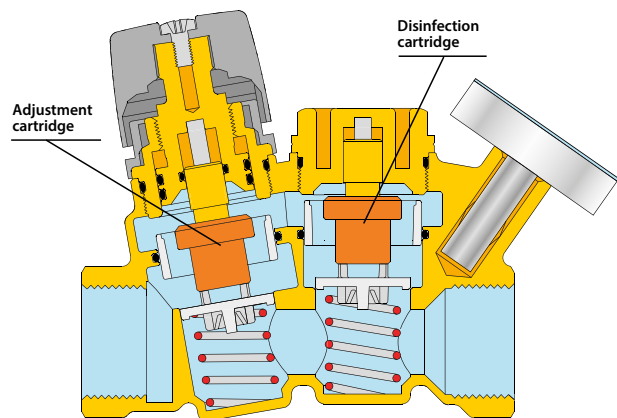
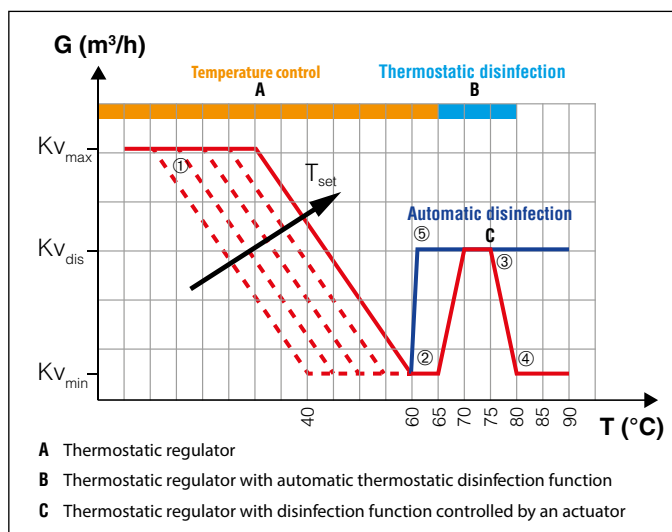


Diagram of thermostatic regulator 116 series



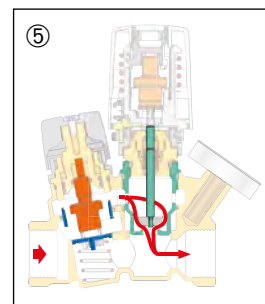
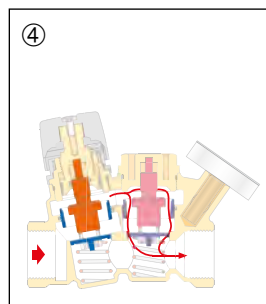
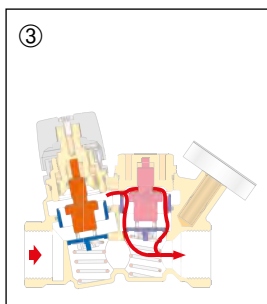
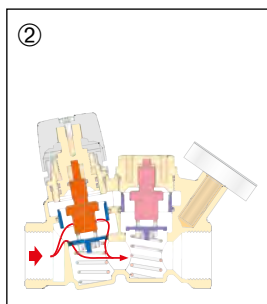
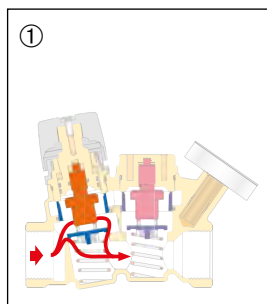
### Thermostatic adjustment

### Minimum flow rate

### Thermostatic disinfection

### Thermal closing

### Electrically controlled disinfection



### 116

Thermostatic regulator for domestic hot water recirculation circuits. Complete with automatic thermostatic thermal disinfection function. With temperature gauge for circuit temperature check. **CR** dezincification resistant alloy body **"LOW LEAD"**. Female connections. Max. working pressure: 16 bar. Adjustment temperature range: 35–60 °C. Disinfection temperature: 70 °C.



### 116

Thermostatic regulator for domestic hot water recirculation circuits. Fitted for automatic or controlled thermal disinfection function. With temperature gauge. **CR** dezincification resistant alloy body **"LOW LEAD"**. Female connections. Max. working pressure: 16 bar. Adjustment temperature range: 40–65 °C.

W  
WMTS-468  
WM-40195

W  
WMTS-468  
WM-40195

| Code       | DN | Conn. |   |   |
|------------|----|-------|---|---|
| 116240 AUS | 15 | 1/2"  | 1 | – |
| 116250 AUS | 20 | 3/4"  | 1 | – |

| Code       | DN | Conn.                          |   |   |
|------------|----|--------------------------------|---|---|
| 116141 AUS | 15 | 1/2"                           | 1 | – |
| 116151 AUS | 20 | 3/4"                           | 1 | – |
| 116140 AUS | 15 | 1/2" without temperature gauge | 1 | – |
| 116150 AUS | 20 | 3/4" without temperature gauge | 1 | – |

## THERMOSTATIC REGULATOR FOR DOMESTIC HOT WATER RECIRCULATION CIRCUITS



**116**

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits. With temperature gauge for circuit temperature check. CR dezincification resistant alloy body "LOW LEAD". Female connections. Max. working pressure: 16 bar. Adjustment temperature range: 40–65 °C.



kiwa



| Code        | DN | Conn.   |   |    |
|-------------|----|---------|---|----|
| 116441      | 15 | Rp 1/2" | 1 | 20 |
| 116451      | 20 | Rp 3/4" | 1 | 20 |
| 116451 AUS* | 20 | Rp 3/4" | 1 | 20 |

\* With WATERMARK certification



**116**

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits. With pocket for temperature gauge. CR dezincification resistant alloy body "LOW LEAD". Female connections. Max. working pressure: 16 bar. Adjustment temperature range: 40–65 °C.



kiwa



| Code   | DN | Conn.   |   |    |
|--------|----|---------|---|----|
| 116440 | 15 | Rp 1/2" | 1 | 10 |
| 116450 | 20 | Rp 3/4" | 1 | 10 |



**116**

tech. broch. 01362

Thermostatic regulator for domestic hot water recirculation circuits. With pocket for temperature gauge. CR dezincification resistant alloy body "LOW LEAD". Compression fittings connections. Max. working pressure: 16 bar. Adjustment temperature range: 40–65 °C.



kiwa



| Code   | DN | Conn. |   |    |
|--------|----|-------|---|----|
| 116415 | 15 | Ø 15  | 1 | 10 |
| 116420 | 20 | Ø 22  | 1 | 10 |



**NEW**

Insulation for 1/2" and 3/4" multifunction thermostatic regulator 116 series.

| Code      | Use         |   |    |
|-----------|-------------|---|----|
| CBN116440 | 1/2" - 3/4" | 1 | 20 |



**116**

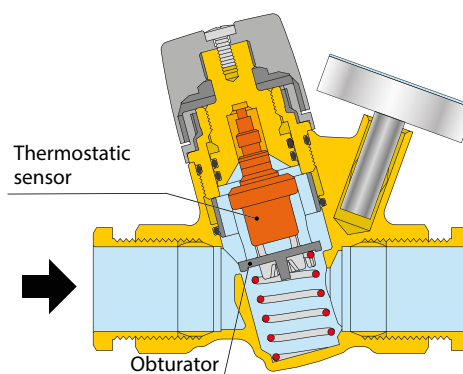
tech. broch. 01325

Accessory temperature gauge for thermostatic regulators 116 series. Temperature gauge scale: 0–80 °C.

| Code   |  |   |    |
|--------|--|---|----|
| 116010 |  | 1 | 20 |

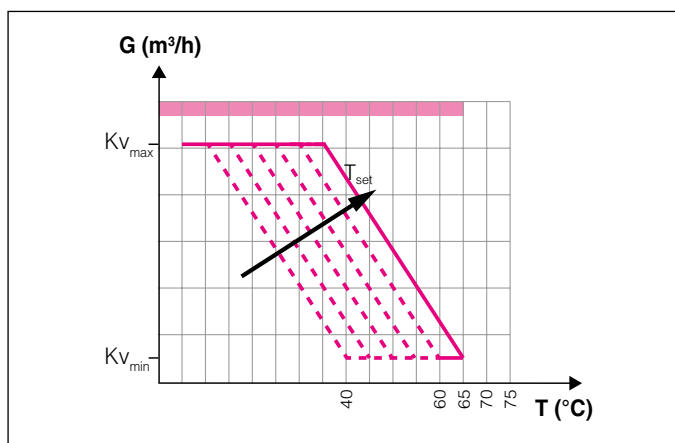
### Operating principle

The thermostatic regulator, installed on each branch of the recirculation circuit, automatically maintains the set temperature. This device modulates the medium flow rate in accordance with the water inlet temperature by means of the action of a dedicated internal thermostatic cartridge. When the water temperature approaches the set value, the obturator progressively reduces the passage. This specific version of the regulator has one single cartridge which allows the adjustment of the set temperature up to 65 °C. This device can be used in cases where the temperature of the hot water network is constantly distributed at higher values, without the need to perform extra thermal disinfection.

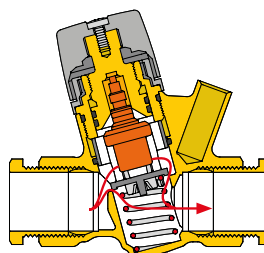


### Hydraulic characteristics

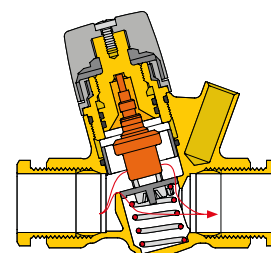
The graph shows the variation of the Kv value depending on the device configuration and on the inlet temperature of the domestic water.



#### 1 - Thermostatic regulation



#### 2 - Minimum flow rate



# MANIFOLDS FOR DOMESTIC WATER SYSTEMS



**BIM**  
bim.caleffi.com

**Distribution manifolds with individual shut-off valves**  
**Distribution manifolds with main shut-off valves**  
**Unit with main shut-off valves**  
**Distribution manifolds**

## DISTRIBUTION MANIFOLDS WITH INDIVIDUAL SHUT-OFF VALVES



**359**

tech. broch. 01371


Domestic water distribution manifolds pre-assembled in boxes with **individual shut-off valves**.  
Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.  
Outlet centre distance: 35 mm.

Consisting of:

- pair of manifolds with shut-off knobs;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- protection cover for installation;
- 2 end fitting plugs with fixing clips.

PATENT PENDING.

| Code           | Outlets No.<br>cold | hot |  |  |
|----------------|---------------------|-----|---|---|
| <b>359410*</b> | 4                   | 3   | 1   | –   |
| <b>359510*</b> | 5                   | 4   | 1   | –   |

\*  dezincification resistant alloy body “**LOW LEAD**” available on request with the code extension: 001.



**359**

tech. broch. 01371

Accessories for manifolds series 359.

| Code          |  |   |   |
|---------------|--|---|---|
| <b>359001</b> | tee with fixing clip                         | 1 | – |
| <b>359002</b> | blind plug with fixing clip                  | 1 | – |
| <b>359003</b> | 23 p.1,5 fitting with fixing clip            | 1 | – |
| <b>359004</b> | 1/2" fitting Ø 13 flat seat with fixing clip | 1 | – |
| <b>359005</b> | 3/4" fitting Ø 18 flat seat with fixing clip | 1 | – |
| <b>359006</b> | 3/4" fitting Ø 18 Euroconus with fixing clip | 1 | – |
| <b>359024</b> | Ø 16x2 pressfitting                          | 1 | – |
| <b>359064</b> | Ø 20x2 pressfitting                          | 1 | – |
| <b>359025</b> | Ø 16x2,25 pressfitting                       | 1 | – |
| <b>359065</b> | Ø 20x2,25 pressfitting                       | 1 | – |
| <b>359066</b> | Ø 20x2,5 pressfitting                        | 1 | – |
| <b>359087</b> | Ø 26x3 pressfitting                          | 1 | – |

### Specifications

Manifolds 359 series are used to control and distribute the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The manifolds are equipped with shut-off valves with handwheels for each individual circuit, and labels summarising the utilities served.



**359**

tech. broch. 01371

Recessed door with push-to-open frame.

| Code          |  |  |
|---------------|---|---|
| <b>359700</b> | 1   | –   |



**359**

tech. broch. 01371

Aesthetic cover plate made of paintable plastic with a RAL 9010 white finish. Complete with support plate.



| Code          |  |  |
|---------------|---|---|
| <b>359801</b> | 1   | –   |



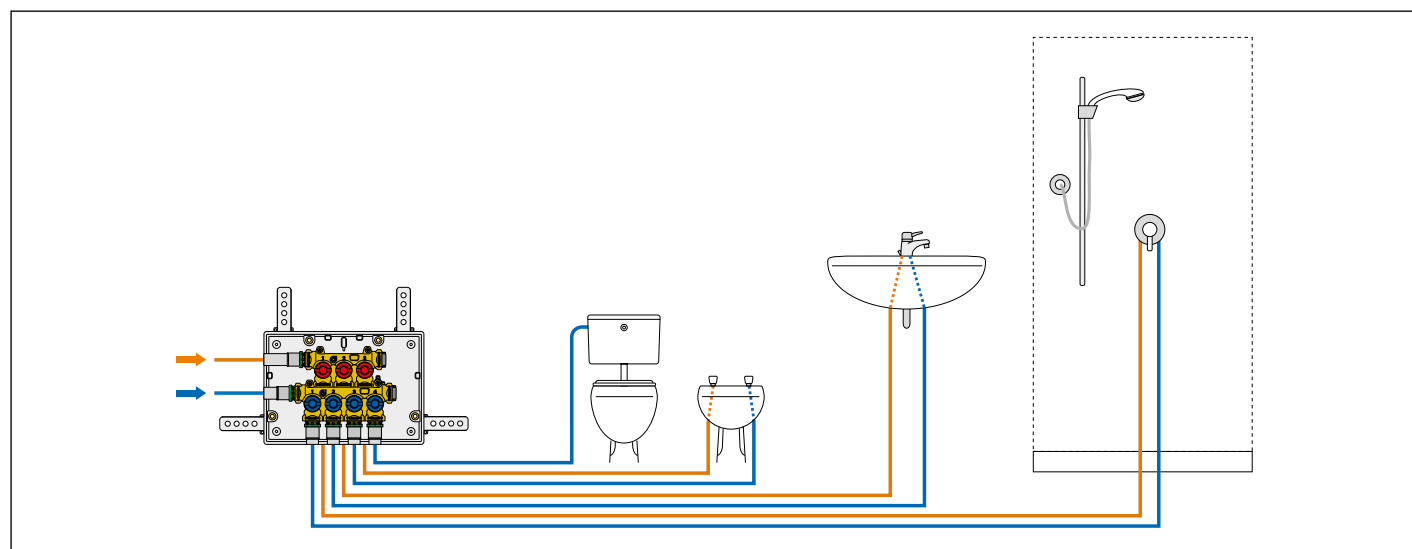
**359**

tech. broch. 01371

Aesthetic cover plate, in stainless steel. Complete with support plate.

| Code          |                 |  |  |
|---------------|-----------------|---|---|
| <b>359802</b> | polished finish | 1   | –   |
| <b>359803</b> | brushed finish  | 1   | –   |

### Application diagram



## ACCESSORIES FOR MODULAR MANIFOLDS



**359**

tech. broch. 01371

Manifold with individual shut-off valves (red knobs).  
Can be used as spare parts.

| Code    | Outlets No. |   |   |
|---------|-------------|---|---|
| 359330* | 3           | 1 | – |
| 359340* | 4           | 1 | – |



**359**

tech. broch. 01371

Manifold with individual shut-off valves (blue knobs).  
Can be used as spare parts.

| Code    | Outlets No. |   |   |
|---------|-------------|---|---|
| 359240* | 4           | 1 | – |
| 359250* | 5           | 1 | – |



**NEW**

**359**

tech. broch. 01371

Brackets with screws for hot water manifold.  
Stainless steel body.

| Code   |  |   |   |
|--------|--|---|---|
| 359015 |  | 1 | – |



**NEW**

**359**

tech. broch. 01371

Brackets with screws for cold water manifold.  
Stainless steel body.

| Code   |  |   |   |
|--------|--|---|---|
| 359016 |  | 1 | – |



**NEW**

**359**

tech. broch. 01371

Long adapter with clip.  
Brass body.

| Code    |  |   |   |
|---------|--|---|---|
| 359017* |  | 1 | – |



**NEW**

**359**

tech. broch. 01371

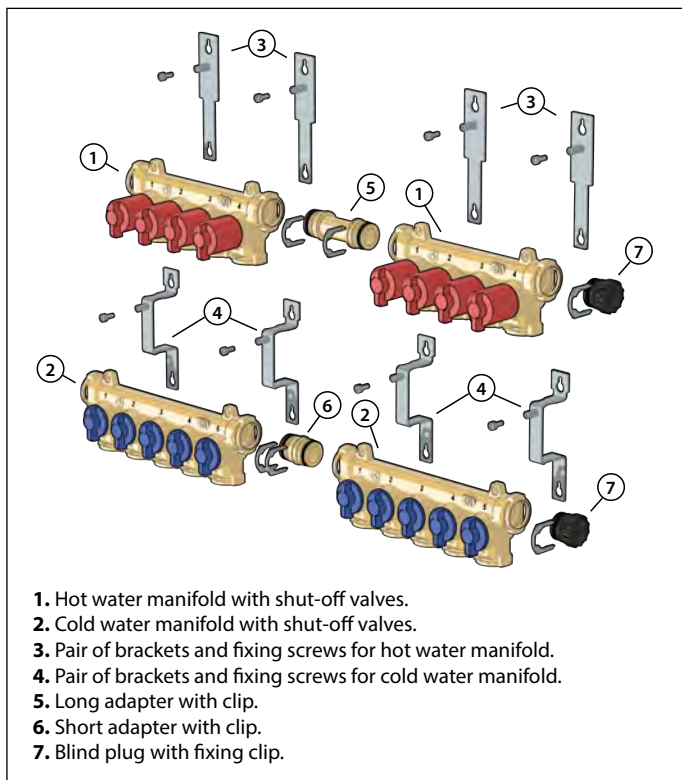
Short adapter with clip.  
Brass body.

| Code    |  |   |   |
|---------|--|---|---|
| 359018* |  | 1 | – |

\* CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.

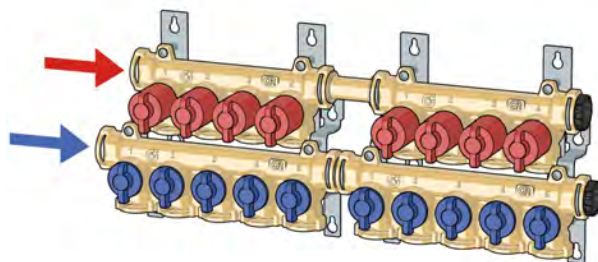


### Characteristic components

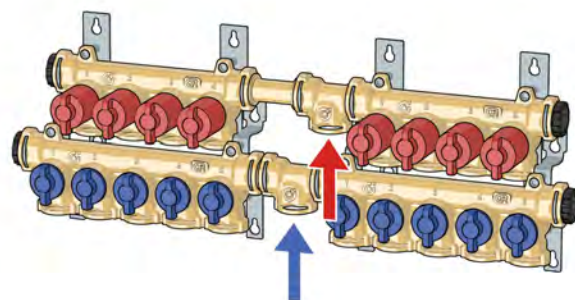


### Possible modular manifold configuration

#### 10 + 8 manifold with side inlet



#### 10 + 8 manifold with central inlet





## DISTRIBUTION MANIFOLDS WITH MAIN SHUT-OFF VALVES



**359**

tech. broch. 01371

Domestic water distribution manifolds pre-assembled in boxes with **main shut-off valves**.

Brass body.

Max. working pressure: 10 bar.

Temperature range: 5–90 °C.

Outlet centre distance: 32 mm.

Consisting of:

- pair of manifolds;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING.

| Code           | Outlets No.<br>cold hot |   |   |
|----------------|-------------------------|---|---|
| <b>359420*</b> | 4 3                     | 1 | – |

\* CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.



**359**

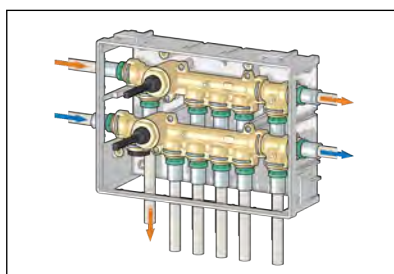
tech. broch. 01371

Accessories for manifolds series 359.

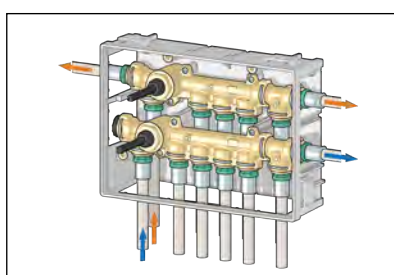
| Code           |                             |   |   |
|----------------|-----------------------------|---|---|
| <b>359001*</b> | tee with fixing clip        | 1 | – |
| <b>359002</b>  | blind plug with fixing clip | 1 | – |
| <b>359024</b>  | Ø 16x2 pressfitting         | 1 | – |
| <b>359064</b>  | Ø 20x2 pressfitting         | 1 | – |
| <b>359025</b>  | Ø 16x2,25 pressfitting      | 1 | – |
| <b>359065</b>  | Ø 20x2,25 pressfitting      | 1 | – |
| <b>359066</b>  | Ø 20x2,5 pressfitting       | 1 | – |
| <b>359087</b>  | Ø 26x3 pressfitting         | 1 | – |

### Possible manifold configurations

Installation with side inlet and recirculation circuit at the bottom.  
Tee for additional outlet and through outlet.



Installation with inlet at the bottom and recirculation at the side.  
Tee for additional outlet and through outlet.



### Specifications

Manifolds 359 series are used to control and distribute the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The manifolds have main shut-off valves on the hot and cold inlets.



**359**

tech. broch. 01371

Plate with hidden knobs.  
High chrome finish.

Code

**359902**

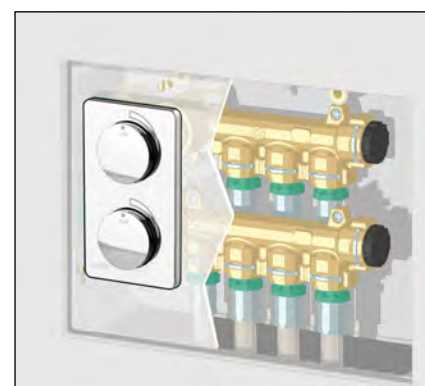


1 –

### Push-to-open knobs

The push-to-open system allows the knob to be hidden, so that the look of the room is not compromised.

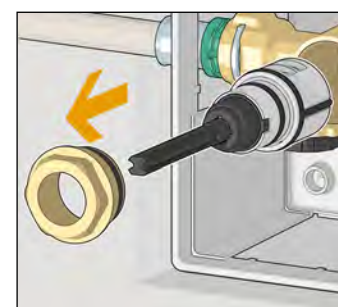
Just press it to extract it and open or close the shut-off valves.



### Main shut-off cartridge

The special cartridge designed to shut off the 359 series manifold has a double sealing gasket to provide high long-term operating reliability. The materials used in its construction offer a low opening/closing torque and significantly reduce jamming problems due to limescale.

When required, the cartridge can be replaced simply by extracting it from the front of the manifold and inserting the replacement one.



## INSPECTABLE DISTRIBUTION MANIFOLDS WITH MAIN SHUT-OFF VALVES



### 359 NEW tech. broch. 01371

Domestic water distribution manifolds pre-assembled in boxes with **main shut-off valves, inspectable**. Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.  
Outlet centre distance: 32 mm.

Consisting of:

- pair of manifolds;
- box for manifolds (270 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING.

| Code    | Outlets No. |     |   |   |
|---------|-------------|-----|---|---|
|         | cold        | hot |   |   |
| 359490* | 4           | 3   | 1 | – |

\* CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.



### 359

tech. broch. 01371

Aesthetic cover plate made of paintable plastic with a RAL 9010 white finish. Complete with support plate.

Code

359801



1

–



### 359

tech. broch. 01371

Aesthetic cover plate, in stainless steel. Complete with support plate.

Code

359802 polished finish



1

–

359803 brushed finish

1

–

### 359

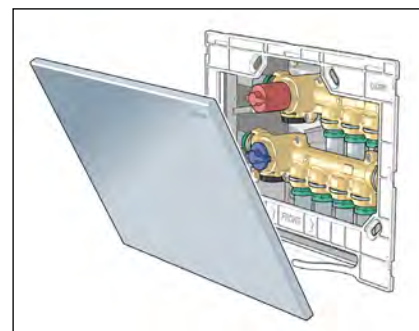
tech. broch. 01371

Accessories for manifolds series 359.

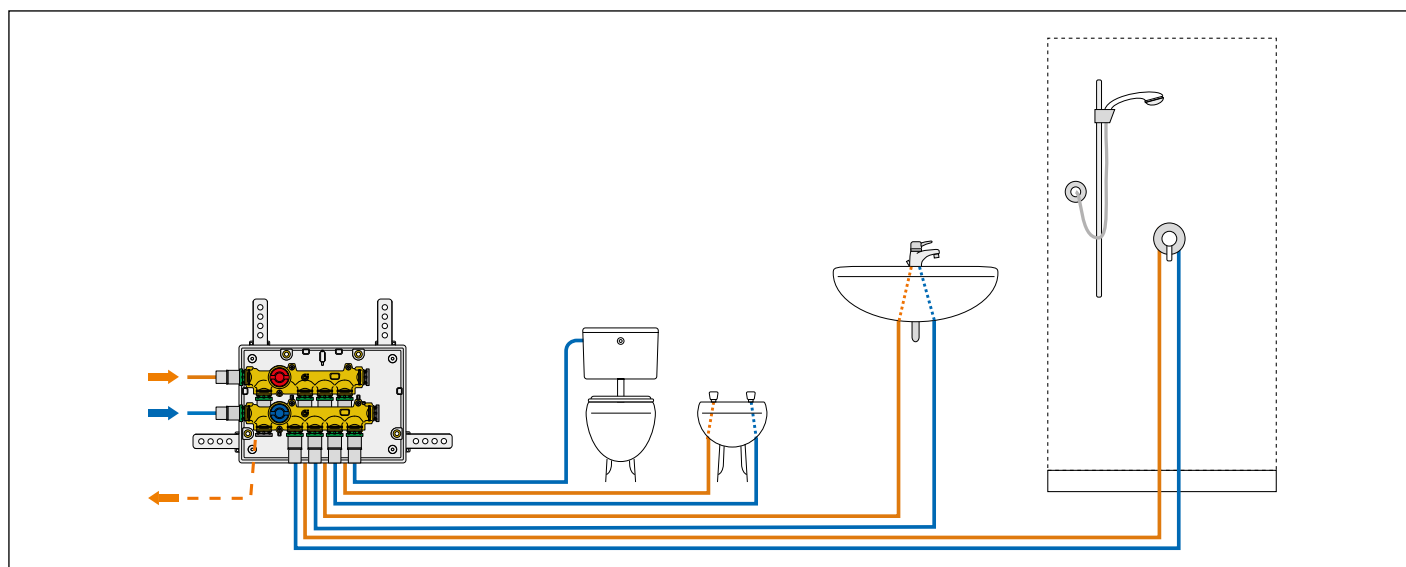
| Code    |  |   |   |
|---------|--|---|---|
| 359001* | tee with fixing clip                         | 1 | – |
| 359002  | blind plug with fixing clip                  | 1 | – |
| 359003  | 23 p.1,5 fitting with fixing clip            | 1 | – |
| 359004  | 1/2" fitting Ø 13 flat seat with fixing clip | 1 | – |
| 359005  | 3/4" fitting Ø 18 flat seat with fixing clip | 1 | – |
| 359006  | 3/4" fitting Ø 18 Euroconus with fixing clip | 1 | – |
| 359024  | Ø 16x2 pressfitting                          | 1 | – |
| 359064  | Ø 20x2 pressfitting                          | 1 | – |
| 359025  | Ø 16x2,25 pressfitting                       | 1 | – |
| 359065  | Ø 20x2,25 pressfitting                       | 1 | – |
| 359066  | Ø 20x2,5 pressfitting                        | 1 | – |
| 359087  | Ø 26x3 pressfitting                          | 1 | – |

### Inspectability

The inspectable box allows full access to the distribution manifold. When the cover plate is removed, it is possible to adjust the shut-off knobs or to intervene for any maintenance operations required. Both compression and press-fittings can be used thanks to this feature.



### Application diagram



## UNIT WITH MAIN SHUT-OFF VALVES



### 359

tech. broch. 01371

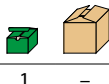
Unit with **main shut-off valves**.  
Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.

Consisting of:  
- valves unit;  
- box for manifolds (190 x 190 x 80 mm)  
complete with manifold supports  
and fixing brackets;  
- cover;  
- 4 plugs with fixing clip.

PATENT PENDING

Code

359100★



★ CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.



### 359

tech. broch. 01371

Accessories for manifolds 359 series.

Code

|         |                             |   |   |
|---------|-----------------------------|---|---|
| 359001★ | tee with fixing clip        | 1 | – |
| 359002  | blind plug with fixing clip | 1 | – |
| 359024  | Ø 16x2 pressfitting         | 1 | – |
| 359064  | Ø 20x2 pressfitting         | 1 | – |
| 359025  | Ø 16x2,25 pressfitting      | 1 | – |
| 359065  | Ø 20x2,25 pressfitting      | 1 | – |
| 359066  | Ø 20x2,5 pressfitting       | 1 | – |
| 359087  | Ø 26x3 pressfitting         | 1 | – |



### Specifications

The 359 series units with main shut-off valves are used to control and shut off the medium in domestic water circuits. They are supplied already assembled in a plastic inspection box to facilitate positioning and installation. The units have main shut-off valves on the inlets.

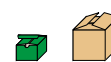


### 359

Plate with hidden knobs.  
High chrome finish.

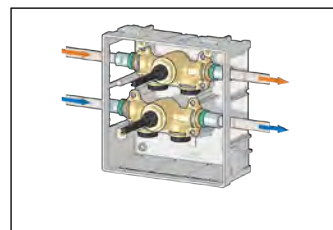
Code

359902

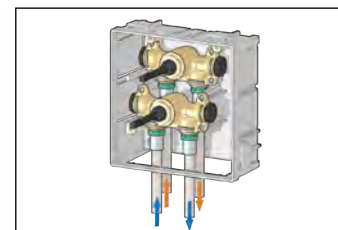


### Possible manifold configurations

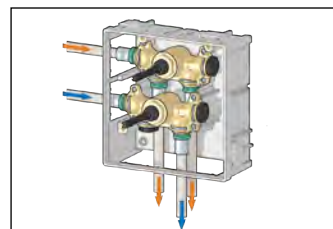
Installation with horizontal pipes.



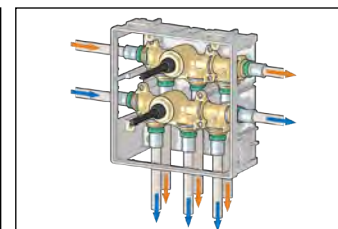
Installation with pipes from below.



L-shaped installation with recirculation circuit.

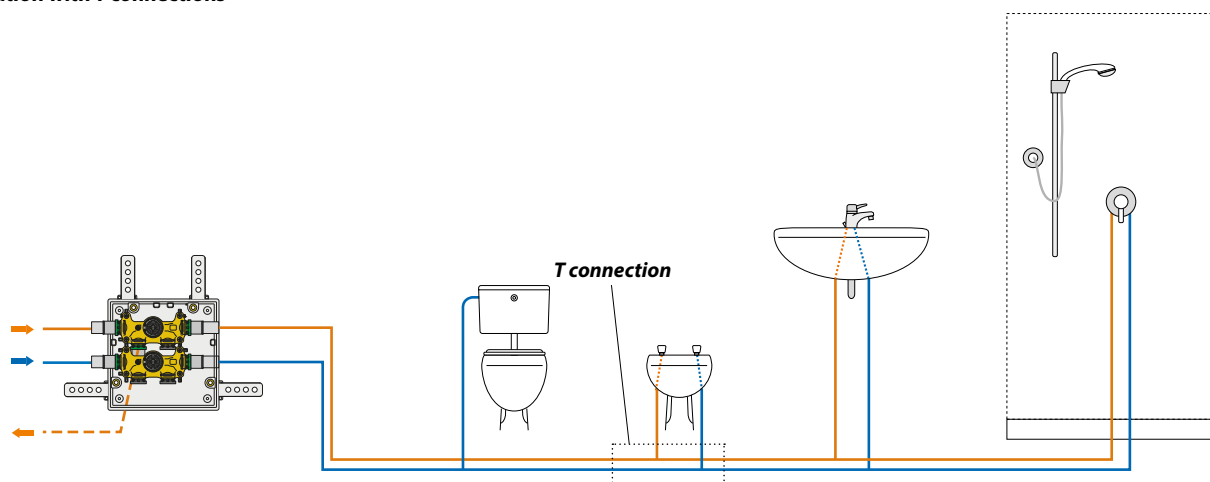


L-shaped installation with hot and cold water recirculation extension tee and through joint.



### Application diagram

#### Distribution with T connections



## INSPECTABLE UNIT WITH MAIN SHUT-OFF VALVES



**359**

**NEW**

tech. broch. 01371

Unit with **main shut-off valves, inspectable.**

Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.

Consisting of:

- valves unit;
- box for manifolds (190 x 190 x 80 mm) complete with manifold supports and fixing brackets;
- cover;
- 4 plugs with fixing clip.

PATENT PENDING

Code

**359190\***

1

–

\* **CR** dezincification resistant alloy body **"LOW LEAD"** available on request with the code extension: 001.

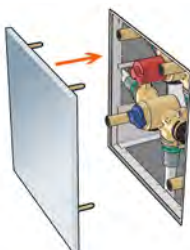


### Aesthetic cover plate

The stainless steel cover plate allows easy inspection of the entire unit.

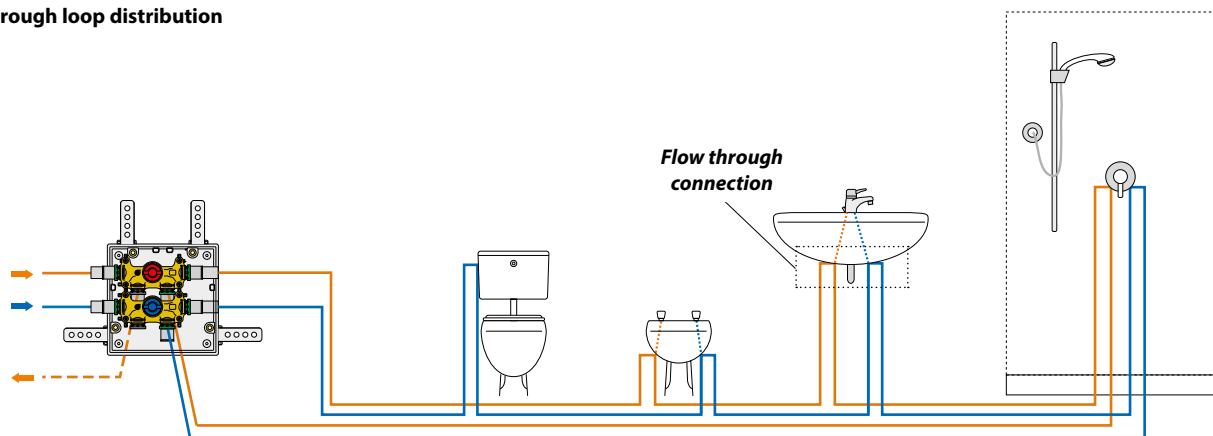
Once removed, it allows access to the opening/closing knobs.

It is installed simply by inserting the plate pins into the cylindrical guides for the box.

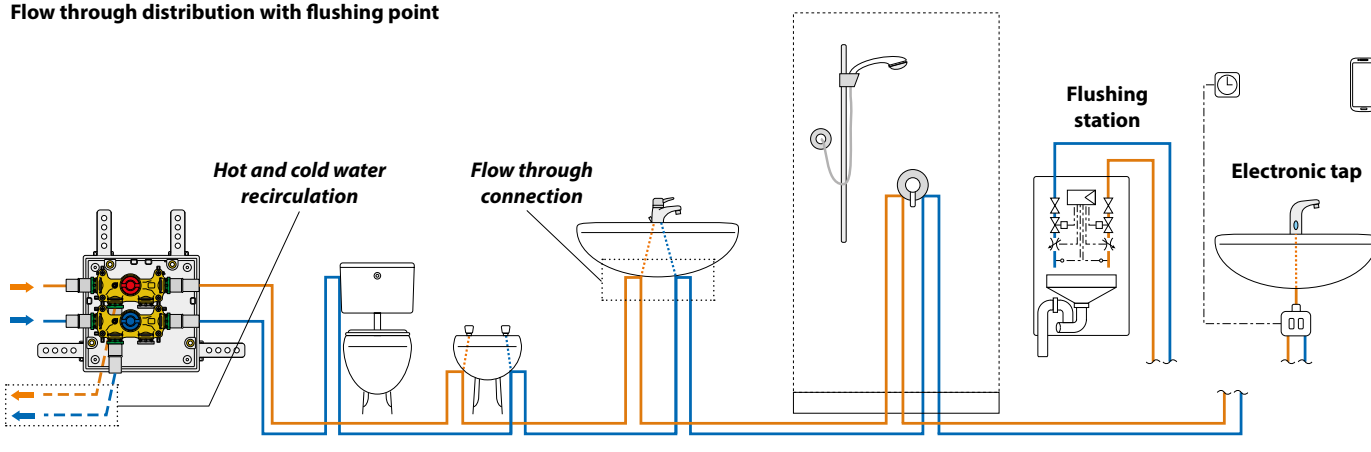


### Application diagrams

#### Flow through loop distribution



#### Flow through distribution with flushing point



**359**

**NEW**

tech. broch. 01371

Aesthetic cover plate, in stainless steel.

Code

**359892** polish finish

1

–

**359893** brushed finish

1

–

**359**

tech. broch. 01371

Accessories for manifolds series 359.

Code

**359001\*** tee with fixing clip

1

–

**359002** blind plug with fixing clip

1

–

**359003** 23 p.1,5 fitting with fixing clip

1

–

**359004** 1/2" fitting Ø 13 flat seat with fixing clip

1

–

**359005** 3/4" fitting Ø 18 flat seat with fixing clip

1

–

**359006** 3/4" fitting Ø 18 Euroconus with fixing clip

1

–

**359024** Ø 16x2 pressfitting

1

–

**359064** Ø 20x2 pressfitting

1

–

**359025** Ø 16x2,25 pressfitting

1

–

**359065** Ø 20x2,25 pressfitting

1

–

**359066** Ø 20x2,5 pressfitting

1

–

**359087** Ø 26x3 pressfitting

1

–

## PRESS FITTING FOR MANIFOLDS 359 SERIES



### 359

Multi-crimp tool pressfittings for multilayer pipes with fixing clips.  
**CR** dezincification resistant alloy body  
**"LOW LEAD"**.

Max. working pressure: 10 bar.  
 Temperature range: 5–90 °C.

Can be used with H - TH - U profile crimp tool.



Code



|                |                        |   |   |
|----------------|------------------------|---|---|
| <b>359024</b>  | Ø 16x2 pressfitting    | 1 | – |
| <b>359025</b>  | Ø 16x2,25 pressfitting | 1 | – |
| <b>359064</b>  | Ø 20x2 pressfitting    | 1 | – |
| <b>359065</b>  | Ø 20x2,25 pressfitting | 1 | – |
| <b>359066</b>  | Ø 20x2,5 pressfitting  | 1 | – |
| <b>359087*</b> | Ø 26x3 pressfitting    | 1 | – |

\* Can be used only with H - TH profile crimp tool.



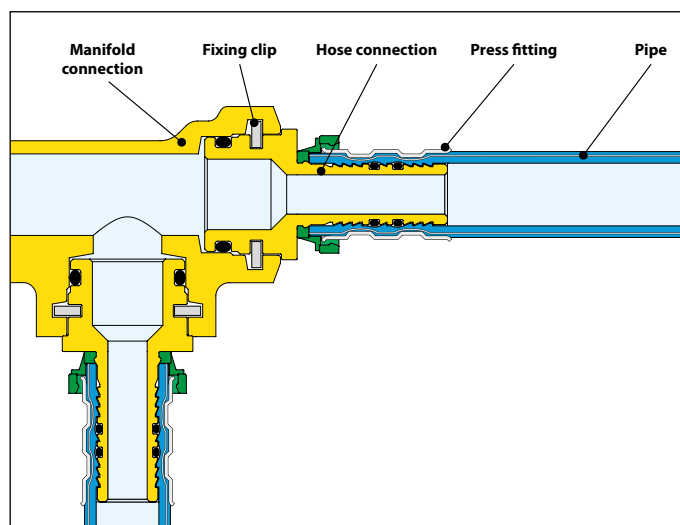
### 679

Calibrator and handle to adjust multilayer pipes diameter before use with fittings 359 series.

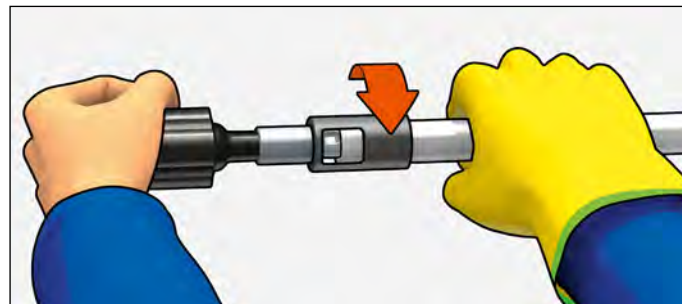
Code



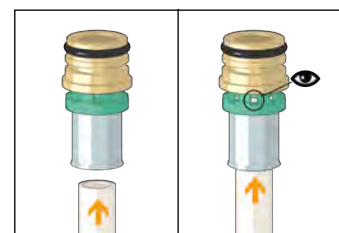
|               |                       |   |   |
|---------------|-----------------------|---|---|
| <b>679002</b> | calibrator Ø 16x2     | 1 | – |
| <b>679003</b> | calibrator Ø 16x2,25  | 1 | – |
| <b>679006</b> | calibrator Ø 20x2     | 1 | – |
| <b>679007</b> | calibrator Ø 20x2,25  | 1 | – |
| <b>679008</b> | calibrator Ø 20x2,5   | 1 | – |
| <b>679010</b> | calibrator Ø 26x3     | 1 | – |
| <b>679009</b> | handle for calibrator | 1 | – |



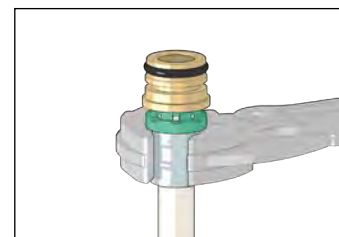
### Multilayer pipe calibration and installation of fitting 359 series



After calibrating the pipe with the calibrator, fit the pipe onto the fitting, taking care to insert it as far as it will go.  
 Check the pipe position through the peepholes.



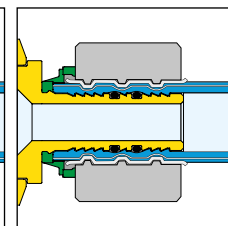
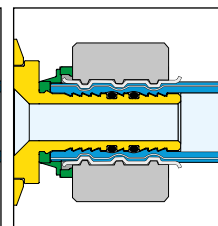
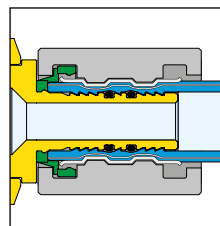
Crimp the pipe with the crimp tool until it clicks automatically.



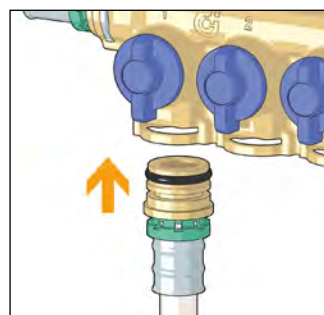
TH profile crimp tool

U profile crimp tool

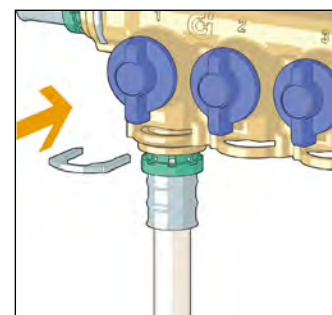
H profile crimp tool



Insert the pipe complete with fitting into the seat on the manifold.



Fasten it with the dedicated fixing clip.





## SPARE PARTS FOR MANIFOLDS 359 SERIES



**359**

Manifold with main shut-off valve.

| Code    | Outlets No. |   |   |
|---------|-------------|---|---|
| 359630* | 3           | 1 | - |
| 359640* | 4           | 1 | - |



**359**

Fixing clip.

| Code   |   |   |
|--------|---|---|
| 359007 | 1 | - |



**359**

NEW

Inspectable manifold with main shut-off valve (blue knob).

| Code    | Outlets No. |   |   |
|---------|-------------|---|---|
| 359290* | 4           | 1 | - |



**359**

NEW

Inspectable manifold with main shut-off valve (red knob).

| Code    | Outlets No. |   |   |
|---------|-------------|---|---|
| 359390* | 3           | 1 | - |



**359**

Unit with main shut-off valve.

| Code    |   |   |
|---------|---|---|
| 359101* | 1 | - |



**359**

NEW

Inspectable unit with main shut-off valve (blue knob).

| Code    |   |   |
|---------|---|---|
| 359192* | 1 | - |



**359**

NEW

Inspectable unit with main shut-off valve (red knob).

| Code    |   |   |
|---------|---|---|
| 359193* | 1 | - |



Individual shut-off valves cartridge.

| Code     |   |   |
|----------|---|---|
| F0001305 | 1 | - |



Main shut-off valves cartridge.

| Code     |   |   |
|----------|---|---|
| F0001306 | 1 | - |



NEW

Main shut-off valves cartridge (inspectable version).

| Code     |   |   |
|----------|---|---|
| F0001721 | 1 | - |



**359**

Spare protection cover.

| Code   |   |   |
|--------|---|---|
| 359010 | 1 | - |



**359**

Box bottom.

| Code   |   |     |
|--------|---|-----|
| 359011 | spare bottom for 3+4 individual shut-off valves | 1 - |
| 359012 | spare bottom for 4+5 individual shut-off valves | 1 - |
| 359013 | spare bottom for 3+4 main shut-off valves       | 1 - |
| 359014 | spare bottom for main shut-off valves           | 1 - |

\* CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.



## ACCESSORIES FOR MANIFOLDS 359 SERIES



**359**

Tee with fixing clip.  
Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.

\* CR dezincification resistant alloy body "LOW LEAD" available on request with the code extension: 001.



| Code           |   |   |
|----------------|---|---|
| <b>359001*</b> | 1 | – |



**359**

Blind plug with fixing clip.  
Technopolymer body.

| Code          |   |   |
|---------------|---|---|
| <b>359002</b> | 1 | – |



**359**

Fitting with fixing clip.  
CR dezincification resistant alloy body  
"LOW LEAD".  
Max. working pressure: 10 bar.  
Temperature range: 5–90 °C.

| Code          |  |     |
|---------------|--|-----|
| <b>359003</b> | 23 p. 1,5 fitting with fixing clip           | 1 – |
| <b>359004</b> | 1/2" fitting Ø 13 flat seat with fixing clip | 1 – |
| <b>359005</b> | 3/4" fitting Ø 18 flat seat with fixing clip | 1 – |
| <b>359006</b> | 3/4" fitting Ø 18 Euroconus with fixing clip | 1 – |

## PRE-ASSEMBLED DISTRIBUTION MANIFOLDS



**354**

Modular single distribution manifold  
with shut-off valve.  
Brass body.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 35 mm.



**Outlet male connections.**  
With flat seat.  
**For press-fittings.**

| Code          | Connections | Outlets No. | Outlets       |   |    |
|---------------|-------------|-------------|---------------|---|----|
| <b>354252</b> | 3/4"        | x 2         | 1/2" M - Ø 13 | 2 | 30 |
| <b>354253</b> | 3/4"        | x 3         | 1/2" M - Ø 13 | 2 | 20 |
| <b>354254</b> | 3/4"        | x 4         | 1/2" M - Ø 13 | 2 | 10 |
| <b>354255</b> | 3/4"        | x 5         | 1/2" M - Ø 13 | 2 | 10 |



**354**

Modular single distribution manifold  
with shut-off valve.  
CR dezincification resistant alloy body.  
Max. working pressure: 10 bar.  
Temperature range: 5–100 °C.  
Outlet centre distance: 35 mm.



| Code          | Connections | Outlets No. | Outlets    |   |    |
|---------------|-------------|-------------|------------|---|----|
| <b>354052</b> | 3/4"        | x 2         | 23 p.1,5 M | 5 | 20 |
| <b>354053</b> | 3/4"        | x 3         | 23 p.1,5 M | 5 | 20 |
| <b>354054</b> | 3/4"        | x 4         | 23 p.1,5 M | 5 | 20 |
| <b>354055</b> | 3/4"        | x 5         | 23 p.1,5 M | 5 | 20 |



**360**

Pair of stainless steel mounting brackets  
for manifolds 354 series.  
For inspection box 360 and 362 series.

| Code          |   |    |
|---------------|---|----|
| <b>360210</b> | 1 | 10 |



**3642**

End fitting.  
For distribution manifolds 360 series.

| Code          |                 |     |
|---------------|-----------------|-----|
| <b>364254</b> | 3/4" M x 1/2" F | 2 – |



**3641**

Plug.  
For distribution manifolds 360 series.

| Code          |        |     |
|---------------|--------|-----|
| <b>364150</b> | 3/4" M | 2 – |



**5991**

End fitting.  
For distribution manifolds 360 series.

| Code          |                 |     |
|---------------|-----------------|-----|
| <b>599154</b> | 3/4" F x 1/2" F | 2 – |

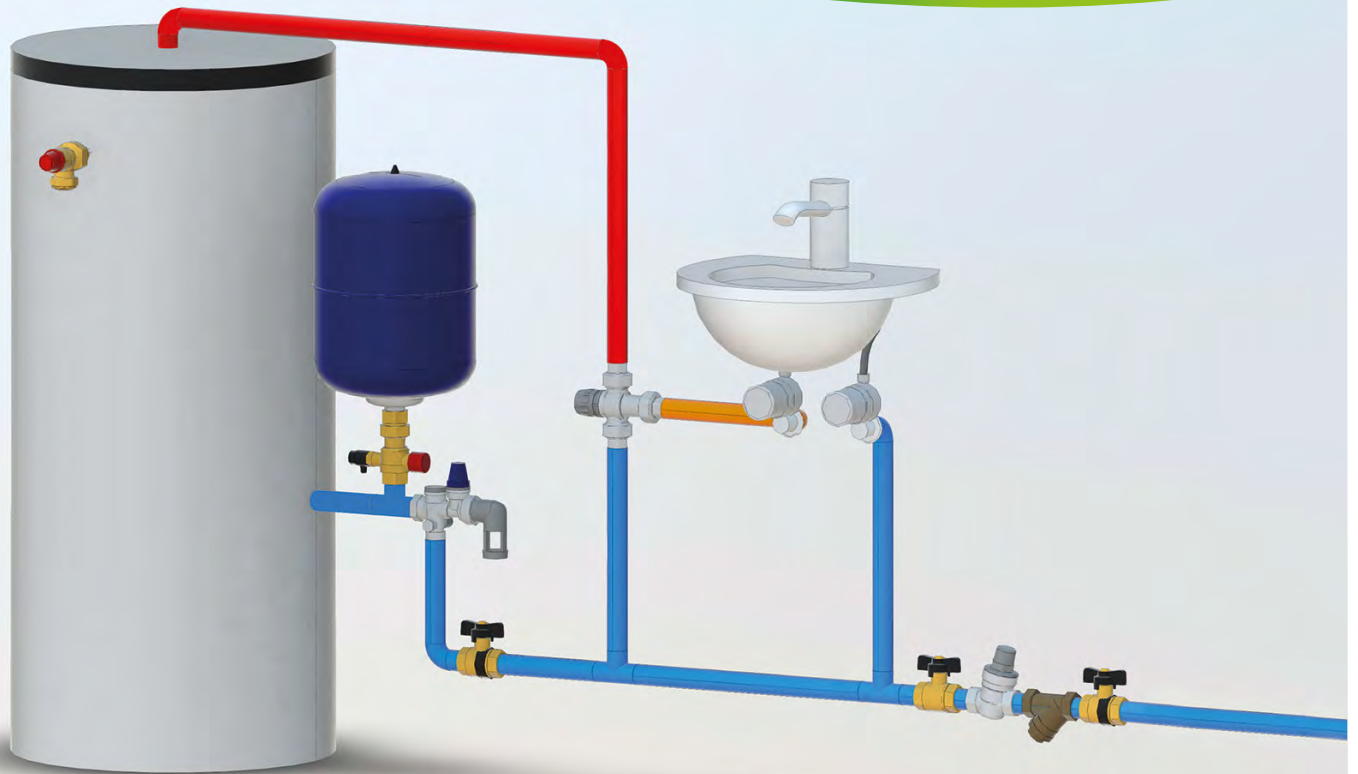


**5993**

Plug.  
For distribution manifolds 360 series.

| Code          |        |      |
|---------------|--------|------|
| <b>599350</b> | 3/4" F | 2 10 |

# COMPONENTS FOR DOMESTIC WATER SYSTEMS



**BIM**  
bim.caleffi.com

**Expansion groups for hot water storage heaters**  
**Hydraulic safety groups for hot water storage heaters**  
**Safety group for hot water storage heaters**  
**Expansion vessels**  
**Water hammer arresters**  
**Temperature and pressure relief valves - flow limiter**  
**Housing and strainer cartridges**  
**Ball valve with built-in check valve**  
**Single and double check valves**  
**Antifreeze safety device**

## EXPANSION GROUPS FOR HOT WATER STORAGE HEATERS

### 528

Expansion group for hot water storage heaters, for horizontal or vertical installation. Brass body and expansion relief valve.

With shut-off valve and controllable check valve.

Max. working pressure: 10 bar.

Max. working temperature: 40 °C.

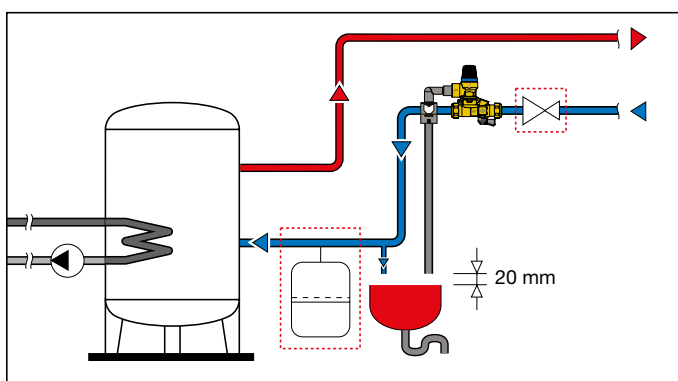
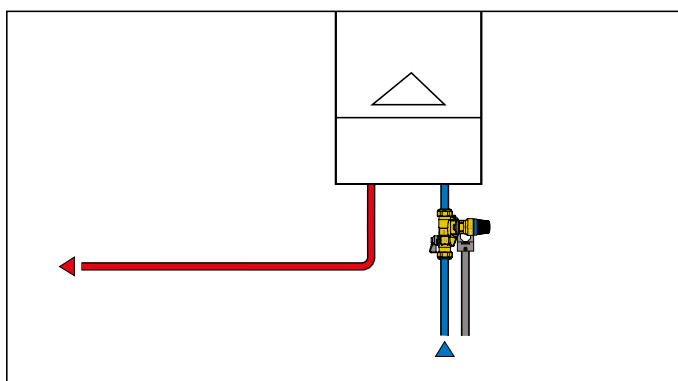
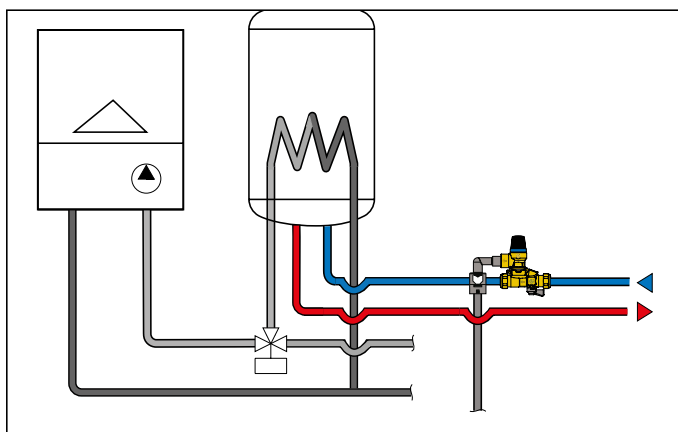
Settings: 7, 8, 10 bar.

Certified to EN 1488.



| Code   | Expansion relief valve |   |    |
|--------|------------------------|---|----|
| 528518 | Ø 15 8 bar             | 1 | 20 |
| 528547 | 1/2" 7 bar             | 1 | 20 |
| 528548 | 1/2" 8 bar             | 1 | 20 |
| 528540 | 1/2" 10 bar            | 1 | 20 |

Application diagram 528 series



### 5280 SICAL®

Expansion group for hot water storage heaters, for horizontal or vertical installation.

Brass body and expansion relief valve.

With shut-off cock and controllable check valve.

With insulation.

Max. working pressure: 10 bar.

Max. working temperature: 40 °C.

Max. volume of domestic water storage: 200 l.

Max. power of domestic water storage: 75 kW.

Settings: 6, 8, 10 bar.

Certified to EN 1488.



| Code   | Expansion relief valve |   |   |
|--------|------------------------|---|---|
| 528046 | 1/2" M 6 bar           | 1 | 5 |
| 528048 | 1/2" M 8 bar           | 1 | 5 |
| 528041 | 1/2" M 10 bar          | 1 | 5 |
| 528056 | 3/4" M 6 bar           | 1 | 5 |
| 528058 | 3/4" M 8 bar           | 1 | 5 |
| 528051 | 3/4" M 10 bar          | 1 | 5 |

### 5281 SICAL®

Expansion group for hot water storage heaters, for horizontal or vertical installation.

Brass body and expansion relief valve.

With shut-off cock and controllable check valve.

With insulation.

Max. working pressure: 10 bar.

Max. working temperature: 40 °C.

Max. volume of domestic water storage: 1000 l.

Max. power of domestic water storage: 150 kW.

Settings: 6, 8, 10 bar.

Certified to EN 1488.



| Code   | Expansion relief valve |   |   |
|--------|------------------------|---|---|
| 528156 | 3/4" M 6 bar           | 1 | 5 |
| 528158 | 3/4" M 8 bar           | 1 | 5 |
| 528151 | 3/4" M 10 bar          | 1 | 5 |
| 528166 | 1" M 6 bar             | 1 | 5 |
| 528168 | 1" M 8 bar             | 1 | 5 |
| 528161 | 1" M 10 bar            | 1 | 5 |

## HYDRAULIC SAFETY GROUPS FOR HOT WATER STORAGE HEATERS



### 5261

tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve. Brass body. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 120 °C. Setting: 7 bar. Max. power rating: 1/2" - 4 kW, 3/4" - 10 kW.

Certified to EN 1487.



Blue cap-with stainless steel seat.

| Code   |      |   |    |
|--------|------|---|----|
| 526142 | 1/2" | 1 | 30 |
| 526152 | 3/4" | 1 | 30 |

Red cap-standard seat

| Code   |      |   |    |
|--------|------|---|----|
| 526140 | 1/2" | 1 | 30 |
| 526150 | 3/4" | 1 | 30 |



### 319

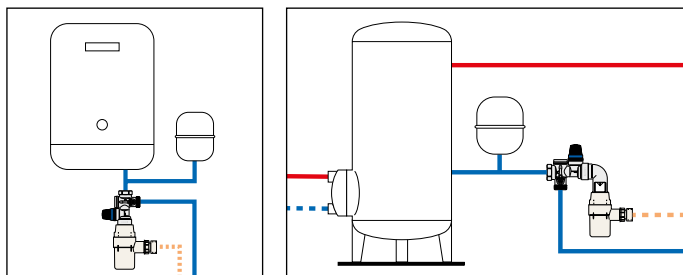
tech. broch. 01019

Plastic discharge tundish for safety groups 5261 series.



| Code   |    |   |    |
|--------|----|---|----|
| 319601 | 1" | 1 | 25 |

Application diagram of safety group 5261 series



### 5261

tech. broch. 01019

Hydraulic safety group for hot water storage heaters, with shut-off valve and controllable check valve. For horizontal installation. Brass body. Chrome plated. Max. working pressure: 10 bar. Max. working temperature: 120 °C. Setting: 7 bar. Max. power rating: 3/4" - 10 kW, 1" - 18 kW.

Certified to EN 1487.



Blue cap-with stainless steel seat.

| Code   |                      |   |    |
|--------|----------------------|---|----|
| 526153 | 3/4"                 | 1 | 10 |
| 526163 | 1" yellow brass body | 1 | 10 |

Red cap-standard seat

| Code   |      |   |    |
|--------|------|---|----|
| 526151 | 3/4" | 1 | 10 |

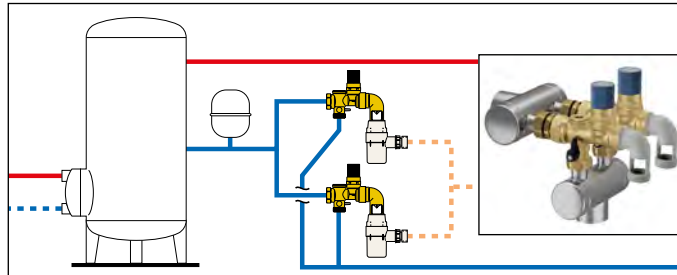


### 6509

Connection kit for unit code 526163.

| Code   |                 |   |    |
|--------|-----------------|---|----|
| 650972 | 1 1/4" F x 1" M | 1 | 25 |

Application diagram of kit code 650972 with unit code 526163



## SAFETY GROUP FOR HOT WATER STORAGE HEATERS



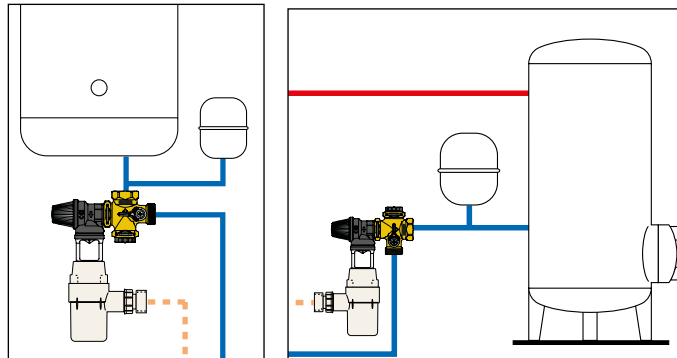
### 5265

Safety group for hot water storage heaters, with shut-off valve and check valve. Brass safety group body. PPSU safety relief valve body. Max. working pressure: 10 bar. Max. working temperature: 120 °C. Safety relief valve opening pressure: 7 bar. Certified to EN 1487.



| Code   |              |   |    |
|--------|--------------|---|----|
| 526554 | DN 20 (3/4") | 1 | 30 |

Application diagram safety group 5265 series





## TEMPERATURE AND PRESSURE RELIEF VALVES



### 309

tech. broch. 01130

Temperature and pressure relief valve.  
CR dezincification resistant alloy body.

**For domestic water system,  
to protect the hot water storage.**

Setting temperature: 90 °C.

Discharge rating: 1/2" - 3/4" x Ø 15: 10 kW.  
3/4" x Ø 22: 25 kW.

Settings: 3 - 4 - 6 - 7 - 10 bar.

**Settings certified to EN 1490: 4 - 7 - 10 bar.**



| Code   |               |        | Probe length<br>(mm) |   |    |
|--------|---------------|--------|----------------------|---|----|
| 309430 | 1/2" M x Ø 15 | 3 bar  | 100                  | 1 | 20 |
| 309440 | 1/2" M x Ø 15 | 4 bar  | 100                  | 1 | 20 |
| 309460 | 1/2" M x Ø 15 | 6 bar  | 100                  | 1 | 20 |
| 309470 | 1/2" M x Ø 15 | 7 bar  | 100                  | 1 | 20 |
| 309400 | 1/2" M x Ø 15 | 10 bar | 100                  | 1 | 20 |
| 309542 | 3/4" M x Ø 15 | 4 bar  | 100                  | 1 | 20 |
| 309530 | 3/4" M x Ø 22 | 3 bar  | 100                  | 1 | 20 |
| 309560 | 3/4" M x Ø 22 | 6 bar  | 100                  | 1 | 20 |
| 309570 | 3/4" M x Ø 22 | 7 bar  | 100                  | 1 | 20 |
| 309500 | 3/4" M x Ø 22 | 10 bar | 100                  | 1 | 20 |
| 309435 | 1/2" M x Ø 15 | 3 bar  | 200                  | 1 | 20 |
| 309445 | 1/2" M x Ø 15 | 4 bar  | 200                  | 1 | 20 |
| 309465 | 1/2" M x Ø 15 | 6 bar  | 200                  | 1 | 20 |
| 309475 | 1/2" M x Ø 15 | 7 bar  | 200                  | 1 | 20 |
| 309405 | 1/2" M x Ø 15 | 10 bar | 200                  | 1 | 20 |
| 309547 | 3/4" M x Ø 15 | 4 bar  | 200                  | 1 | 20 |
| 309535 | 3/4" M x Ø 22 | 3 bar  | 200                  | 1 | 20 |
| 309565 | 3/4" M x Ø 22 | 6 bar  | 200                  | 1 | 20 |
| 309575 | 3/4" M x Ø 22 | 7 bar  | 200                  | 1 | 20 |
| 309505 | 3/4" M x Ø 22 | 10 bar | 200                  | 1 | 20 |



### 309

Temperature and pressure relief valve.  
CR dezincification resistant alloy body.

**For domestic water system,  
to protect the hot water storage.**

Set temperature: 95 °C.

Discharge rating: 25 kW.

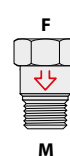
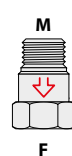
Setting: 6 bar.

**For systems with nominal pressure of 400 kPa.**



| Code   |               | Probe length<br>(mm) |   |    |
|--------|---------------|----------------------|---|----|
| 309563 | 3/4" M x Ø 22 | 100                  | 1 | 20 |

## FLOW LIMITER



### 534

Flow limiter.

Brass body.

Chrome plated.

1/2" connection.

Max. working pressure: 12 bar.

Max. working temperature: 80 °C.

Pressure range: 1-10 bar.

#### • Key to code

flow direction M ⇒ F = 1

flow direction F ⇒ M = 2

| Code   |                     | Accuracy<br>(%) |   |   |
|--------|---------------------|-----------------|---|---|
| 534•02 | 2 l/min olive green | ±30             | 1 | – |
| 534•04 | 4 l/min grey        | ±15             | 1 | – |
| 534•05 | 5 l/min yellow      | ±15             | 1 | – |
| 534•06 | 6 l/min black       | ±10             | 1 | – |
| 534•08 | 8 l/min white       | ±10             | 1 | – |
| 534•10 | 10 l/min light blue | ±10             | 1 | – |
| 534•12 | 12 l/min red        | ±10             | 1 | – |
| 534•16 | 16 l/min blue       | ±10             | 1 | – |
| 534•18 | 18 l/min purple     | ±10             | 1 | – |



## EXPANSION VESSELS


**5557**


tech. broch. 01079

Welded expansion vessel,  
for hot water systems, EC certification.  
Bladder membrane.  
Max. working pressure: 10 bar.  
System working temperature range: -10–100 °C.  
Membrane working temperature range: -10–100 °C.  
Conformity to EN 13831 standard.



| Code          | Litres | Conn. | Precharge<br>(bar) |   |   |
|---------------|--------|-------|--------------------|---|---|
| <b>555702</b> | 2      | 1/2"  | 2,5                | 4 | – |
| <b>555705</b> | 5      | 3/4"  | 2,5                | 1 | – |
| <b>555708</b> | 8      | 3/4"  | 2,5                | 1 | – |

For bigger capacity see page 280

## HOUSING AND STRAINER CARTRIDGES


**5370**

tech. broch. 01028

Housing for strainer cartridges  
of standard nominal size 10".  
Brass body,  
transparent plastic housing.  
Max. working pressure: 16 bar.  
Temperature range: 5–40 °C.

| Code          |      |   |   |
|---------------|------|---|---|
| <b>537050</b> | 3/4" | 1 | – |
| <b>537060</b> | 1"   | 1 | – |


**5370**

tech. broch. 01028

Strainer cartridges  
for housing 5370 series.  
Standard nominal size 10".  
Temperature range: 5–40 °C.  
Max. Δp: 3 bar.  
Characteristics:  
537004 - nylon washable mesh - 60 μm,  
537005 - stainless steel mesh - 50 μm.

| Code          |  |   |   |
|---------------|--|---|---|
| <b>537004</b> |  | 1 | – |
| <b>537005</b> |  | 1 | – |

## WATER HAMMER ARRESTERS


**525**
**ANTISHOCK**

tech. broch. 01020

Water hammer arrester.  
Brass body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
PTFE seal on thread.



| Code            |                        |   |    |
|-----------------|------------------------|---|----|
| <b>525040*</b>  | 1/2"                   | 1 | 25 |
| <b>525041**</b> | 1/2" yellow brass body | 1 | 25 |

\* Certified WRAS only

\*\* Certified ACS only


**525**
**ANTISHOCK**

tech. broch. 01020

Water hammer arrester  
for fitting under sinks, wash-hand basins  
and washing machine (3/4").  
Brass body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

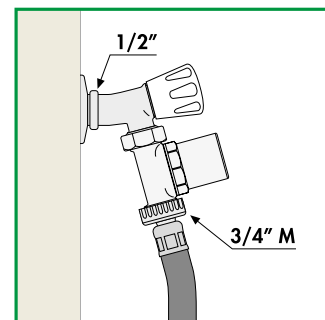
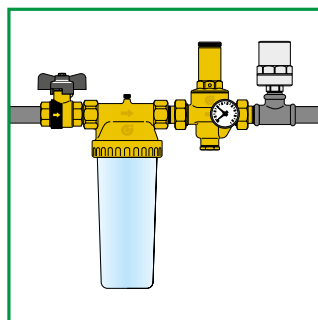
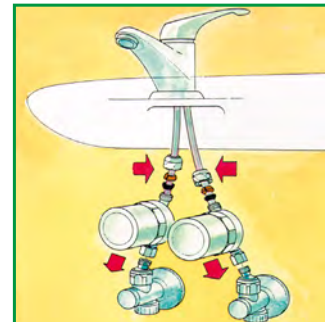
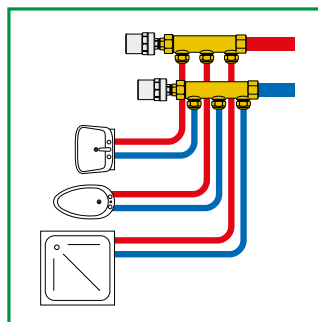


| Code            |                                       |   |    |
|-----------------|---------------------------------------|---|----|
| <b>525130*</b>  | 3/8" F nut x 3/8" M                   | 1 | 50 |
| <b>525131**</b> | 3/8" F nut x 3/8" M yellow brass body | 1 | 50 |
| <b>525150*</b>  | 3/4" F nut x 3/4" M                   | 1 | 25 |
| <b>525151**</b> | 3/4" F nut x 3/4" M yellow brass body | 1 | 25 |

\* Certified WRAS only

\*\* Certified ACS only

### Installation diagrams of water hammer arrester 525 series



## BALL VALVE WITH BUILT-IN CHECK VALVE



### 3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female connections.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



Code

|        |      |    |   |
|--------|------|----|---|
| 323040 | 1/2" | 10 | – |
| 323050 | 3/4" | 10 | – |
| 323062 | 1"   | 10 | – |



### 333 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female - nut connection.  
Drilled tamper-proof safety nut.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



Code

|        |                     |    |   |
|--------|---------------------|----|---|
| 333400 | 1/2" F x nut 3/4" F | 10 | – |
| 333500 | 3/4" F x nut 3/4" F | 10 | – |



### 3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female connections.  
Lever handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



Code

|        |        |   |   |
|--------|--------|---|---|
| 323060 | 1"     | 4 | – |
| 323070 | 1 1/4" | 4 | – |
| 323080 | 1 1/2" | 2 | – |
| 323090 | 2"     | 1 | – |



### 334 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Male - nut connection.  
Drilled tamper-proof safety nut.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



Code

|        |                     |    |   |
|--------|---------------------|----|---|
| 334400 | 1/2" M x nut 3/4" F | 10 | – |
| 334500 | 3/4" M x nut 3/4" F | 10 | – |



### 332 BALLSTOP

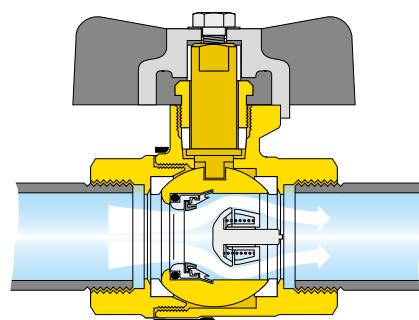
tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Male - female connections.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.

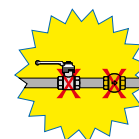


Code

|        |                 |    |   |
|--------|-----------------|----|---|
| 332400 | 1/2" M x 1/2" F | 10 | – |
|--------|-----------------|----|---|



**BALLSTOP**  
TWO VALVES  
IN ONE



## SINGLE AND DOUBLE CHECK VALVES



### 3037 ROBOCHECK-1

15 mm single check valve with compression ends.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.



Code

|        |      |    |     |
|--------|------|----|-----|
| 303715 | Ø 15 | 10 | 100 |
|--------|------|----|-----|



### 3038 ROBOCHECK-2

15 mm controllable double check valve with compression ends.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.



Code

|        |      |    |     |
|--------|------|----|-----|
| 303815 | Ø 15 | 10 | 100 |
|--------|------|----|-----|

## ANTIFREEZE SAFETY DEVICE

### 603 ICECAL

tech. broch. 01181



Garden tap, ball type,  
**with antifreeze safety device.**  
Brass body. Chrome plated.  
Stainless steel lever and fixing nut.  
Hose connection for Ø 15 mm pipe.  
Max. working pressure: 10 bar.  
Ambient temperature range: -30–90 °C.  
Opening temperature: 3 °C.  
Closing temperature: 4 °C.

Code

**603450** 1/2" M x 3/4" M with hose connection



1

10



antifreeze group spare part,  
chrome plated for code 603450.

Code

**F89046/C**

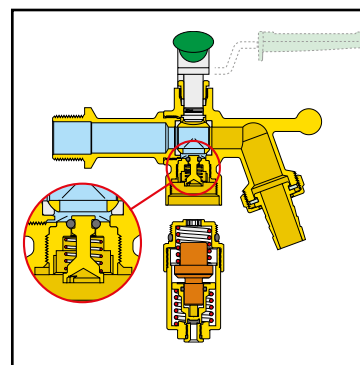


1

–

#### antifreeze safety device replacement

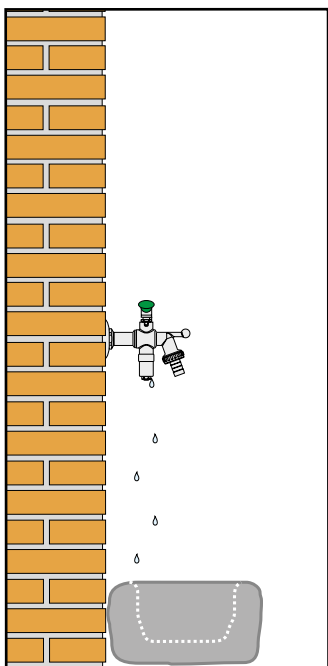
The antifreeze safety device  
is preassembled and can be  
replaced in case of necessity.  
A specific internal valve  
automatically shuts the water  
off during the replacement  
operation.



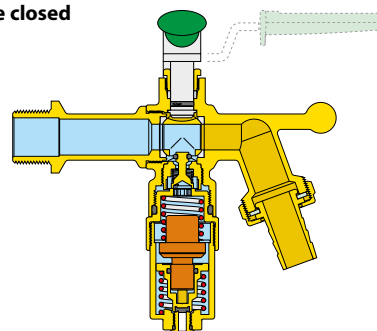
#### Function

The antifreeze safety device prevents ice build-up in domestic water circuits, avoiding possible damage to pipes in hydraulic and irrigation systems. When the minimum intervention temperature is reached, it automatically opens so that a minimum quantity of water may flow toward the drain, enabling a small continuous inflow of water; this prevents the circuit from freezing.

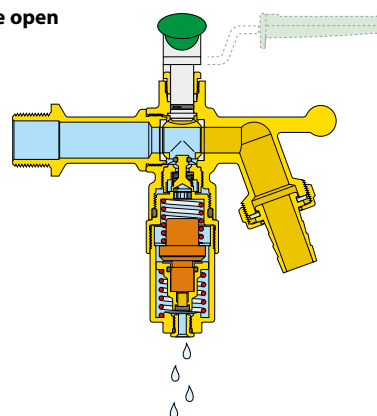
A particular product has been developed by combining the antifreeze safety device with a garden tap ball type, specifically constructed for these installations. The valve is fitted with ball with blow-out proof design, O-ring seal and packing gland; the control lever and fixing nut are made of stainless steel, for total resistance against corrosion in different climatic conditions.



#### antifreeze safety device closed



#### antifreeze safety device open



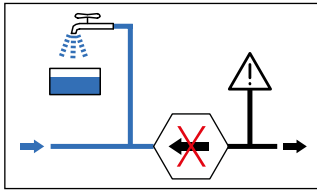




## 7



## Anti-pollution check valves



The following pages are extracted from the specific Monographic Guide, which concerns the problem of pollution of water supplies from backflow and presents the range of Caleffi products specifically designed to prevent this problem. The materials of the components and their performance characteristics meet the specific regulatory and safety requirements of water supply systems.



## POLLUTION OF WATER SUPPLIES - NORMATIVE REFERENCES

Pollution is defined as any relative degradation of the quality of potable water.

European standard **EN 1717:2000** "Protection against pollution of potable water in water installations and general requirements of devices to prevent pollution by backflow" is the reference point as regards the prevention of pollution of public water supplies caused the backflow of fluid from private systems downstream.

The above standard is applied in conjunction with **EN 806:2012** "Specifications for installations inside buildings conveying water for human consumption," that indicates the requirements for design, operation and maintenance.

Both these European reference standards should be applied in conjunction with the applicable national standards and regulations.

Installations must be designed and maintained in such a way that they do not cause pollution of the public water supply or of the internal system by backflow of any type of substance considered hazardous.

**The standard EN 1717** classifies fluids contained in installations into five categories according to the degree of risk they pose to human health; these categories range from 1, with no human health hazard, to 5, the most hazardous.

### Category 1:

Water to be used for human consumption coming directly from a potable water distribution system.

### Category 2:

Fluid presenting no human health hazard, as per 1, the quality of which can have undergone a change in taste, odour, colour or temperature.

### Category 3:

Fluid representing some human health hazard due to the presence of one or more harmful substances.

### Category 4:

Fluid presenting a human health hazard due to the presence of one or more "toxic" or "very toxic" substances or one or more radioactive, mutagenic or carcinogenic substances.

### Category 5:

Fluid presenting a human health hazard due to the presence of micro-biological or viral elements.

According to this classification, suitable backflow prevention devices must be fitted in water distribution circuits.

**EN 1717 lists the operating principle and minimum requirements of devices designed to protect the public water supply from the backflow of fluids belonging to one of these five categories.**

Protection devices are grouped in eight Families, identified by the letters A, B, C, D, E, G, H, L, each of which may have one or more variants called Types, also identified with the letters A, B, C, or D. EN 1717 specifies for each Type of device the minimum and maximum fluid category and the conditions in which it may be used for to protect the installation against backflow.

The sequence of appliances, including protection device, filters, check valves, shut-off valves, pressure test ports, air gaps, etc. that together comprise the backflow protection, is defined as the **Protection Unit**.

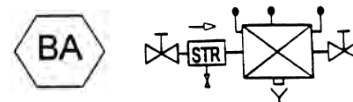
The Protection Point is defined as the point in the system in which the Protection Unit is applied.

The generic symbol used in EN 1717 to identify the Protection Unit is a hexagon containing the letters indicating the protection Family and Type, as shown in the following figure:

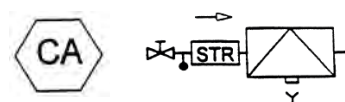


Here below are some examples of Protection Units with the relative sequences of devices required by EN 1717.

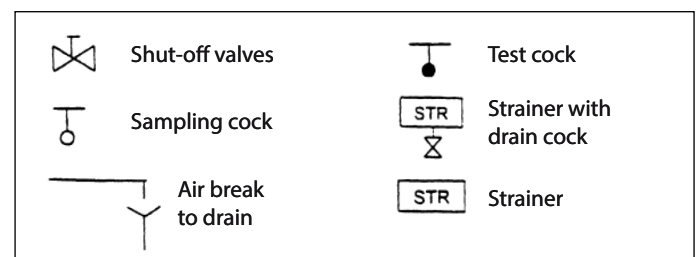
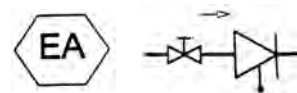
Protection unit: Family B, Type A



Protection unit: Family C, Type Aa



Protection unit: Family E, Type A



The indications in EN 1717 may be applied to all domestic, industrial/commercial and non domestic installations connected to the public potable water supply:

- domestic installations in residential or similar buildings, such as homes, hotels, schools, offices, hostels, etc.: kitchen sinks, hand basins, baths, showers, WCs, domestic hot water systems, domestic washing machines and dishwashers, garden irrigation systems, systems with low concentrations of additives that are not harmful to human health, such as water treatment, conditioning systems, etc.;
- in industrial and commercial installations the standard applies to all applications of potable water with similar use to a domestic installation, excluding therefore process water; also fire fighting, centralised heating or irrigation systems;
- non domestic installations for professional uses of water, for example, industries, commerce, agriculture, clinics, public and private swimming pools and thermal baths.

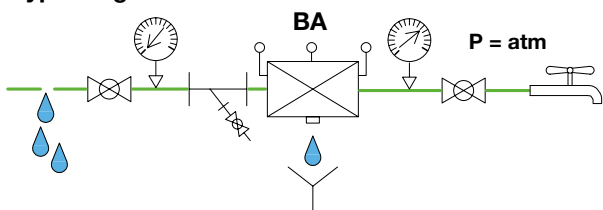
## POLLUTION OF WATER SUPPLIES - NORMATIVE REFERENCES

### Backflow

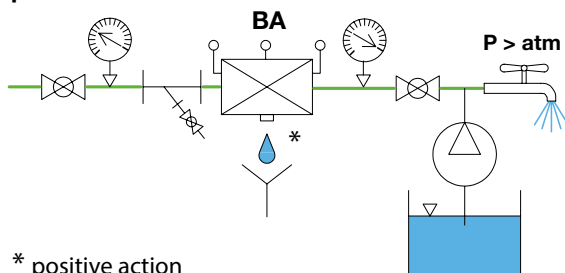
Potable water from the mains supply may be subject to pollution caused mainly by the contaminated fluids flowing back from plumbing installations connected directly to the mains supply. Backflow can be attributed to a variation in the pressure difference that causes a consequent inversion of the normal direction of flow at certain point of the installation. This phenomenon, termed "backflow", occurs when:

- the pressure in the mains system is less than that in the plumbing circuit receiving the supply (back syphonage). This situation can occur, for example, due to a break in the pipework of the mains supply and the consequent maintenance work, or when significant quantities of water are drawn by other users connected upstream, such as fire-fighting systems.
- the pressure in the plumbing circuit receiving the supply rises (back pressure) due, for example, to water being pumped from a well.

#### Back syphonage



#### Backpressure



\* positive action

### Risk assessment

Given the potential dangers of the phenomenon and the requirements of current regulations, the risk of pollution caused by backflow must be assessed on the basis of the type of system and the characteristics of the fluid that flows inside it.

A suitable backflow prevention device must be selected on the basis of the assessment performed by the system designer and the mains supplier. The device must be located along the supply line at the points at risk of backflow which would be hazardous to human health.

In addition to consultation of the European standard EN 1717, it is always necessary to consult the water supplier and the specific national regulations as, depending the type of installation, there may be more restrictive or more permissive derogations from the European standard.

In situations where there are fluids present that pose different degrees of hazard, backflow prevention should consider the most hazardous of these fluids. In the case of fluids that are exceptionally hazardous, it will be necessary to assess additional technical parameters.

In the case of applications where it is not possible to verify the risk level, it is necessary to hypothesise the greatest risk. The "Protection Matrix" tables reported in the following pages list various types of installation and the corresponding fluid categories.

### Protection Unit - Product standards - Caleffi devices

Tables 1 and 2 below list all the Protection Units defined in EN 1717, with the relative fluid categories, the product standards and the corresponding products in the Caleffi catalogue.

Table 2

| Devices  | Category | Authorised level of the Protection Unit       |
|--|----------|---|
| Tap with spray outlet over handbasins, sinks, showers, baths; excluding WCs and bidets   | 5        | Protection unit for category 2 and EB, ED, HC |
| Tub with water inlet below the rim of the tub (b)  | 5        | Protection unit for category 3                |
| Draw-off tap for hose connection (a b)   | 5        | Protection unit for category 3                |
| Over ground or in-ground irrigation system (b)   | 5        | Protection unit for category 4                |
| (a) Used for washing, cleaning or garden irrigation<br>(b) The Protection Unit must be installed above the maximum operating level |          |   |

Table 1

| Family Type             |   | Fluid category |   |   |   |   | Product standard |  | Caleffi series |  |
|-------------------------|---|----------------|---|---|---|---|------------------|--|----------------|--|
| EN 1717 Protection unit |   | 1              | 2 | 3 | 4 | 5 |                  |  |                |  |
| BA                      | Backflow preventer with controllable reduced pressure zone              | ●              | ● | ● | ● | - | EN 12729         |  | 580, 574, 575  |  |
| CA                      | Backflow preventer with different non controllable pressure zones       | ●              | ● | ● | - | - | EN 14367         |  | 573            |  |
| EA                      | Controllable anti-pollution check valves from DN 6 to DN 250            | ●              | ● | - | - | - | EN 13959         |  | 3045, 3046     |  |
| EB                      | Non-controllable anti-pollution check valves from DN 6 to DN 250        |                |   | ■ |   |   | EN 13959         |  | 3047           |  |
| EC                      | Controllable anti-pollution double check valves from DN 6 to DN 250     | ●              | ● | - | - | - | EN 13959         |  |                |  |
| ED                      | Non-controllable anti-pollution double check valves from DN 6 to DN 250 |                |   | ■ |   |   | EN 13959         |  |                |  |

Units with atmospheric vent must not be installed in zones at risk of flooding (for example, AA, BA, CA, GA, GB...)

● Covers the risk    - Does not cover the risk    ■ Only for certain sanitary uses (see Table 2)

## BACKFLOW PREVENTERS



### 572

Non controllable backflow preventer with different pressure zones for wall mounted boilers.

**CAb type.** Brass body. PN 10.  
Ø 6 copper pipe connections.  
Max. working temperature: 40 °C.  
To standard EN 14367.



Code

572106



1

50



### 573

tech. broch. 01328

Non controllable backflow preventer with different pressure zones. **CAa type.** Brass body. PN 10.

Female union connections.  
Max. working temperature: 65 °C.  
To standard EN 14367.



Code

573415 1/2"



1

10

573515 3/4"

1

10



### 573

Non controllable backflow preventer with different pressure zones. Normally closed.

Brass body. PN 10.  
Female union connections.  
With threaded outlet.  
Max. working temperature: 65 °C.

Code

573405 1/2"



1

20

573505 3/4"

1

20



### 574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.

**BA type.**

CR dezincification resistant alloy components "LOW LEAD".

PN 10. Male union connections.

Max. working temperature: 65 °C.

Discharge opening differential pressure to: 14 kPa.

To standard EN 12729.



Upstream of the backflow preventer is mandatory to install a strainer 577 series.



Code

574004 1/2"



1

10



### 574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.

**BA type.**

CR dezincification resistant alloy components "LOW LEAD".

PN 10. Male union connections.

Max. working temperature: 65 °C.

Discharge opening differential pressure to: 14 kPa.

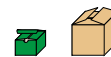
To standard EN 12729.

Upstream of the backflow preventer is mandatory to install a strainer 577 series.



Code

574040 1/2"



1

–

574050 3/4"

1

–

574006 1"

1

–

## BACKFLOW PREVENTERS



### 574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.

**BA type.**

CR dezincification resistant alloy components "LOW LEAD".

PN 10. Male union connections.

Max. working temperature: 65 °C.

Discharge opening differential pressure to: 14 kPa.

**To standard EN 12729.**

**Upstream of the backflow preventer is mandatory to install a strainer 577 series.**



| Code   |        |   |   |
|--------|--------|---|---|
| 574600 | 1"     | 1 | — |
| 574700 | 1 1/4" | 1 | — |

### 575

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.

**BA type.** Bronze body. PN 10. Flanged connections PN 16.

To be coupled with flat counterflanges EN 1092-1.

Max. working temperature: 65 °C.

Discharge opening differential pressure to: 14 kPa.

**To standard EN 12729.**

**Upstream of the backflow preventer is mandatory to install a strainer 579 series.**



| Code   |        |   |   |
|--------|--------|---|---|
| 575005 | DN 50  | 1 | — |
| 575006 | DN 65  | 1 | — |
| 575008 | DN 80  | 1 | — |
| 575010 | DN 100 | 1 | — |

### 574

tech. broch. 01022

Controllable, reduced pressure zone backflow preventer.

**BA type.** Bronze body. PN 10. Male union connections.

Max. working temperature: 65 °C.

Discharge opening differential pressure to: 14 kPa.

**To standard EN 12729.**

**Upstream of the backflow preventer is mandatory to install a strainer 577 series.**



| Code   |        |   |   |
|--------|--------|---|---|
| 574800 | 1 1/2" | 1 | — |
| 574900 | 2"     | 1 | — |

### 570

tech. broch. 01022

Pre-assembled group consisting of:  
backflow preventer 574 series;

Y-strainer 577 series for backflow preventers;

manual shut-off valves.

PN 10. Female connections.

Max. working temperature: 65 °C.



| Code   |        |   |   |
|--------|--------|---|---|
| 570004 | 1/2"   | 1 | — |
| 570005 | 3/4"   | 1 | — |
| 570006 | 1"     | 1 | — |
| 570007 | 1 1/4" | 1 | — |
| 570008 | 1 1/2" | 1 | — |
| 570009 | 2"     | 1 | — |



## BACKFLOW PREVENTERS

### 570

tech. broch. 01022

Pre-assembled group consisting of:  
backflow preventer 575 series;  
Y-strainer 579 series for backflow preventers;  
manual shut-off valves.  
PN 10. Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
Max. working temperature: 65 °C.



Code

|        |        |   |   |
|--------|--------|---|---|
| 570050 | DN 50  | 1 | – |
| 570060 | DN 65  | 1 | – |
| 570080 | DN 80  | 1 | – |
| 570100 | DN 100 | 1 | – |

### 575

tech. broch. 01245

Controllable, reduced pressure zone backflow preventer.  
**BA type.** Cast iron body, with epoxy coating.  
PN 10. Flanged connections.  
To be coupled with flat counterflanges EN 1092-1.  
Max. working temperature: 60 °C.  
Discharge opening differential pressure to: 14 kPa.  
**To standard EN 12729.**  
**Upstream of the backflow preventer is mandatory to install a strainer 579 series.**



Code

|        |        |   |   |
|--------|--------|---|---|
| 575150 | DN 150 | 1 | – |
| 575200 | DN 200 | 1 | – |
| 575250 | DN 250 | 1 | – |

### 570

tech. broch. 01245

Pre-assembled group consisting of:  
backflow preventer 575 series;  
Y-strainer 579 series for backflow preventers;  
manual shut-off valves.  
PN 10. Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
Max. working temperature: 60 °C.



Code

|        |        |   |   |
|--------|--------|---|---|
| 570150 | DN 150 | 1 | – |
| 570200 | DN 200 | 1 | – |
| 570250 | DN 250 | 1 | – |

## Y-STRAINERS AND TEST KIT FOR BACKFLOW PREVENTERS

### 577

Y-strainer,  
for backflow preventers 573 and 574 series.  
Bronze body,  
1/2"–2": PN 16,  
2 1/2"–3": PN 10.  
Female connections.  
Temperature range: –20–110 °C.  
Max. percentage of glycol: 30 %.  
Strainer in stainless steel stretched plate.



| Code   |        | Mesh size<br>Ø (mm) | Kv (m³/h) |   |   |
|--------|--------|---------------------|-----------|---|---|
| 577004 | 1/2"   | 0,40                | 3,4       | 1 | – |
| 577005 | 3/4"   | 0,40                | 7         | 1 | – |
| 577006 | 1"     | 0,40                | 10        | 1 | – |
| 577007 | 1 1/4" | 0,47                | 16        | 1 | – |
| 577008 | 1 1/2" | 0,47                | 24        | 1 | – |
| 577009 | 2"     | 0,53                | 35        | 1 | – |
| 577020 | 2 1/2" | 0,53                | 57        | 1 | – |
| 577030 | 3"     | 0,53                | 73        | 1 | – |

### 579

Y-strainer, for backflow preventer 575 series  
and for pressure reducing valve 576 series.  
Cast iron body, with epoxy coating.  
Flanged connections PN 16.  
To be coupled with flat counterflanges  
EN 1092-1.  
Max. working pressure: 16 bar.  
Max. working temperature: 65 °C.  
Stainless steel mesh.  
With drain cock.



| Code   |        | Mesh size<br>Ø (mm) | Kv (m³/h) |   |   |
|--------|--------|---------------------|-----------|---|---|
| 579050 | DN 50  | 0,87                | 54        | 1 | – |
| 579060 | DN 65  | 0,87                | 76        | 1 | – |
| 579080 | DN 80  | 1,55                | 108       | 1 | – |
| 579100 | DN 100 | 1,55                | 170       | 1 | – |
| 579120 | DN 125 | 1,55                | 295       | 1 | – |
| 579150 | DN 150 | 1,55 *              | 408       | 1 | – |
| 579200 | DN 200 | 1,55 *              | 725       | 1 | – |
| 579250 | DN 250 | 1,55 *              | 938       | 1 | – |

\* Rhomboidal reinforcing mesh

## SPARE PARTS FOR BACKFLOW PREVENTERS



Discharge device  
for backflow preventers  
574 and 575 series.

Code

|              |                                    |   |   |
|--------------|------------------------------------|---|---|
| <b>59978</b> | 1/2" (574004)                      | 1 | — |
| <b>59471</b> | 1/2" (574040) - 3/4" - 1" (574006) | 1 | — |
| <b>59457</b> | 1" (574600) - 1 1/4"               | 1 | — |
| <b>59461</b> | 1 1/2" - 2" - DN 50                | 1 | — |



Discharge device  
for backflow preventer 575 series.

Code

|              |                                  |   |   |
|--------------|----------------------------------|---|---|
| <b>59625</b> | DN 65 (575006)                   | 1 | — |
| <b>59629</b> | DN 80 (575008) - DN 100 (575010) | 1 | — |



Discharge valve seat  
for backflow preventers  
574 and 575 series.

Code

|              |                                    |   |   |
|--------------|------------------------------------|---|---|
| <b>59472</b> | 1/2" (574040) - 3/4" - 1" (574006) | 1 | — |
| <b>59458</b> | 1" (574600) - 1 1/4"               | 1 | — |
| <b>59462</b> | 1 1/2" - 2" - DN 50 - DN 65        | 1 | — |



Discharge valve seat  
for backflow preventer 575 series.

Code

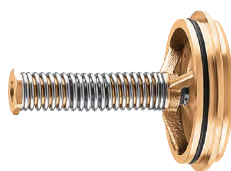
|              |                                  |   |   |
|--------------|----------------------------------|---|---|
| <b>59630</b> | DN 80 (575008) - DN 100 (575010) | 1 | — |
|--------------|----------------------------------|---|---|



Upstream check valve  
for backflow preventers  
574 and 575 series.

Code

|              |                               |   |   |
|--------------|-------------------------------|---|---|
| <b>59977</b> | 1/2" (574004)                 | 1 | — |
| <b>59973</b> | 1/2" (574040) - 3/4" (574050) | 1 | — |
| <b>59469</b> | 3/4" (574005) - 1" (574006)   | 1 | — |
| <b>59455</b> | 1" (574600) - 1 1/4"          | 1 | — |
| <b>59459</b> | 1 1/2" - 2" - DN 50           | 1 | — |



Upstream check valve  
for backflow preventer 575 series.

Code

|              |                                  |   |   |
|--------------|----------------------------------|---|---|
| <b>59627</b> | DN 65 (575006)                   | 1 | — |
| <b>59631</b> | DN 80 (575008) - DN 100 (575010) | 1 | — |



Downstream check valve  
for backflow preventers  
574 and 575 series.

Code

|              |                                    |   |   |
|--------------|------------------------------------|---|---|
| <b>59979</b> | 1/2" (574004)                      | 1 | — |
| <b>59470</b> | 1/2" (574040) - 3/4" - 1" (574006) | 1 | — |
| <b>59456</b> | 1" (574600) - 1 1/4"               | 1 | — |
| <b>59460</b> | 1 1/2" - 2" - DN 50                | 1 | — |



Downstream check valve  
for backflow preventer 575 series.

Code

|              |                                  |   |   |
|--------------|----------------------------------|---|---|
| <b>59628</b> | DN 65 (575006)                   | 1 | — |
| <b>59632</b> | DN 80 (575008) - DN 100 (575010) | 1 | — |

## BACKFLOW PREVENTERS WITH MULTIFUNCTION GEOMETRY



### 580

tech. broch. 01322

Backflow preventer with multifunction geometry. **BA type.**  
CR dezincification resistant alloy body.  
Threaded union connections.  
For linear installation on horizontal or vertical pipes.  
Complete with strainer at the inlet.  
Max. working pressure: 10 bar.  
Max. working temperature: 65 °C.  
**Certified to EN 12729 standard.**

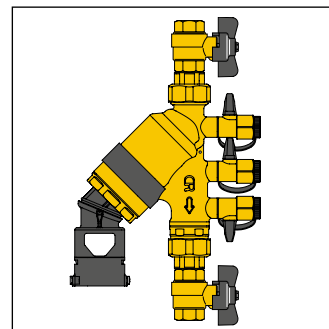
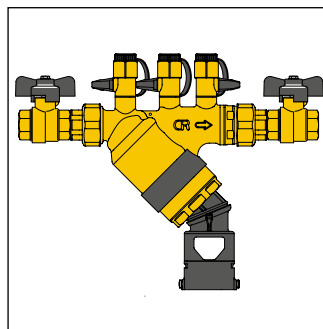


Code

|        |                         |          |   |   |
|--------|-------------------------|----------|---|---|
| 580004 | DN 15                   | 1/2" M   | 1 | 5 |
| 580040 | DN 15 (Cartridge DN 20) | 1/2" M   | 1 | 5 |
| 580050 | DN 20                   | 3/4" M   | 1 | 5 |
| 580060 | DN 25                   | 1" M     | 1 | – |
| 580070 | DN 32                   | 1 1/4" M | 1 | – |

### Discharge tundish

Thanks to the possibility of orienting the tundish, the same body can be used in three different configurations: installation on horizontal or vertical pipes or for special applications.



### 580

tech. broch. 01322

Backflow preventer with multifunction geometry. **BA type.**  
CR dezincification resistant alloy body.  
Complete with connection fitting to the tap at the inlet and hose connection at the outlet.  
For vertical installation.  
Complete with strainer at the inlet.  
Max. working pressure: 10 bar.  
Max. working temperature: 65 °C.  
**Certified to EN 12729 and Beschluss 4/2007 standard.**



Code

|        |       |                   |   |   |
|--------|-------|-------------------|---|---|
| 580104 | DN 15 | 3/4" nut x 3/4" M | 1 | 5 |
| 580150 | DN 20 | 3/4" nut x 3/4" M | 1 | 5 |

### Self-contained cartridge

The self-contained cartridge comprises, all in one piece, the membrane, the upstream check valve, the discharge valve and the whole activation system. In case of maintenance, it can be easily extracted from the body without the aid of further sealing elements.



### 580

tech. broch. 01322

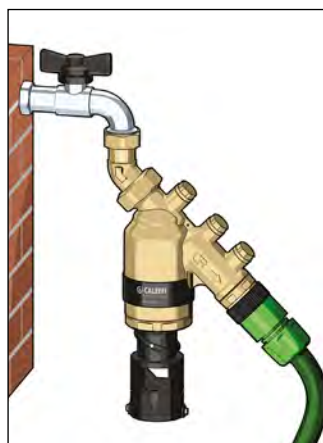
Backflow preventer with multifunction geometry. **BA type.**  
CR dezincification resistant alloy body.  
Complete with isolating valve at the inlet and hose connection at the outlet.  
For vertical installation.  
Complete with strainer at the inlet.  
Max. working pressure: 10 bar.  
Max. working temperature: 65 °C.  
**Certified to EN 12729 and W570-3 standard.**



Code

|        |                         |                 |   |   |
|--------|-------------------------|-----------------|---|---|
| 580240 | DN 15 (Cartridge DN 20) | 1/2" M x 3/4" M | 1 | 5 |
| 580250 | DN 20                   | 3/4" M x 3/4" M | 1 | 5 |

### Application diagram code 580104/580150



### Application diagram code 580240/580250



## ANTI-POLLUTION CHECK VALVES WITH BUILT-IN SHUT-OFF VALVE



**324**

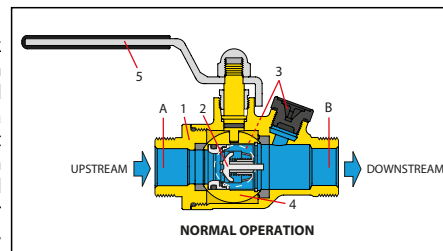
tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**. Pressure test ports upstream and downstream. Replaceable check valve cartridge. **CR** dezincification resistant alloy body **"LOW LEAD"**. Medium: drinking water. Max. working pressure: 10 bar. Check valve minimum opening pressure ( $\Delta p$ ): 0,5 kPa. Max. working temperature: 65 °C. **Certified to EN 13959 and EN 13828 standards.** PATENT PENDING.

| Code   | DN<br>internal check valve | Conn.  |   |    |
|--------|----------------------------|--------|---|----|
| 324140 | 20                         | 1/2" M | 1 | 10 |
| 324150 | 20                         | 3/4" M | 1 | 10 |

### Operating principle

The anti-pollution check valve with built-in shut-off valve is comprised of a valve body (1), a check valve (2), two test ports (3), one downstream for operation checks and one downstream for system pressure testing, a shut-off ball valve (4) with control lever (5). The check valve (2) delimits two distinct zones: one upstream or at the inlet (A), and one downstream or at the outlet (B).



### Operation check

To test the seal of the check valve, check that the valve closes each time the pressure in the upstream water supply so as to prevent water from the installation flowing back into the supply system:

- to maintain pressure in the installation in the absence of flow, close all shut-off valves and users downstream of the valve. Using the downstream test port, check that the pressure is greater than 0,5 bar;
- close the built-in shut-off valve, rotating it clockwise through 90° relative to the longitudinal position, and open the check valve test port. The flow should stop after the small amount of fluid contained in the valve body between the shut-off valve and pressure test port has drained off;
- if not, check the seal of the built-in shut-off valve: if this valve is sealing correctly but the flow from the test port continues, replace the check valve, as the flow can only be caused by imperfect sealing of the valve.

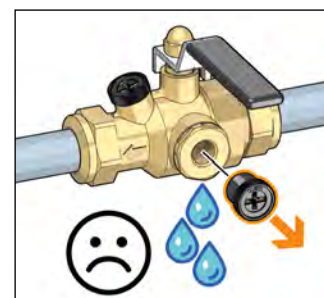
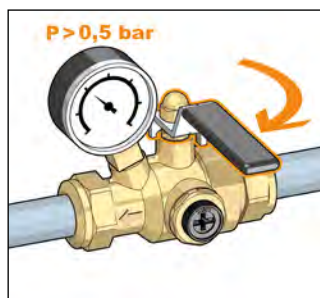


**324**

tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**. Pressure test ports upstream and downstream. Replaceable check valve cartridge. **CR** dezincification resistant alloy body **"LOW LEAD"**. Medium: drinking water. Max. working pressure: 10 bar. Check valve minimum opening pressure ( $\Delta p$ ): 0,5 kPa. Max. working temperature: 65 °C. **Certified to EN 13959 and EN 13828 standards.** PATENT PENDING.

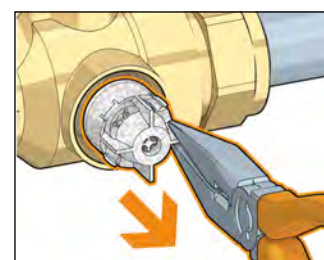
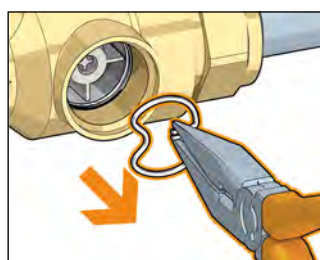
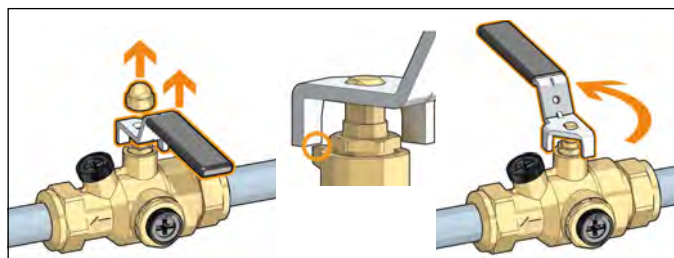
| Code   | DN<br>internal check valve | Conn.               |   |    |
|--------|----------------------------|---------------------|---|----|
| 324250 | 20                         | 3/4" M x nut 3/4" F | 1 | 10 |



### Replacement of the check valve

Thanks to the special patented design, all operation check and replacement operations can be carried out using just one shut-off valve:

- position the lever perpendicular to the valve body by raising it slightly and rotating it anti-clockwise through 90° relative to the longitudinal position;
- open the side cap;
- remove the snap ring;
- use pliers to remove the snap ring, taking care not to damage it. Carry out the maintenance operations, position the original or replacement check valve in its seat and refit by reversing the removal procedure.



**324**

tech. broch. 01341

Anti-pollution check valve with built-in shut-off valve. **EA type**. Pressure test ports upstream and downstream. Replaceable check valve cartridge. **CR** dezincification resistant alloy body **"LOW LEAD"**. Medium: drinking water. Max. working pressure: 10 bar. Check valve minimum opening pressure ( $\Delta p$ ): 0,5 kPa. Max. working temperature: 65 °C. **Certified to EN 13959 and EN 13828 standards.** PATENT PENDING.

| Code   | DN<br>internal check valve | Conn. |   |    |
|--------|----------------------------|-------|---|----|
| 324110 | 20                         | Ø 15  | 1 | 10 |
| 324120 | 20                         | Ø 22  | 1 | 10 |

| Code     |                         |   |   |
|----------|-------------------------|---|---|
| F0002665 | pressure gauge 0-10 bar | 1 | - |



## BALL VALVE WITH BUILT-IN CHECK VALVE



### 3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female connections.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



| Code   |      |    |   |
|--------|------|----|---|
| 323040 | 1/2" | 10 | – |
| 323050 | 3/4" | 10 | – |
| 323062 | 1"   | 10 | – |



### 333 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female - nut connection.  
Drilled tamper-proof safety nut.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



| Code   |                     |    |   |
|--------|---------------------|----|---|
| 333400 | 1/2" F x nut 3/4" F | 10 | – |
| 333500 | 3/4" F x nut 3/4" F | 10 | – |



### 3230 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Female connections.  
Lever handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



| Code   |        |   |   |
|--------|--------|---|---|
| 323060 | 1"     | 4 | – |
| 323070 | 1 1/4" | 4 | – |
| 323080 | 1 1/2" | 2 | – |
| 323090 | 2"     | 1 | – |



### 334 BALLSTOP

tech. broch. 01021

Ball valve with built-in check valve.  
Brass body.  
Male - nut connection.  
Drilled tamper-proof safety nut.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



| Code   |                     |    |   |
|--------|---------------------|----|---|
| 334400 | 1/2" M x nut 3/4" F | 10 | – |
| 334500 | 3/4" M x nut 3/4" F | 10 | – |



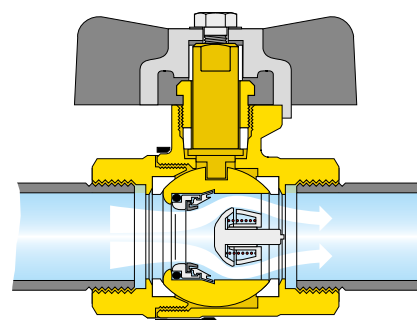
### 332 BALLSTOP

tech. broch. 01021

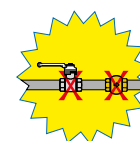
Ball valve with built-in check valve.  
Brass body.  
Male - female connections.  
Butterfly handle.  
Max. working pressure: 16 bar.  
Temperature range: 5–90 °C.



| Code   |                 |    |   |
|--------|-----------------|----|---|
| 332400 | 1/2" M x 1/2" F | 10 | – |



**BALLSTOP**  
TWO VALVES  
IN ONE



## SINGLE AND DOUBLE CHECK VALVES



### 3037 ROBOCHECK-1

15 mm single check valve  
with compression ends.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.



| Code   |      |    |     |
|--------|------|----|-----|
| 303715 | Ø 15 | 10 | 100 |



### 3038 ROBOCHECK-2

15 mm controllable double check valve  
with compression ends.  
CR dezincification resistant alloy body.  
Chrome plated.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.



| Code   |      |    |     |
|--------|------|----|-----|
| 303815 | Ø 15 | 10 | 100 |



## ANTI-POLLUTION CHECK VALVES



### 3045

tech. broch. 01005

Check valve. **EA type**.  
Controllable. Brass body.  
Female connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
**To standard EN 13959.**

| Code   | Inside check device DN | Connections |    |     |
|--------|------------------------|-------------|----|-----|
| 304540 | 1/2"                   |             | 10 | 100 |
| 304550 | 3/4"                   |             | 10 | 50  |
| 304560 | 1"                     |             | 5  | 25  |
| 304570 | 1 1/4"                 |             | 5  | 25  |
| 304580 | 1 1/2"                 |             | 2  | 20  |
| 304590 | 2"                     |             | 1  | 10  |



### 3046

Compact check valve. **EA type**.  
Controllable. Brass body.  
Nut - male connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
**To standard EN 13959.**

| Code   | Inside check device DN | Connections     |    |     |
|--------|------------------------|-----------------|----|-----|
| 304601 | 15                     | 3/4" F x 3/4" M | 10 | 100 |



### 3046

tech. broch. 01005

Check valve. **EA type**.  
Controllable. Brass body.  
Nut - male connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
**To standard EN 13959.**

| Code    | Inside check device DN | Connections         |    |     |
|---------|------------------------|---------------------|----|-----|
| 304640  | 15                     | 3/4" F x 3/4" M     | 10 | 100 |
| 304650  | 20                     | 1" F x 1" M         | 10 | 50  |
| 304660* | 25                     | 1 1/4" F x 1 1/4" M | 5  | 25  |
| 304670* | 32                     | 1 1/2" F x 1 1/2" M | 4  | 20  |
| 304680* | 40                     | 2" F x 2" M         | 2  | 10  |

\* Without NF and SVGW certification



### 3046

Check valve. **EA type**.  
Controllable. Brass body.  
Nut - male connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
**To standard EN 13959.**

| Code   | Inside check device DN | Connections         |   |    |
|--------|------------------------|---------------------|---|----|
| 304644 | 15                     | 3/4" F nut x 3/4" M | 1 | 50 |
| 304654 | 20                     | 1" F nut x 1" M     | 1 | 50 |



### 3046

Check valve. **EA type**.  
Controllable. Brass body.  
Nut - male connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.  
**To standard EN 13959.**

| Code   | Inside check device DN | Connections     |    |     |
|--------|------------------------|-----------------|----|-----|
| 304645 | 15                     | 3/4" F x 3/4" M | 10 | 100 |



### 3047

tech. broch. 01005

Check valve. **EB type**.  
Non controllable. Brass body.  
Female connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

| Code   | Inside check device DN | Connections |    |     |
|--------|------------------------|-------------|----|-----|
| 304740 | 1/2"                   |             | 10 | 100 |
| 304750 | 3/4"                   |             | 10 | 50  |
| 304760 | 1"                     |             | 5  | 25  |



### 3048

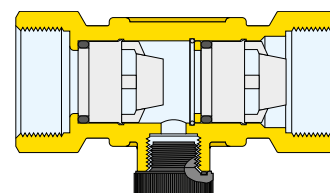
tech. broch. 01005

Double check valve.  
Controllable. Brass body.  
Female connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

| Code   | Inside check device DN | Connections |   |    |
|--------|------------------------|-------------|---|----|
| 304840 | 1/2"                   |             | 1 | 50 |
| 304850 | 3/4"                   |             | 1 | 50 |

#### Double check valve 3048 series

This double check valve can be used according to local regulations, instead of the backflow preventer when a low pressure valve, at the inlet from the public network, is present. The watertightness of the check valve, furthermore, can be verified by using the pressure test port on the valve body.



### 3041

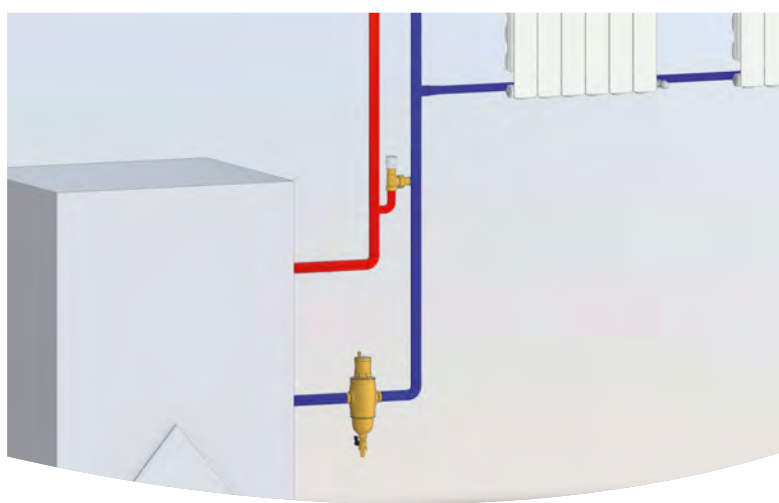
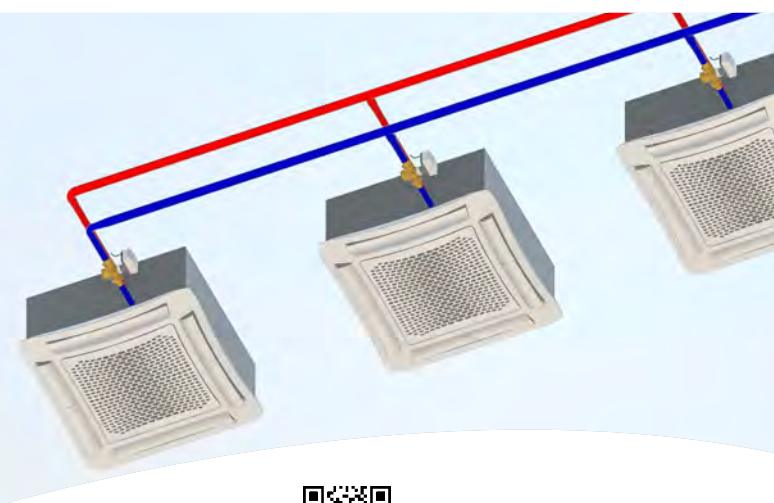
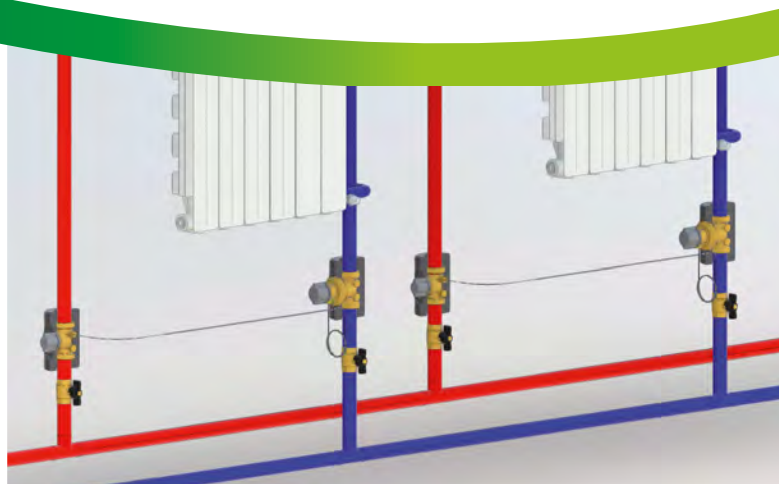
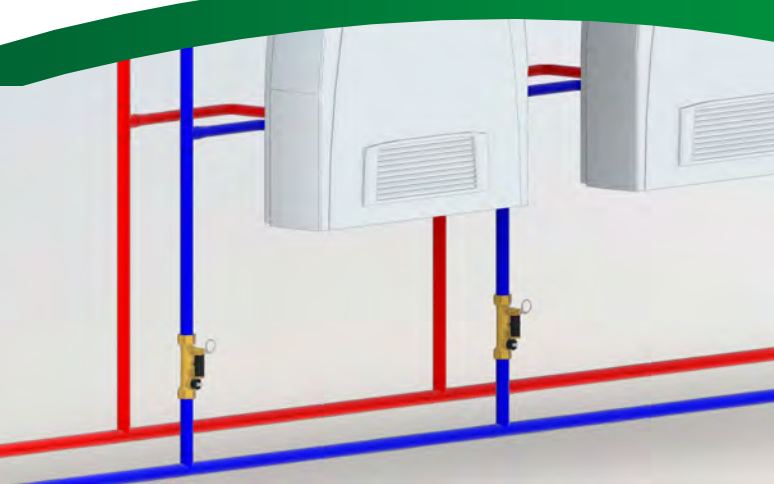
tech. broch. 01005

Ball valve with built-in certified check valve.  
Controllable. Brass body.  
Nut - male connections.  
Max. working pressure: 10 bar.  
Max. working temperature: 90 °C.

| Code   | Inside check device DN | Connections     |   |    |
|--------|------------------------|-----------------|---|----|
| 304140 | 15                     | 3/4" F x 3/4" M | 5 | 25 |



## BALANCING AND CONTROL DEVICES



**BIM**  
bim.caleffi.com

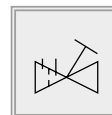
**Static balancing devices**  
**Dynamic balancing and control devices**  
**Differential pressure control devices**  
**Regulating valves**

## BALANCING AND CONTROL DEVICES

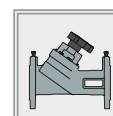
Circuit balancing devices can be classified in accordance with their method of action and the type of control they perform in relation to the hydronic circuit.

### Static balancing devices

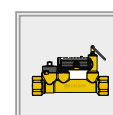
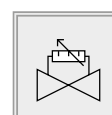
- Manual balancing valve, with Venturi device 130 series



- Manual balancing valve, with variable orifice 130 series

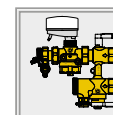
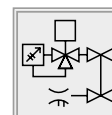


- Balancing valve with flow meter 132 series

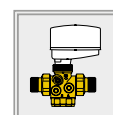
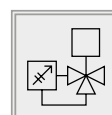


### Dynamic balancing and control devices

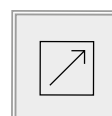
- Connection and regulation kit for HVAC terminal units 149 series



- Pressure independent control valve (PICV) 145-146 series

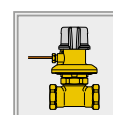


- Automatic flow rate regulator, fixed flow rate 127-128-121-126-120-125-103 series

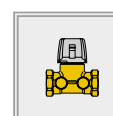
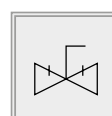


### Differential pressure control devices

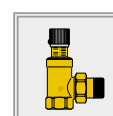
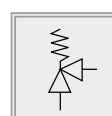
- Differential pressure control valve 140 series



- Shut-off and pre-regulation valve 142 series

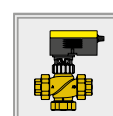
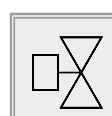


- Differential by-pass valve 519 series

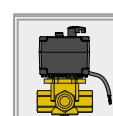
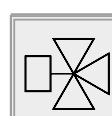


### Regulating valves

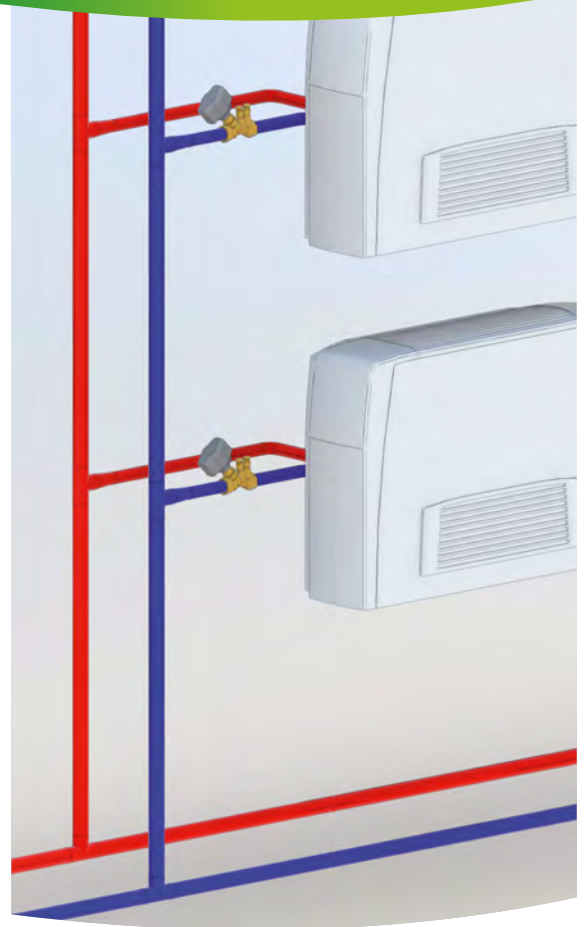
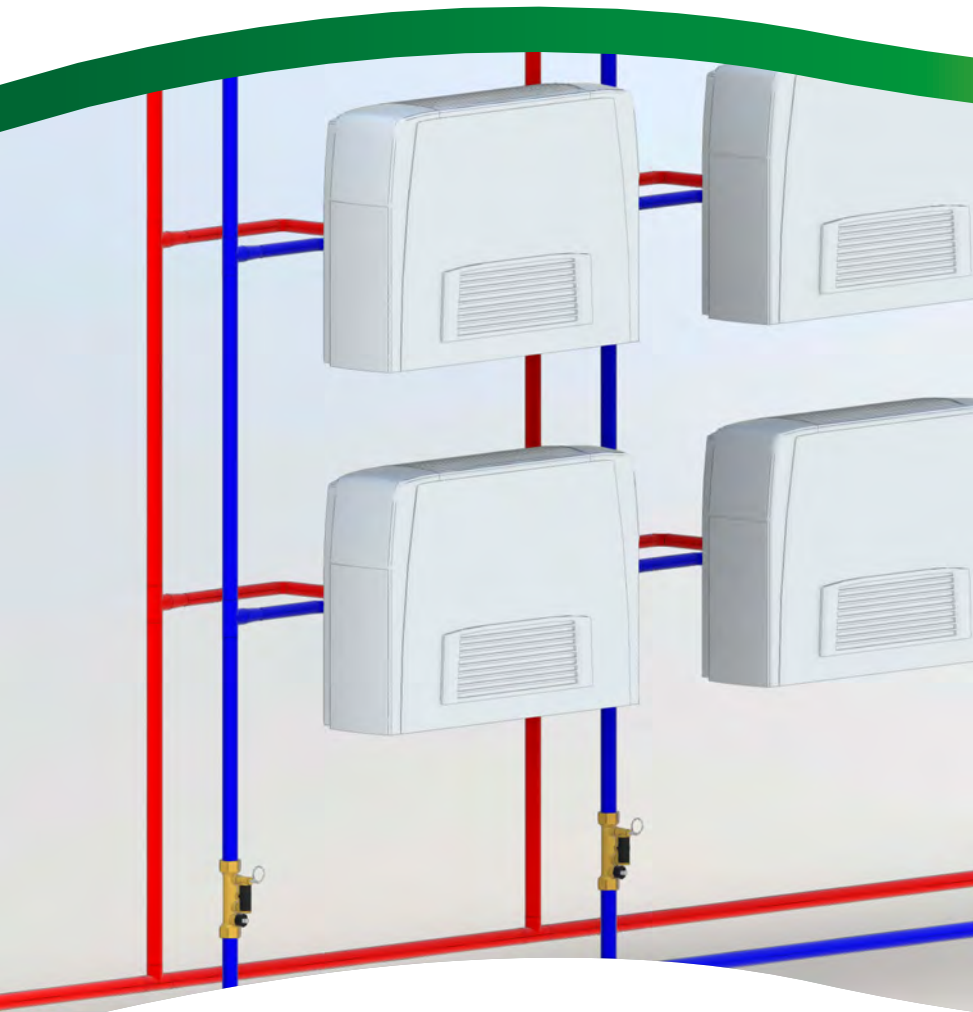
- Regulating valves 636 series



- Temperature regulating valves 610-611-612 series



## STATIC BALANCING DEVICES



 **BIM**  
bim.caleffi.com

**Manual balancing valve**  
**Manual balancing valve, with Venturi device**  
**Manual balancing valve, with variable orifice**



## BALANCING VALVES



### 130

tech. broch. 01251

Balancing valve for hydraulic systems.  
Flow rate measurement with Venturi device.  
CR dezincification resistant alloy body,  
stainless steel obturator.  
Complete with pressure ports.  
Max. working pressure: 16 bar.  
Temperature range: -20–120 °C.  
Max. percentage of glycol: 50 %.



Code

| Code          |        |   |   |
|---------------|--------|---|---|
| <b>130400</b> | 1/2"   | 1 | 5 |
| <b>130500</b> | 3/4"   | 1 | 5 |
| <b>130600</b> | 1"     | 1 | 5 |
| <b>130700</b> | 1 1/4" | 1 | 5 |
| <b>130800</b> | 1 1/2" | 1 | 5 |
| <b>130900</b> | 2"     | 1 | 5 |



Pre-formed insulation for balancing valves  
with threaded connections 130 series.  
For heating and cooling system.

Code

| Code             |        |   |   |
|------------------|--------|---|---|
| <b>CBN130400</b> | 1/2"   | 1 | – |
| <b>CBN130500</b> | 3/4"   | 1 | – |
| <b>CBN130600</b> | 1"     | 1 | – |
| <b>CBN130700</b> | 1 1/4" | 1 | – |
| <b>CBN130800</b> | 1 1/2" | 1 | – |
| <b>CBN130900</b> | 2"     | 1 | – |



### 142

Balancing valve.  
CR dezincification resistant alloy body.  
Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.

Code

| Code          |      | Kv (m³/h) |    |   |
|---------------|------|-----------|----|---|
| <b>142340</b> | 1/2" | 0,32–2,96 | 10 | – |
| <b>142345</b> | 1/2" | 0,15–1,60 | 10 | – |
| <b>142350</b> | 3/4" | 0,47–4,35 | 10 | – |

NEW

### 130

tech. broch. 01251

Balancing valve  
for hydraulic systems.  
Body: - DN 65–200: grey cast iron  
- DN 250 e 300: ductile cast iron  
Obturator: - DN 65–200: technopolymer  
- DN 250 e 300: ductile cast iron  
Complete with pressure ports.  
Max. working pressure: 16 bar.  
Temperature range:  
DN 65–DN 300: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Flanged connections PN 16.  
To be coupled with flat counterflanges  
EN 1092-1.



Code

| Code          |        |   |   |
|---------------|--------|---|---|
| <b>130063</b> | DN 65  | 1 | – |
| <b>130083</b> | DN 80  | 1 | – |
| <b>130103</b> | DN 100 | 1 | – |
| <b>130123</b> | DN 125 | 1 | – |
| <b>130153</b> | DN 150 | 1 | – |
| <b>130203</b> | DN 200 | 1 | – |
| <b>130253</b> | DN 250 | 1 | – |
| <b>130303</b> | DN 300 | 1 | – |

## BALANCING VALVE WITH FLOW METER

### 132

tech. broch. 01149





Balancing valve with flow meter.  
Direct reading of flow rate.  
Brass valve body and flow meter.  
Ball valve for flow rate adjustment.  
Graduated scale flow meter with magnetic movement flow rate indicator.

#### With insulation.

Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Max. percentage of glycol: 50 %.  
PATENT.





| Code   | Flow rate range (l/min) |        |  |  |
|--------|-------------------------|--------|---|---|
| 132402 | 1/2"                    | 2– 7   | 1   | 5   |
| 132512 | 3/4"                    | 5– 13  | 1   | 5   |
| 132522 | 3/4"                    | 7– 28  | 1   | 5   |
| 132602 | 1"                      | 10– 40 | 1   | 5   |
| 132702 | 1 1/4"                  | 20– 70 | 1   | 5   |
| 132802 | 1 1/2"                  | 30–120 | 1   | 5   |
| 132902 | 2"                      | 50–200 | 1   | 5   |

### 132



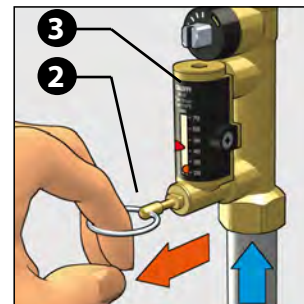
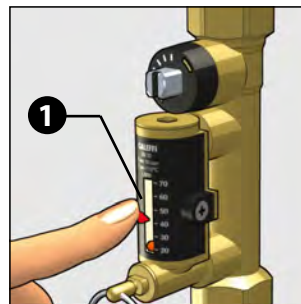
Balancing valve with flow meter.  
Direct reading of flow rate.  
Cast iron body.  
Brass flow meter.  
Characterized ball valve for flow rate adjustment.  
Graduated scale flow meter with magnetic movement flow rate indicator.  
Max. working pressure: 10 bar.  
Temperature range: -10–110 °C.  
Max. percentage of glycol: 50 %.  
Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
PATENT.

| Code   | Flow rate range (m³/h) |       |  |  |
|--------|------------------------|-------|---|---|
| 132060 | DN 65                  | 6–24  | 1   | –   |
| 132080 | DN 80                  | 8–32  | 1   | –   |
| 132100 | DN 100                 | 12–48 | 1   | –   |

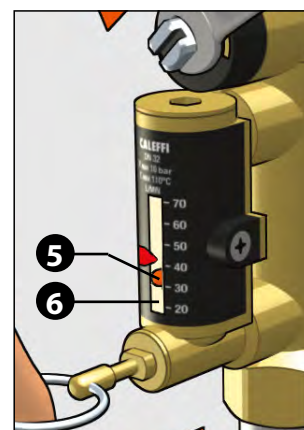
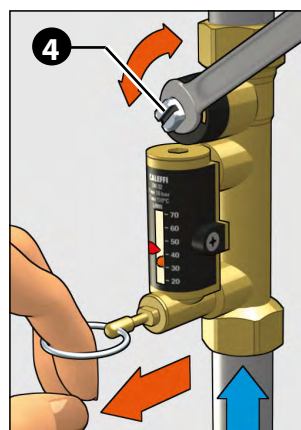
#### Flow rate adjustment

The flow rate is adjusted by carrying out the following operations:

1. With the aid of the indicator (1), mark the reference flow rate at which the valve has to be set.
2. Use the ring (2) to open the obturator that shuts off the flow of medium in the flow meter (3) under normal operating conditions.



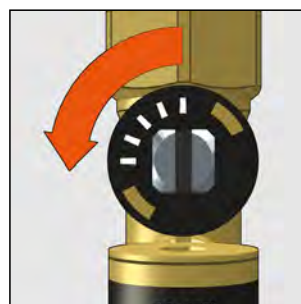
3. Keeping the obturator open, apply a wrench on the control stem of the valve (4) to adjust the flow rate. It is indicated by a metal ball (5) that runs inside a transparent guide (6) marked by a graduated scale in l/min.



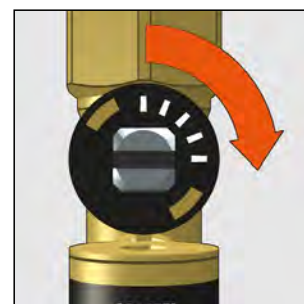
4. After completing the balancing, release the ring (2) of the flow meter obturator that, thanks to an internal spring, will automatically go back into the closed position.
5. After completing the balancing, the indicator (1) can be used to keep in memory the selected setting in case of future inspections.

#### Complete opening and closing of the valve

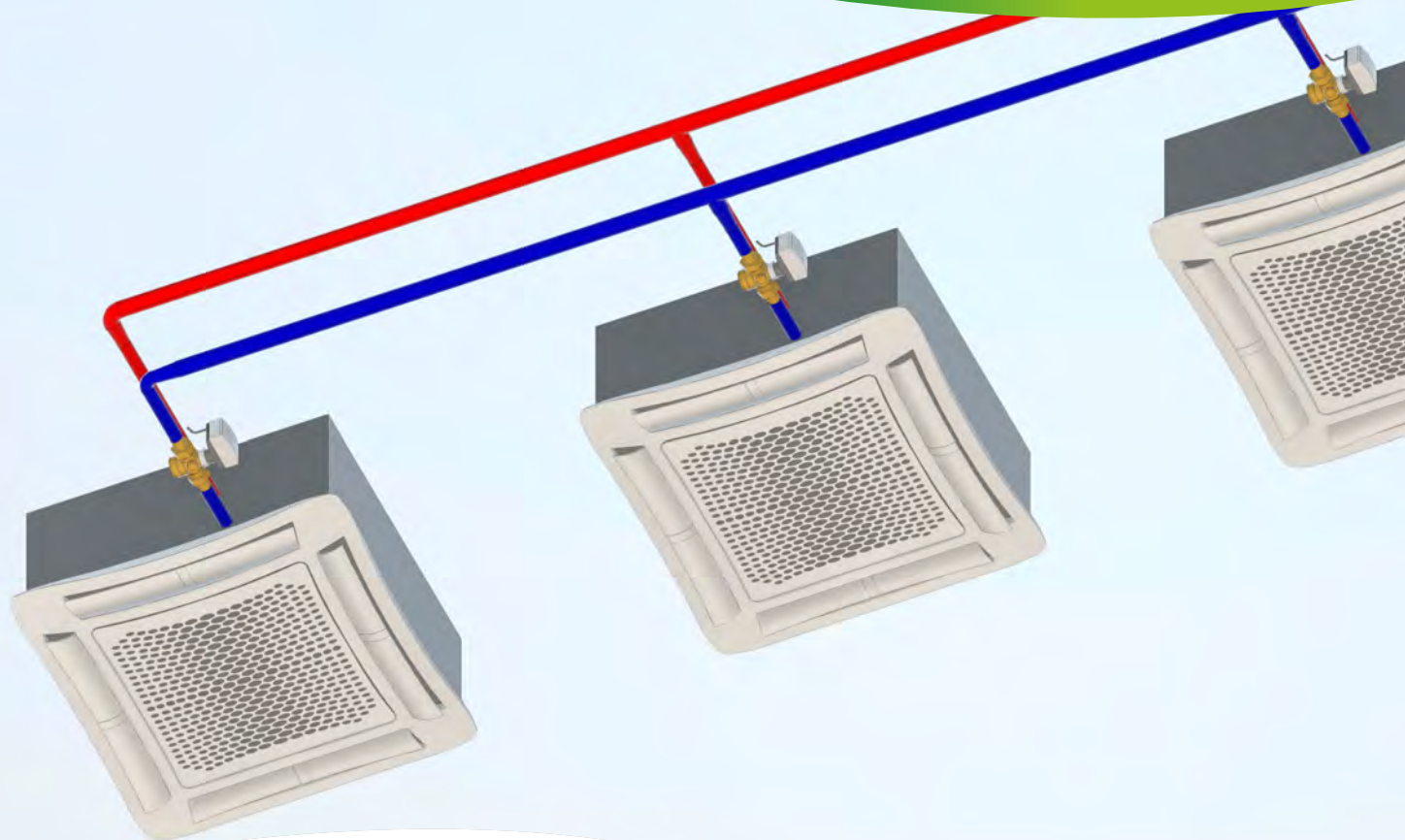
Complete opening of the valve



Complete closing of the valve







 **BIM**  
bim.caleffi.com

**Pressure independent control valve (PICV)**

**Connection and regulation kit for HVAC terminal units**

**Automatic flow rate regulator**

**Automatic flow rate regulator with stainless steel cartridge - flanged connections**



## PRESSURE INDEPENDENT CONTROL VALVE (PICV)



### 145 FLOWMATIC®

tech. broch. 01262

Pressure independent control valve FLOWMATIC®. CR dezincification resistant alloy body. Male connections. Flow rate regulator in polymer with membrane in EPDM. Graduated scale indicator. Max. working pressure: 25 bar. Temperature range: -20–120 °C. Max. percentage of glycol: 50 %. Δp range: 25–400 kPa. With pressure test ports. **Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.**



| Code       | DN | Conn.  | Flow rate range (m³/h) |  |  |
|------------|----|--------|------------------------|---|---|
| 145437 H20 | 15 | 1/2"   | 0,02–0,20              | 1   | 10  |
| 145447 H40 | 15 | 3/4"   | 0,08–0,40              | 1   | 10  |
| 145447 H80 | 15 | 3/4"   | 0,08–0,80              | 1   | 10  |
| 145557 H40 | 20 | 1"     | 0,08–0,40              | 1   | 10  |
| 145557 H80 | 20 | 1"     | 0,08–0,80              | 1   | 10  |
| 145557 1H2 | 20 | 1"     | 0,12–1,20              | 1   | 10  |
| 145667 1H8 | 25 | 1 1/4" | 0,18–1,80              | 1   | 10  |
| 145667 3H0 | 25 | 1 1/4" | 0,30–3,00              | 1   | 10  |
| 145667 3H7 | 25 | 1 1/4" | 0,37–3,70              | 1   | 10  |



### 145 FLOWMATIC®



tech. broch. 01262

Pressure independent control valve FLOWMATIC®. CR dezincification resistant alloy body. Male connections. Flow rate regulator in polymer with membrane in EPDM. Graduated scale indicator. Max. working pressure: 25 bar. Temperature range: -20–120 °C. Max. percentage of glycol: 50 %. Δp range: 25–400 kPa. Fitted for connection of pressure test ports. **Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.**

| Code       | DN | Conn.  | Flow rate range (m³/h) |  |  |
|------------|----|--------|------------------------|---|---|
| 145434 H20 | 15 | 1/2"   | 0,02–0,20              | 1   | 10  |
| 145444 H40 | 15 | 3/4"   | 0,08–0,40              | 1   | 10  |
| 145444 H80 | 15 | 3/4"   | 0,08–0,80              | 1   | 10  |
| 145554 H20 | 20 | 1"     | 0,02–0,20              | 1   | 10  |
| 145554 H40 | 20 | 1"     | 0,08–0,40              | 1   | 10  |
| 145554 H80 | 20 | 1"     | 0,08–0,80              | 1   | 10  |
| 145554 1H2 | 20 | 1"     | 0,12–1,20              | 1   | 10  |
| 145664 1H8 | 25 | 1 1/4" | 0,18–1,80              | 1   | 10  |
| 145664 3H0 | 25 | 1 1/4" | 0,30–3,00              | 1   | 10  |
| 145664 3H7 | 25 | 1 1/4" | 0,37–3,70              | 1   | 10  |



Union with gasket.

| Code   |                     |  |  |
|--------|---------------------|---|---|
| 145001 | 1/2" F x 3/8" M     | 1   | –   |
| 145003 | 3/4" F x 1/2" M     | 1   | –   |
| 145005 | 1" F x 3/4" M       | 1   | –   |
| 145006 | 1" F x 1" M         | 1   | –   |
| 145007 | 1 1/4" F x 1" M     | 1   | –   |
| 145008 | 1 1/4" F x 1 1/4" M | 1   | –   |

## ACTUATORS FOR KITS AND CONTROL VALVES (PICV)





### 145 FLOWMATIC®

tech. broch. 01336

Proportional linear actuator for FLOWMATIC® 145 series control valve and 149 series kit. Supply: 24 V (AC)/(DC). Control signal: 0–10 V. Feedback signal: 0–10 V. Ambient temperature range: 0–50 °C. Protection class: IP 54. Connection: M 30 p.1,5. Supply cable length: 2 m.





| Code   | Tension V | Control signal | Feedback signal |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 145013 | 24        | 0–10 V         | 0–10 V          | 1   | –   |

### 6565

tech. broch. 01336

Proportional thermo-electric actuator for FLOWMATIC® 145 series control valve and 149 series kit. **Quick-coupling installation, with a clip adapter.** Normally closed. Supply: 24 V (AC)/(DC). Control signal: 0–10 V. Feedback signal: 0–10 V. Power consumption: 1,2 W. Ambient temperature range: 0–60 °C. Protection class: IP 54. Connection: M 30 p.1,5. Supply cable length: 1 m.





| Code   | Tension V | Control signal | Feedback signal |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 656524 | 24        | 0–10 V         | 0–10 V          | 100   | –   |

### 6565/6566

Thermo-electric actuator for FLOWMATIC® 145 series control valve and 149 series kit. **Quick-coupling installation, with a clip adapter.** Supply: 230 V (AC) o 24 V (AC)/(DC). Control signal: ON/OFF. Power consumption: 1 W. Ambient temperature range: 0–60 °C. Protection class: IP 54. Connection: M 30 p.1,5. Supply cable length: 1 m.



| Code   | Tension V | Control signal |                 |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 656502 | 230       | ON/OFF         | normally closed | 100   | –   |
| 656504 | 24        | ON/OFF         | normally closed | 100   | –   |
| 656602 | 230       | ON/OFF         | normally open   | 100   | –   |
| 656604 | 24        | ON/OFF         | normally open   | 100   | –   |



## PRESSURE INDEPENDENT CONTROL VALVE (PICV)





### 145



Pressure independent control valve.  
Cast iron body.  
Max. working pressure: 25 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
 $\Delta p$  range: 30–600 kPa.  
With pressure test ports.



### 145

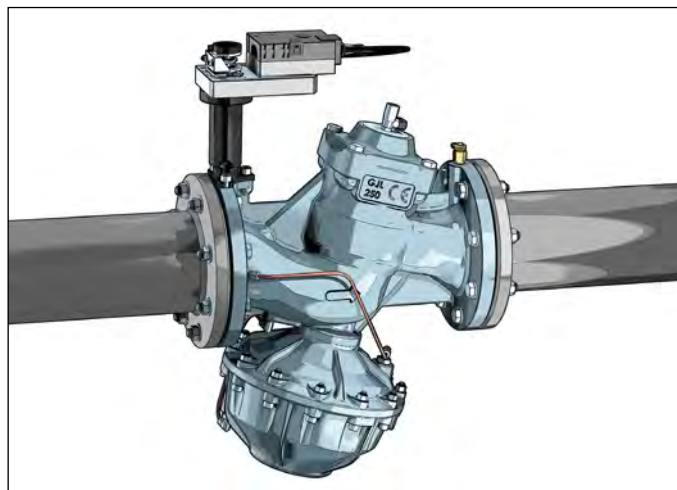
Rotational proportional actuator for pressure independent control valve 145 series.  
Supply: 24 V (AC)/(DC).  
Control signal: 0–10 V.  
Feedback signal: 0–10 V.  
Ambient temperature range: -30–50 °C.  
Protection class: IP 54.  
Manual override.



| Code   | DN | Conn.    | Flow rate range (m <sup>3</sup> /h) |  |  |
|--------|----|----------|-------------------------------------|---|---|
| 145895 | 40 | 2" M     | 2,9– 9,3                            | 1   | –   |
| 145905 | 50 | 2 1/2" M | 5,1–14,8                            | 1   | –   |

| Code   | Voltage V | Control signal | Feedback signal | Use           |  |  |
|--------|-----------|----------------|-----------------|---------------|---|---|
| 145017 | 24        | 0–10 V         | 0–10 V          | DN 40 - DN 50 | 1   | –   |

### 146

Pressure independent control valve.  
Grey cast iron body.  
Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
 $\Delta p$  range: 30–400 kPa.  
With pressure ports.  
Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.



| Code   | DN  | Flow rate range (m <sup>3</sup> /h) |  |  |
|--------|-----|-------------------------------------|---|---|
| 146060 | 65  | 6–26                                | 1   | –   |
| 146080 | 80  | 8–36                                | 1   | –   |
| 146100 | 100 | 16–82,5                             | 1   | –   |
| 146120 | 125 | 20–125                              | 1   | –   |
| 146150 | 150 | 27–160                              | 1   | –   |

NEW

### 146

Rotational proportional actuator for pressure independent control valve 146 series.  
Supply: 24 V (AC)/(DC).  
Control signal: 0(2)–10 V.  
Feedback signal: 2–10 V.  
Ambient temperature range: -30–50 °C.  
Protection class: IP 54.  
Manual override.



| Code   | Voltage V | Control signal | Feedback signal | Use            |  |  |
|--------|-----------|----------------|-----------------|----------------|---|---|
| 146025 | 24        | 0(2)–10 V      | 2–10 V          | DN 65 - DN 150 | 1   | –   |

## CONNECTION AND REGULATION KIT FOR HVAC TERMINAL UNITS

### 149

tech. broch. 01336

Connection and regulation kit for HVAC terminal units.

CR dezincification resistant alloy body.

Complete with:

- pressure independent control valve,
- three-way shut-off valve,
- integrated by-pass,
- Venturi device with pressure test ports (only in codes 149.00 ...),
- filtering cartridge,
- fill/drain cock.
- pre-formed shell insulation.

Max. working pressure: 25 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Δp range (PICV): 25–400 kPa.

Centre distance: **80 mm**.

**Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.**

PATENT PENDING.



Optional drain cock for 149 series.



| Code            | Use                 |       |     |
|-----------------|---------------------|-------|-----|
| <b>F0000680</b> | 3/4" M x 3/4" F     | DN 15 | 1 – |
| <b>F0000681</b> | 1" M x 1" F         | DN 20 | 1 – |
| <b>F0000682</b> | 1 1/4" M x 1 1/4" F | DN 25 | 1 – |

**NEW**



### 149

Stainless steel flexible hoses.  
L = 300 mm.  
PN 25

| Code              |                     |       |   |   |
|-------------------|---------------------|-------|---|---|
| <b>149000 530</b> | 3/4" F x 3/4" F     | DN 16 | 1 | – |
| <b>149000 630</b> | 1" F x 1" F         | DN 20 | 1 | – |
| <b>149000 730</b> | 1 1/4" F x 1 1/4" F | DN 25 | 1 | – |

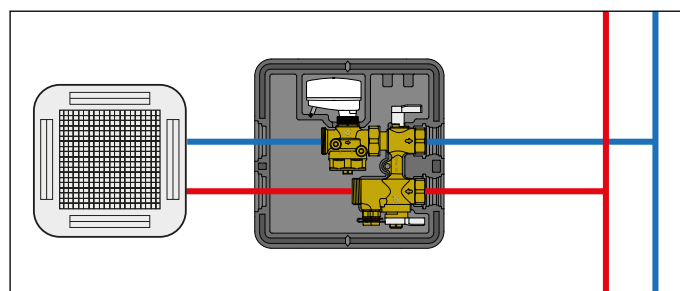
#### With Venturi device

| Code              | DN | Kv Venturi (m³/h) | Flow rates range (m³/h) |   |   |
|-------------------|----|-------------------|-------------------------|---|---|
| <b>149400 H10</b> | 15 | 0,25              | 0,02–0,10               | 1 | – |
| <b>149400 H20</b> | 15 | 0,50              | 0,10–0,20               | 1 | – |
| <b>149400 H40</b> | 15 | 1,10              | 0,20–0,40               | 1 | – |
| <b>149400 H80</b> | 15 | 2,35              | 0,40–0,80               | 1 | – |
| <b>149500 H10</b> | 20 | 0,25              | 0,02–0,10               | 1 | – |
| <b>149500 H20</b> | 20 | 0,50              | 0,10–0,20               | 1 | – |
| <b>149500 H40</b> | 20 | 1,10              | 0,20–0,40               | 1 | – |
| <b>149500 H80</b> | 20 | 2,35              | 0,40–0,80               | 1 | – |
| <b>149500 1H2</b> | 20 | 5,00              | 0,80–1,20               | 1 | – |
| <b>149600 1H8</b> | 25 | 5,00              | 1,20–1,80               | 1 | – |
| <b>149600 3H0</b> | 25 | 9,60              | 1,80–3,00               | 1 | – |
| <b>149600 3H7</b> | 25 | 9,60              | 1,85–3,70               | 1 | – |

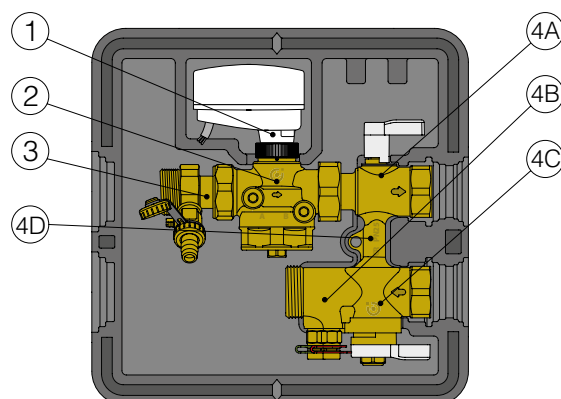
#### Without Venturi device

| Code              | DN | Flow rates range (m³/h) |   |   |
|-------------------|----|-------------------------|---|---|
| <b>149410 H20</b> | 15 | 0,02–0,20               | 1 | – |
| <b>149410 H40</b> | 15 | 0,08–0,40               | 1 | – |
| <b>149410 H80</b> | 15 | 0,08–0,80               | 1 | – |
| <b>149510 H20</b> | 20 | 0,02–0,20               | 1 | – |
| <b>149510 H40</b> | 20 | 0,08–0,40               | 1 | – |
| <b>149510 H80</b> | 20 | 0,08–0,80               | 1 | – |
| <b>149510 1H2</b> | 20 | 0,12–1,20               | 1 | – |
| <b>149610 1H8</b> | 25 | 0,18–1,80               | 1 | – |
| <b>149610 3H0</b> | 25 | 0,30–3,00               | 1 | – |
| <b>149610 3H7</b> | 25 | 0,37–3,70               | 1 | – |

#### Application diagram of 149 series



#### Characteristics components



1. Actuator (optional)
2. Pressure independent control valve (PICV)
3. Fill/drain cock (optional)
4. By-pass kit composed of:
  - 4A. Three-way shut-off valve
  - 4B. Venturi device for flow rate measurement with connections for pressure test ports (in 149.00 codes only)
  - 4C. Three-way shut-off valve with built-in strainer
  - 4D. By-pass

## CONNECTION AND REGULATION KITS FOR HVAC TERMINAL UNITS

149

tech. broch. 01349

Connection and regulation kit for HVAC terminal units.

CR dezincification resistant alloy body.



Complete with:



- pressure independent control valve,
- three-way shut-off valve,
- filtering cartridge,
- integrated by-pass,
- Venturi device with pressure test ports,
- fill/drain cock.



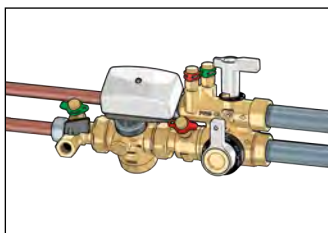
Max. working pressure: 25 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Δp range (PICV): 25–400 kPa.  
Centre distance: **40 mm**.

**Fitted for 145 series actuator and 6565/6566 series thermo-electric actuator.**

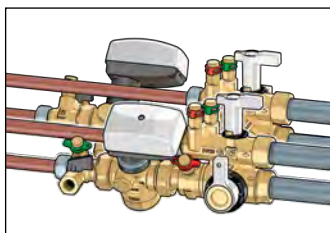
| Code           | DN | Kv Venturi (m³/h) | Flow rates range (m³/h) |  |  |
|----------------|----|-------------------|-------------------------|---|---|
| 149500 H08 001 | 20 | 0,15              | 0,02–0,08               | 1   | –   |
| 149500 H20 001 | 20 | 0,50              | 0,08–0,20               | 1   | –   |
| 149500 H40 001 | 20 | 1,10              | 0,20–0,40               | 1   | –   |
| 149500 H80 001 | 20 | 2,25              | 0,40–0,80               | 1   | –   |
| 149500 1H2 001 | 20 | 3,90              | 0,60–1,20               | 1   | –   |

| Code           | DN | Kv Venturi (m³/h) | Flow rates range (m³/h) |  |  |
|----------------|----|-------------------|-------------------------|---|---|
| 149500 H08 002 | 20 | 0,15              | 0,02–0,08               | 1   | –   |
| 149500 H20 002 | 20 | 0,50              | 0,08–0,20               | 1   | –   |
| 149500 H40 002 | 20 | 1,10              | 0,20–0,40               | 1   | –   |
| 149500 H80 002 | 20 | 2,25              | 0,40–0,80               | 1   | –   |
| 149500 1H2 002 | 20 | 3,90              | 0,60–1,20               | 1   | –   |

**Single installation  
code 149500 ... 001**



**Double installation  
code 149500 ... 001+  
code 149500 ... 002**



## ACTUATORS FOR KIT AND CONTROL VALVES (PICV)

145

FLOWMATIC®

tech. broch. 01336



Proportional linear actuator for FLOWMATIC® 145 series control valve and 149 series kit.

Supply: 24 V (AC)/(DC).

Control signal: 0–10 V.

Feedback signal: 0–10 V.



Ambient temperature range: 0–50 °C.

Protection class: IP 54.

Connection: M 30 p.1,5.

Supply cable length: 2 m.

CE

| Code   | Tension V | Control signal | Feedback signal |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 145013 | 24        | 0–10 V         | 0–10 V          | 1   | –   |

6565

tech. broch. 01336



Proportional thermo-electric actuator for FLOWMATIC® 145 series control valve and 149 series kit.

**Quick-coupling installation, with a clip adapter.**

Normally closed.

Supply: 24 V (AC)/(DC).

Control signal: 0–10 V.

Feedback signal: 0–10 V.

Power consumption: 1,2 W.



Ambient temperature range: 0–60 °C.

Protection class: IP 54.

Connection: M 30 p.1,5.

Supply cable length: 1 m.

CE

| Code   | Tension V | Control signal | Feedback signal |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 656524 | 24        | 0–10 V         | 0–10 V          | 100   | –   |

6565/6566

Thermo-electric actuator for FLOWMATIC® 145 series control valve and 149 series kit.

**Quick-coupling installation, with a clip adapter.**

Supply: 230 V (AC) o 24 V (AC)/(DC).

Control signal: ON/OFF.

Power consumption: 1 W.



Ambient temperature range: 0–60 °C.

Protection class: IP 54.

Connection: M 30 p.1,5.

Supply cable length: 1 m.

CE

| Code   | Tension V | Control signal |                 |  |  |
|--------|-----------|----------------|-----------------|---|---|
| 656502 | 230       | ON/OFF         | normally closed | 100   | –   |
| 656504 | 24        | ON/OFF         | normally closed | 100   | –   |
| 656602 | 230       | ON/OFF         | normally open   | 100   | –   |
| 656604 | 24        | ON/OFF         | normally open   | 100   | –   |

## COMPACT AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE



### 127 AUTOFLOW®

tech. broch. 01166

Compact automatic flow rate regulator.

Brass body.

AUTOFLOW® cartridge:

1/2"–1 1/4" in high resistance polymer,

1 1/2"–2" in high resistance polymer and stainless steel.

Max. working pressure: 16 bar.

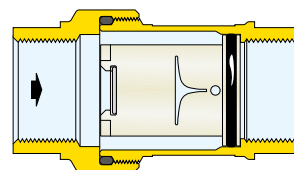
Temperature range: 0–100 °C.

Max. percentage of glycol: 50 %.

Flow rates: 0,02–0,06 m³/h - Δp range: 20–200 kPa - Accuracy: ± 15 %.

Flow rates: 0,085–11,0 m³/h - Δp range: 15–200 kPa - Accuracy: ± 10 %.

PATENT.



Code

|                   |        |   |   |
|-------------------|--------|---|---|
| <b>127141</b> ... | 1/2"   | 1 | – |
| <b>127151</b> ... | 3/4"   | 1 | – |
| <b>127161</b> ... | 1"     | 1 | – |
| <b>127171</b> ... | 1 1/4" | 1 | – |
| <b>127181</b> ... | 1 1/2" | 1 | – |
| <b>127191</b> ... | 2"     | 1 | – |

| Code              | Min. working<br>Δp (kPa) | Δp range<br>(kPa) | Flow rates (m³/h)   |
|-------------------|--------------------------|-------------------|---|
| <b>127141</b> ... | 15                       | 15–200 (20–200*)  | 0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4               |
| <b>127151</b> ... | 15                       | 15–200 (20–200*)  | 0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6          |
| <b>127161</b> ... | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0 |
| <b>127171</b> ... | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0 |
| <b>127181</b> ... | 15                       | 15–200            | 4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0   |
| <b>127191</b> ... | 15                       | 15–200            | 4,5; 4,75; 5,0; 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0   |



### 128 AUTOFLOW®

tech. broch. 01269

Compact automatic flow rate regulator.

Brass body.

AUTOFLOW® cartridge: in high resistance polymer.

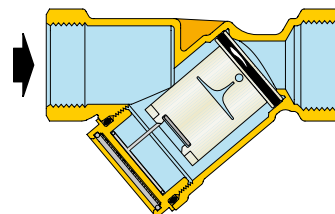
Max. working pressure: 16 bar.

Temperature range: 0–100 °C.

Max. percentage of glycol: 50 %.

Flow rates: 0,02–0,06 m³/h - Δp range: 20–200 kPa - Accuracy: ± 15 %.

Flow rates: 0,085–5,0 m³/h - Δp range: 15–200 kPa - Accuracy: ± 10 %.



Code

|                   |          |   |   |
|-------------------|----------|---|---|
| <b>128141</b> ... | 1/2" F   | 1 | – |
| <b>128151</b> ... | 3/4" F   | 1 | – |
| <b>128161</b> ... | 1" F     | 1 | – |
| <b>128171</b> ... | 1 1/4" F | 1 | – |

| Code              | Kv (m³/h) | Min. working<br>Δp (kPa) | Δp range<br>(kPa) | Flow rates (m³/h)   |
|-------------------|-----------|--------------------------|-------------------|---|
| <b>128141</b> ... | 6,69      | 15                       | 15–200 (20–200*)  | 0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2              |
| <b>128151</b> ... | 7,58      | 15                       | 15–200 (20–200*)  | 0,02*; 0,04*; 0,06*; 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4         |
| <b>128161</b> ... | 14,00     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,2; 2,5; 2,7; 3,0; 3,2; 3,5; 3,7; 4,0; 4,2; 4,5; 4,7; 5,0 |
| <b>128171</b> ... | 14,50     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,2; 2,5; 2,7; 3,0; 3,2; 3,5; 3,7; 4,0; 4,2; 4,5; 4,7; 5,0 |

## AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE



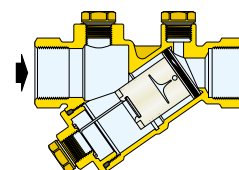
| Code       |        |   |   |
|------------|--------|---|---|
| 126141 ●●● | 1/2"   | 1 | — |
| 126151 ●●● | 3/4"   | 1 | — |
| 126161 ●●● | 1"     | 1 | — |
| 126171 ●●● | 1 1/4" | 1 | — |
| 126181 ●●● | 1 1/2" | 1 | — |
| 126191 ●●● | 2"     | 1 | — |

| Code       | Kv (m³/h) | Min. working<br>Δp (kPa) | Δp range<br>(kPa) | Flow rates (m³/h)  |
|------------|-----------|--------------------------|-------------------|--|
| 126141 ●●● | 6,69      | 15                       | 15–200            | 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2  |
| 126151 ●●● | 7,58      | 15                       | 15–200            | 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6                                |
| 126161 ●●● | 14,00     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,00 |
| 126171 ●●● | 14,50     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,00 |
| 126181 ●●● | 34,72     | 15                       | 15–200            | 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0  |
| 126191 ●●● | 37,38     | 15                       | 15–200            | 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0  |

### 126 AUTOFLOW®

Automatic flow rate regulator.  
CR dezincification resistant alloy body.  
AUTOFLOW® cartridge:  
1/2"–1 1/4" in high resistance polymer,  
1 1/2"–2" in high resistance polymer and stainless steel.  
Max. working pressure: 25 bar.  
Temperature range: -20–100 °C.  
Max. percentage of glycol: 50 %.  
Δp range: 15–200 kPa.  
Flow rates: 0,085–11,0 m³/h.  
Accuracy: ± 10 %.

Fitted for connection of pressure ports and drain valve.  
PATENT.



tech. broch. 01141

## AUTOMATIC FLOW RATE REGULATOR WITH HIGH RESISTANCE POLYMER CARTRIDGE AND BALL VALVE



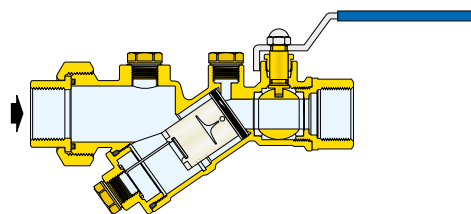
| Code       |        |   |   |
|------------|--------|---|---|
| 121141 ●●● | 1/2"   | 1 | — |
| 121151 ●●● | 3/4"   | 1 | — |
| 121161 ●●● | 1"     | 1 | — |
| 121171 ●●● | 1 1/4" | 1 | — |
| 121181 ●●● | 1 1/2" | 1 | — |
| 121191 ●●● | 2"     | 1 | — |

| Code       | Kv (m³/h) | Min. working<br>Δp (kPa) | Δp range<br>(kPa) | Flow rates (m³/h)   |
|------------|-----------|--------------------------|-------------------|---|
| 121141 ●●● | 6,90      | 15                       | 15–200            | 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2   |
| 121151 ●●● | 7,73      | 15                       | 15–200            | 0,085; 0,12; 0,15; 0,2; 0,25; 0,3; 0,35; 0,4; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6                               |
| 121161 ●●● | 18,00     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0 |
| 121171 ●●● | 18,50     | 15                       | 15–200            | 0,5; 0,6; 0,7; 0,8; 0,9; 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 4,75; 5,0 |
| 121181 ●●● | 47,24     | 15                       | 15–200            | 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0   |
| 121191 ●●● | 48,89     | 15                       | 15–200            | 5,5; 6,0; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0   |

### 121 AUTOFLOW®

Combination of automatic flow rate regulator and ball valve.  
CR dezincification resistant alloy body.  
AUTOFLOW® cartridge:  
1/2"–1 1/4" in high resistance polymer,  
1 1/2"–2" in high resistance polymer and stainless steel.  
Max. working pressure: 25 bar.  
Temperature range: -20–100 °C.  
Max. percentage of glycol: 50 %.  
Δp range: 15–200 kPa.  
Flow rates: 0,085–11,0 m³/h.  
Accuracy: ± 10 %.

Fitted for connection of pressure ports and drain valve.  
PATENT.



tech. broch. 01141



## Method of coding AUTOFLOW® 121 - 126 - 127 - 128 series

For correct identification of the device, fill in the form indicating: series, size, flow rate and  $\Delta p$  range.

Complete code

|                 |                 |                 |                 |                 |                 |                 |                 |                 |
|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 5 <sup>th</sup> | 6 <sup>th</sup> | 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> |
|                 |                 |                 | 1               |                 | 1               |                 |                 |                 |

SERIES
SIZE
FLOW RATE -  $\Delta p$  RANGE

### SERIES

|                 |                 |                 |
|-----------------|-----------------|-----------------|
| 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |
|-----------------|-----------------|-----------------|

The first three digits indicate the series

|     |                                    |
|-----|------------------------------------|
| 121 | AUTOFLOW® regulator and ball valve |
| 126 | AUTOFLOW® regulator                |
| 127 | AUTOFLOW® compact regulator        |
| 128 | AUTOFLOW® compact regulator        |

### SIZE

|                 |
|-----------------|
| 5 <sup>th</sup> |
|-----------------|

The fifth digit indicates the size

|       |      |      |    |        |        |    |
|-------|------|------|----|--------|--------|----|
| Size  | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" |
| Digit | 4    | 5    | 6  | 7      | 8      | 9  |

### FLOW RATE - $\Delta p$ RANGE

|                 |                 |                 |
|-----------------|-----------------|-----------------|
| 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> |
|-----------------|-----------------|-----------------|

The last three digits indicate the available flow rate

| $\Delta p$ range 20–200 kPa |       |                   |       |                   |       |
|-----------------------------|-------|-------------------|-------|-------------------|-------|
| m <sup>3</sup> /h           | digit | m <sup>3</sup> /h | digit | m <sup>3</sup> /h | digit |
| 0,02                        | M02   | 0,04              | M04   | 0,06              | M06   |

| $\Delta p$ range 15–200 kPa |       |                   |       |                   |       |                   |       |                   |       |                   |       |
|-----------------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|-------------------|-------|
| m <sup>3</sup> /h           | digit | m <sup>3</sup> /h | digit | m <sup>3</sup> /h | digit | m <sup>3</sup> /h | digit | m <sup>3</sup> /h | digit | m <sup>3</sup> /h | digit |
| 0,085                       | M08   | 0,40              | M40   | 1,20              | 1M2   | 2,75              | 2M7   | 4,50              | 4M5   | 7,50              | 7M5   |
| 0,12                        | M12   | 0,50              | M50   | 1,40              | 1M4   | 3,00              | 3M0   | 4,75              | 4M7   | 8,00              | 8M0   |
| 0,15                        | M15   | 0,60              | M60   | 1,60              | 1M6   | 3,25              | 3M2   | 5,00              | 5M0   | 8,50              | 8M5   |
| 0,20                        | M20   | 0,70              | M70   | 1,80              | 1M8   | 3,50              | 3M5   | 5,50              | 5M5   | 9,00              | 9M0   |
| 0,25                        | M25   | 0,80              | M80   | 2,00              | 2M0   | 3,75              | 3M7   | 6,00              | 6M0   | 9,50              | 9M5   |
| 0,30                        | M30   | 0,90              | M90   | 2,25              | 2M2   | 4,00              | 4M0   | 6,50              | 6M5   | 10,0              | 10M   |
| 0,35                        | M35   | 1,00              | 1M0   | 2,50              | 2M5   | 4,25              | 4M2   | 7,00              | 7M0   | 11,0              | 11M   |

### Minimum differential pressure required

This is given by the sum of two values:

- the minimum working  $\Delta p$  of the AUTOFLOW® cartridge;
- the  $\Delta p$  required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Pump head  $H = \Delta p_{\text{circuit}} + \Delta p_{\text{require}}$

## SPARE POLYMER CARTRIDGES. For 127 series.



For 1/2" - 3/4" bodies

| Code      | Flow rate (m <sup>3</sup> /h) |
|-----------|-------------------------------|
| 02M02 XXG | 0,020                         |
| 02M04 XXG | 0,040                         |
| 02M06 XXG | 0,060                         |
| 02M08 XXG | 0,085                         |
| 02M12 XXG | 0,12                          |
| 02M15 XXG | 0,15                          |
| 02M20 XXG | 0,20                          |
| 02M25 XXG | 0,25                          |
| 02M30 XXG | 0,30                          |
| 02M35 XXG | 0,35                          |
| 02M40 XXG | 0,40                          |
| 02M50 XXG | 0,50                          |
| 02M60 XXG | 0,60                          |
| 02M70 XXG | 0,70                          |
| 02M80 XXG | 0,80                          |
| 02M90 XXG | 0,90                          |
| 021M0 XXG | 1,00                          |
| 021M2 XXG | 1,20                          |
| 021M4 XXG | 1,40                          |
| 021M6 XXG | 1,60                          |



For 1" - 1 1/4" bodies, with adapter

| Code      | Flow rate (m <sup>3</sup> /h) |
|-----------|-------------------------------|
| 02M50 XXH | 0,50                          |
| 02M60 XXH | 0,60                          |
| 02M70 XXH | 0,70                          |
| 02M80 XXH | 0,80                          |
| 02M90 XXH | 0,90                          |
| 021M0 XXH | 1,00                          |
| 021M2 XXH | 1,20                          |
| 021M4 XXH | 1,40                          |
| 021M6 XXH | 1,60                          |



For 1" - 1 1/4" bodies

| Code      | Flow rate (m <sup>3</sup> /h) |
|-----------|-------------------------------|
| 041M8 XXH | 1,80                          |
| 042M0 XXH | 2,00                          |
| 042M2 XXH | 2,25                          |
| 042M5 XXH | 2,50                          |
| 042M7 XXH | 2,75                          |
| 043M0 XXH | 3,00                          |
| 043M2 XXH | 3,25                          |
| 043M5 XXH | 3,50                          |
| 043M7 XXH | 3,75                          |
| 044M0 XXH | 4,00                          |
| 044M2 XXH | 4,25                          |
| 044M5 XXH | 4,50                          |
| 044M7 XXH | 4,75                          |
| 045M0 XXH | 5,00                          |



For 1 1/2" - 2" bodies, with adapter

| Code      | Flow rate (m <sup>3</sup> /h) |
|-----------|-------------------------------|
| 044M5 XXI | 4,50                          |
| 044M7 XXI | 4,75                          |
| 045M0 XXI | 5,00                          |



For 1 1/2" - 2" bodies

| Code      | Flow rate (m <sup>3</sup> /h) |
|-----------|-------------------------------|
| 055M5 XXI | 5,50                          |
| 056M0 XXI | 6,00                          |
| 056M5 XXI | 6,50                          |
| 057M0 XXI | 7,00                          |
| 057M5 XXI | 7,50                          |
| 058M0 XXI | 8,00                          |
| 058M5 XXI | 8,50                          |
| 059M0 XXI | 9,00                          |
| 059M5 XXI | 9,50                          |
| 0510M XXI | 10,0                          |
| 0511M XXI | 11,0                          |

Spare AUTOFLOW® cartridge complete with label for fixing to the body of the AUTOFLOW® device.

## SPARE POLYMER CARTRIDGES. For 128 series.



For 1/2" - 3/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 02M02 XXL | 0,02             |
| 02M04 XXL | 0,04             |
| 02M06 XXL | 0,06             |
| 02M08 XXL | 0,085            |
| 02M12 XXL | 0,12             |
| 02M15 XXL | 0,15             |
| 02M20 XXL | 0,20             |
| 02M25 XXL | 0,25             |
| 02M30 XXL | 0,30             |
| 02M35 XXL | 0,35             |
| 02M40 XXL | 0,40             |
| 02M50 XXL | 0,50             |
| 02M60 XXL | 0,60             |
| 02M70 XXL | 0,70             |
| 02M80 XXL | 0,80             |
| 02M90 XXL | 0,90             |
| 021M0 XXL | 1,00             |
| 021M2 XXL | 1,20             |
| 021M4 XXL | 1,40             |



For 1" - 1 1/4" bodies, with adapter

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 02M50 XXM | 0,50             |
| 02M60 XXM | 0,60             |
| 02M70 XXM | 0,70             |
| 02M80 XXM | 0,80             |
| 02M90 XXM | 0,90             |
| 021M0 XXM | 1,00             |
| 021M2 XXM | 1,20             |
| 021M4 XXM | 1,40             |
| 021M6 XXM | 1,60             |



For 1" - 1 1/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 041M8 XXM | 1,80             |
| 042M0 XXM | 2,00             |
| 042M2 XXM | 2,25             |
| 042M5 XXM | 2,50             |
| 042M7 XXM | 2,75             |
| 043M0 XXM | 3,00             |
| 043M2 XXM | 3,25             |
| 043M5 XXM | 3,50             |
| 043M7 XXM | 3,75             |
| 044M0 XXM | 4,00             |
| 044M2 XXM | 4,25             |
| 044M5 XXM | 4,50             |
| 044M7 XXM | 4,75             |
| 045M0 XXM | 5,00             |

Spare AUTOFLOW® cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device.

## SPARE POLYMER CARTRIDGES. For 121 - 126 series.



For 1/2" - 3/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 02M08 XXX | 0,085            |
| 02M12 XXX | 0,12             |
| 02M15 XXX | 0,15             |
| 02M20 XXX | 0,20             |
| 02M25 XXX | 0,25             |
| 02M30 XXX | 0,30             |
| 02M35 XXX | 0,35             |
| 02M40 XXX | 0,40             |
| 02M50 XXX | 0,50             |
| 02M60 XXX | 0,60             |
| 02M70 XXX | 0,70             |
| 02M80 XXX | 0,80             |
| 02M90 XXX | 0,90             |
| 021M0 XXX | 1,00             |
| 021M2 XXX | 1,20             |
| 021M4 XXX | 1,40             |
| 021M6 XXX | 1,60             |



For 1" - 1 1/4" bodies, with adapter

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 02M50 XXC | 0,50             |
| 02M60 XXC | 0,60             |
| 02M70 XXC | 0,70             |
| 02M80 XXC | 0,80             |
| 02M90 XXC | 0,90             |
| 021M0 XXC | 1,00             |
| 021M2 XXC | 1,20             |
| 021M4 XXC | 1,40             |
| 021M6 XXC | 1,60             |



For 1" - 1 1/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 041M8 XXC | 1,80             |
| 042M0 XXC | 2,00             |
| 042M2 XXC | 2,25             |
| 042M5 XXC | 2,50             |
| 042M7 XXC | 2,75             |
| 043M0 XXC | 3,00             |
| 043M2 XXC | 3,25             |
| 043M5 XXC | 3,50             |
| 043M7 XXC | 3,75             |
| 044M0 XXC | 4,00             |
| 044M2 XXC | 4,25             |
| 044M5 XXC | 4,50             |
| 044M7 XXC | 4,75             |
| 045M0 XXC | 5,00             |



For 1 1/2" - 2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 055M5 XXD | 5,50             |
| 056M0 XXD | 6,00             |
| 056M5 XXD | 6,50             |
| 057M0 XXD | 7,00             |
| 057M5 XXD | 7,50             |
| 058M0 XXD | 8,00             |
| 058M5 XXD | 8,50             |
| 059M0 XXD | 9,00             |
| 059M5 XXD | 9,50             |
| 0510M XXD | 10,0             |
| 0511M XXD | 11,0             |

### NOTE:

When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® device).

Spare AUTOFLOW® cartridge complete with metal tag for fixing to the body of the AUTOFLOW® device.

## AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE AND BALL VALVE

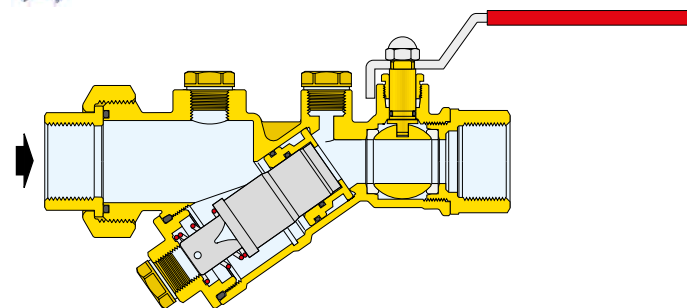


### 120 AUTOFLOW®

tech. broch. 01041

Combination of automatic flow rate regulator and ball valve.  
CR dezincification resistant alloy body.  
Stainless steel AUTOFLOW® cartridge.  
Max. working pressure: 25 bar.  
Temperature range: 0–110 °C.  
Max. percentage of glycol: 50 %.  
Δp range: 10–95 kPa; 22–210 kPa; 40–390 kPa.  
Flow rates: 0,12–15,5 m³/h.  
Accuracy: ± 5 %.

Fitted for connection of pressure ports and drain valve.



| Code       |        |   |   |  |
|------------|--------|---|---|--|
| 120141 ... | 1/2"   | 1 | – |  |
| 120151 ... | 3/4"   | 1 | – |  |
| 120161 ... | 1"     | 1 | – |  |
| 120171 ... | 1 1/4" | 1 | – |  |
| 120181 ... | 1 1/2" | 1 | – |  |
| 120191 ... | 2"     | 1 | – |  |

| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)                           |
|------------|-----------|-----------------------|----------------|---|
| 120141 ... | 6,90      | 10                    | 10–95          | 0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0     |
| 120151 ... | 7,73      | 10                    | 10–95          | 0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0     |
| 120161 ... | 17,04     | 10                    | 10–95          | 0,7; 0,8; 0,9; 1,0                          |
| 120171 ... | 17,74     | 10                    | 10–95          | 0,7; 0,8; 0,9; 1,0                          |
| 120181 ... | 47,24     | 10                    | 10–95          | 2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0; |
| 120191 ... | 48,89     | 10                    | 10–95          | 2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0; |

| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)  |
|------------|-----------|-----------------------|----------------|--|
| 120141 ... | 6,90      | 22                    | 22–210         | 0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8       |
| 120151 ... | 7,73      | 22                    | 22–210         | 0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8       |
| 120161 ... | 17,04     | 22                    | 22–210         | 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25 |
| 120171 ... | 17,74     | 22                    | 22–210         | 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25 |
| 120181 ... | 47,24     | 22                    | 22–210         | 4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0                   |
| 120191 ... | 48,89     | 22                    | 22–210         | 4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0                   |

| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)  |
|------------|-----------|-----------------------|----------------|--|
| 120141 ... | 6,90      | 40                    | 40–390         | 0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75                             |
| 120151 ... | 7,73      | 40                    | 40–390         | 0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75                             |
| 120161 ... | 17,04     | 40                    | 40–390         | 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0                    |
| 120171 ... | 17,74     | 40                    | 40–390         | 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0                    |
| 120181 ... | 47,24     | 40                    | 40–390         | 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5 |
| 120191 ... | 48,89     | 40                    | 40–390         | 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5 |

... For code completion see method of coding on page 242

#### Minimum differential pressure required

This is given by the sum of two values:

1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

Pump head  $H = \Delta p_{\text{circuit}} + \Delta p_{\text{require}}$

## AUTOMATIC FLOW RATE REGULATOR WITH STAINLESS STEEL CARTRIDGE



### 125 AUTOFLOW®

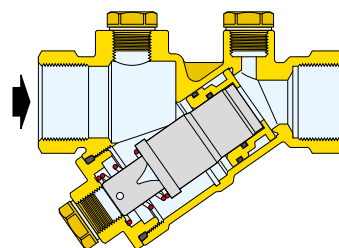
tech. broch. 01041

Automatic flow rate regulator.  
CR dezincification resistant alloy body.  
Stainless steel AUTOFLOW® cartridge.  
Max. working pressure: 25 bar.  
Temperature range: -20–110 °C.  
Max. percentage of glycol: 50 %.  
Δp range: 10–95 kPa; 22–210 kPa; 40–390 kPa.  
Flow rates: 0,12–17 m³/h.  
Accuracy: ± 5 %.

Fitted for connection of pressure ports and drain valve.

Code

|            |        |   |   |
|------------|--------|---|---|
| 125141 ... | 1/2"   | 1 | — |
| 125151 ... | 3/4"   | 1 | — |
| 125161 ... | 1"     | 1 | — |
| 125171 ... | 1 1/4" | 1 | — |
| 125181 ... | 1 1/2" | 1 | — |
| 125191 ... | 2"     | 1 | — |
| 125101 ... | 2 1/2" | 1 | — |



| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)                           |
|------------|-----------|-----------------------|----------------|---|
| 125141 ... | 6,69      | 10                    | 10–95          | 0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0     |
| 125151 ... | 7,58      | 10                    | 10–95          | 0,3; 0,45; 0,5; 0,6; 0,7; 0,8; 0,9; 1,0     |
| 125161 ... | 13,42     | 10                    | 10–95          | 0,7; 0,8; 0,9; 1,0                          |
| 125171 ... | 13,26     | 10                    | 10–95          | 0,7; 0,8; 0,9; 1,0                          |
| 125181 ... | 34,72     | 10                    | 10–95          | 2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0; |
| 125191 ... | 37,38     | 10                    | 10–95          | 2,75; 3,0; 3,25; 3,5; 3,75; 4,25; 5,0; 7,0; |

| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)  |
|------------|-----------|-----------------------|----------------|--|
| 125141 ... | 6,69      | 22                    | 22–210         | 0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8       |
| 125151 ... | 7,58      | 22                    | 22–210         | 0,12; 0,15; 0,2; 0,25; 0,35; 0,4; 0,6; 0,7; 0,8; 0,9; 1,2; 1,4; 1,6; 1,8       |
| 125161 ... | 13,42     | 22                    | 22–210         | 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25 |
| 125171 ... | 13,26     | 22                    | 22–210         | 1,0; 1,2; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25 |
| 125181 ... | 34,72     | 22                    | 22–210         | 4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0                   |
| 125191 ... | 37,38     | 22                    | 22–210         | 4,0; 4,5; 5,5; 6,0; 6,5; 7,5; 8,0; 8,5; 9,0; 9,5; 10,0; 11,0                   |
| 125101 ... | 75,82     | 22                    | 22–210         | 9,0; 9,5; 10,0; 11,0; 12,0; 13,5; 14,5; 15,5; 16,5; 17,0                       |

| Code       | Kv (m³/h) | Min. working Δp (kPa) | Δp range (kPa) | Flow rates (m³/h)  |
|------------|-----------|-----------------------|----------------|--|
| 125141 ... | 6,69      | 40                    | 40–390         | 0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75                             |
| 125151 ... | 7,58      | 40                    | 40–390         | 0,25; 0,35; 0,45; 0,55; 0,7; 0,9; 1,1; 1,4; 1,6; 1,8; 2,0; 2,25; 2,5; 2,75                             |
| 125161 ... | 13,42     | 40                    | 40–390         | 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0   |
| 125171 ... | 13,26     | 40                    | 40–390         | 2,5; 2,75; 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 5,0; 5,5; 6,0   |
| 125181 ... | 34,72     | 40                    | 40–390         | 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5 |
| 125191 ... | 37,38     | 40                    | 40–390         | 3,0; 3,25; 3,5; 3,75; 4,0; 4,25; 4,5; 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 10,0; 11,0; 12,0; 13,0; 14,5; 15,5 |
| 125101 ... | 75,82     | 40                    | 40–390         | 6,5; 7,0; 7,5; 8,0; 8,5; 9,0; 11,0   |

... For code completion see method of coding on page 242

#### Minimum differential pressure required

This is given by the sum of two values:

1. the minimum working Δp of the AUTOFLOW® cartridge;
2. the Δp required for the nominal flow rate to pass through the valve body. This value can be determined on the basis of the values of Kv shown above referring to the valve body.

$$\text{Pump head } H = \Delta p_{\text{circuit}} + \Delta p_{\text{require}}$$

## Method of coding AUTOFLOW® 120 - 125 series

For correct identification of the device, fill in the form indicating: series, size, flow rate and  $\Delta p$  range.

Complete code

| 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> | 4 <sup>th</sup> | 5 <sup>th</sup> | 6 <sup>th</sup>                | 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> |
|-----------------|-----------------|-----------------|-----------------|-----------------|--------------------------------|-----------------|-----------------|-----------------|
|                 |                 |                 | 1               |                 | 1                              |                 |                 |                 |
| SERIES          |                 |                 | SIZE            |                 | FLOW RATE AND $\Delta p$ RANGE |                 |                 |                 |

### SERIES

|                 |                 |                 |
|-----------------|-----------------|-----------------|
| 1 <sup>st</sup> | 2 <sup>nd</sup> | 3 <sup>rd</sup> |
|-----------------|-----------------|-----------------|

The first three digits indicate the series:

|     |                                    |
|-----|------------------------------------|
| 120 | AUTOFLOW® regulator and ball valve |
| 125 | AUTOFLOW® regulator                |

### SIZE

|                 |
|-----------------|
| 5 <sup>th</sup> |
|-----------------|

The fifth digit indicates the size:

| Size  | 1/2" | 3/4" | 1" | 1 1/4" | 1 1/2" | 2" | 2 1/2" |
|-------|------|------|----|--------|--------|----|--------|
| Digit | 4    | 5    | 6  | 7      | 8      | 9  | 0      |

### FLOW RATE AND $\Delta p$ RANGE

|                 |                 |                 |
|-----------------|-----------------|-----------------|
| 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> |
|-----------------|-----------------|-----------------|

The last three digits indicate the available flow rates.

#### $\Delta p$ range 10-95 kPa

| m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit |
|------|-------|------|-------|------|-------|------|-------|
| 0,30 | S30   | 0,70 | S70   | 2,75 | 2S7   | 3,75 | 3S7   |
| 0,45 | S45   | 0,80 | S80   | 3,00 | 3S0   | 4,25 | 4S2   |
| 0,50 | S50   | 0,90 | S90   | 3,25 | 3S2   | 5,00 | 5S0   |
| 0,60 | S60   | 1,00 | 1S0   | 3,50 | 3S5   | 7,00 | 7S0   |

#### $\Delta p$ range 22-210 kPa

| m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit |
|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| 0,12 | L12   | 0,70 | L70   | 1,80 | 1L8   | 3,50 | 3L5   | 6,50 | 6L5   | 11,0 | 11L   |
| 0,15 | L15   | 0,80 | L80   | 2,00 | 2L0   | 3,75 | 3L7   | 7,50 | 7L5   | 12,0 | 12L   |
| 0,20 | L20   | 0,90 | L90   | 2,25 | 2L2   | 4,00 | 4L0   | 8,00 | 8L0   | 13,5 | 13L   |
| 0,25 | L25   | 1,00 | 1L0   | 2,50 | 2L5   | 4,25 | 4L2   | 8,50 | 8L5   | 14,5 | 14L   |
| 0,35 | L35   | 1,20 | 1L2   | 2,75 | 2L7   | 4,50 | 4L5   | 9,00 | 9L0   | 15,5 | 15L   |
| 0,40 | L40   | 1,40 | 1L4   | 3,00 | 3L0   | 5,50 | 5L5   | 9,50 | 9L5   | 16,5 | 16L   |
| 0,60 | L60   | 1,60 | 1L6   | 3,25 | 3L2   | 6,00 | 6L0   | 10,0 | 10L   | 17,0 | 17L   |

#### $\Delta p$ range 40-390 kPa

| m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit | m³/h | digit |
|------|-------|------|-------|------|-------|------|-------|------|-------|------|-------|
| 0,25 | H25   | 1,10 | 1H1   | 2,50 | 2H5   | 4,00 | 4H0   | 6,50 | 6H5   | 10,0 | 10H   |
| 0,35 | H35   | 1,40 | 1H4   | 2,75 | 2H7   | 4,25 | 4H2   | 7,00 | 7H0   | 11,0 | 11H   |
| 0,45 | H45   | 1,60 | 1H6   | 3,00 | 3H0   | 4,50 | 4H5   | 7,50 | 7H5   | 12,0 | 12H   |
| 0,55 | H55   | 1,80 | 1H8   | 3,25 | 3H2   | 5,00 | 5H0   | 8,00 | 8H0   | 13,0 | 13H   |
| 0,70 | H70   | 2,00 | 2H0   | 3,50 | 3H5   | 5,50 | 5H5   | 8,50 | 8H5   | 14,5 | 14H   |
| 0,90 | H90   | 2,25 | 2H2   | 3,75 | 3H7   | 6,00 | 6H0   | 9,00 | 9H0   | 15,5 | 15H   |



## SPARE STAINLESS STEEL CARTRIDGES



Spare AUTOFLOW® cartridge complete with metal tag and metal chain for fixing to the body of the AUTOFLOW® device.

Available in different models depending on the flow rate.

The different colours identify the available models.

**NOTE:** When ordering, give the full code of the AUTOFLOW® device into which the cartridge is to be fitted (code shown on the metal plate supplied with every AUTOFLOW® device).

### Δp range 10–95 kPa

#### For 1/2" - 3/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 03S30 XXX | 0,30             |
| 03S45 XXX | 0,45             |
| 03S50 XXX | 0,50             |
| 03S60 XXX | 0,60             |
| 03S70 XXX | 0,70             |
| 03S80 XXX | 0,80             |
| 03S90 XXX | 0,90             |
| 031S0 XXX | 1,00             |

#### For 1" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 04S70 XXF | 0,70             |
| 04S80 XXF | 0,80             |
| 04S90 XXF | 0,90             |
| 041S0 XXF | 1,00             |

#### For 1 1/2" - 2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 052S7 XXX | 2,75             |
| 053S0 XXX | 3,00             |
| 053S2 XXX | 3,25             |
| 053S5 XXX | 3,50             |
| 053S7 XXX | 3,75             |
| 054S2 XXX | 4,25             |
| 055S0 XXX | 5,00             |
| 057S0 XXX | 17,00            |

### Δp range 22–210 kPa

#### For 1/2" - 3/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 03L12 XXX | 0,12             |
| 03L15 XXX | 0,15             |
| 03L20 XXX | 0,20             |
| 03L25 XXX | 0,25             |
| 03L35 XXX | 0,35             |
| 03L40 XXX | 0,40             |
| 03L60 XXX | 0,60             |
| 03L70 XXX | 0,70             |
| 03L80 XXX | 0,80             |
| 03L90 XXX | 0,90             |
| 031L2 XXX | 1,20             |
| 031L4 XXX | 1,40             |
| 031L6 XXX | 1,60             |
| 031L8 XXX | 1,80             |

#### For 1" - 1 1/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 041L0 XXF | 1,00             |
| 041L2 XXF | 1,20             |
| 041L4 XXF | 1,40             |
| 041L6 XXF | 1,60             |
| 041L8 XXF | 1,80             |
| 042L0 XXF | 2,00             |
| 042L2 XXF | 2,25             |
| 042L5 XXF | 2,50             |
| 042L7 XXF | 2,75             |
| 043L0 XXF | 3,00             |
| 043L2 XXF | 3,25             |
| 043L5 XXF | 3,50             |
| 043L7 XXF | 3,75             |
| 044L0 XXF | 4,00             |
| 044L2 XXF | 4,25             |

#### For 1 1/2" - 2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 054L0 XXX | 4,00             |
| 054L5 XXX | 4,50             |
| 055L5 XXX | 5,50             |
| 056L0 XXX | 6,00             |
| 056L5 XXX | 6,50             |
| 057L5 XXX | 7,50             |
| 058L0 XXX | 8,00             |
| 058L5 XXX | 8,50             |
| 059L0 XXX | 9,00             |
| 059L5 XXX | 9,50             |
| 0510L XXX | 10,00            |
| 0511L XXX | 11,00            |

#### For 2 1/2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 069L0 XXF | 9,00             |
| 069L5 XXF | 9,50             |
| 0610L XXF | 10,00            |
| 0611L XXF | 11,00            |
| 0612L XXF | 12,00            |
| 0613L XXF | 13,00            |
| 0614L XXF | 14,00            |
| 0615L XXF | 15,00            |
| 0616L XXF | 16,00            |
| 0617L XXF | 17,00            |

### Δp range 40–390 kPa

#### For 1/2" - 3/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 03H25 XXX | 0,25             |
| 03H35 XXX | 0,35             |
| 03H45 XXX | 0,45             |
| 03H55 XXX | 0,55             |
| 03H70 XXX | 0,70             |
| 03H90 XXX | 0,90             |
| 031H1 XXX | 1,10             |
| 031H4 XXX | 1,40             |
| 031H6 XXX | 1,60             |
| 031H8 XXX | 1,80             |
| 032H0 XXX | 2,00             |
| 032H2 XXX | 2,25             |
| 032H5 XXX | 2,50             |
| 032H7 XXX | 2,75             |

#### For 1" - 1 1/4" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 042H5 XXF | 2,50             |
| 042H7 XXF | 2,75             |
| 043H0 XXF | 3,00             |
| 043H2 XXF | 3,25             |
| 043H5 XXF | 3,50             |
| 043H7 XXF | 3,75             |
| 044H0 XXF | 4,00             |
| 044H2 XXF | 4,25             |
| 044H5 XXF | 4,50             |
| 045H0 XXF | 5,00             |
| 045H5 XXF | 5,50             |
| 046H0 XXF | 6,00             |

#### For 1 1/2" - 2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 043H0 XXX | 3,00             |
| 043H2 XXX | 3,25             |
| 043H5 XXX | 3,50             |
| 043H7 XXX | 3,75             |
| 044H0 XXX | 4,00             |
| 044H2 XXX | 4,25             |
| 044H5 XXX | 4,50             |
| 056H5 XXX | 6,50             |
| 057H0 XXX | 7,00             |
| 057H5 XXX | 7,50             |
| 058H0 XXX | 8,00             |
| 058H5 XXX | 8,50             |
| 059H0 XXX | 9,00             |
| 0510H XXX | 10,00            |
| 0511H XXX | 11,00            |
| 0512H XXX | 12,00            |
| 0513H XXX | 13,00            |
| 0514H XXX | 14,50            |
| 0515H XXX | 15,50            |

#### For 2 1/2" bodies

| Code      | Flow rate (m³/h) |
|-----------|------------------|
| 066H5 XXX | 6,50             |
| 067H0 XXX | 7,00             |
| 057H5 XXX | 7,50             |
| 058H0 XXX | 8,00             |
| 058H5 XXX | 8,50             |
| 059H0 XXX | 9,00             |
| 0511H XXX | 11,00            |

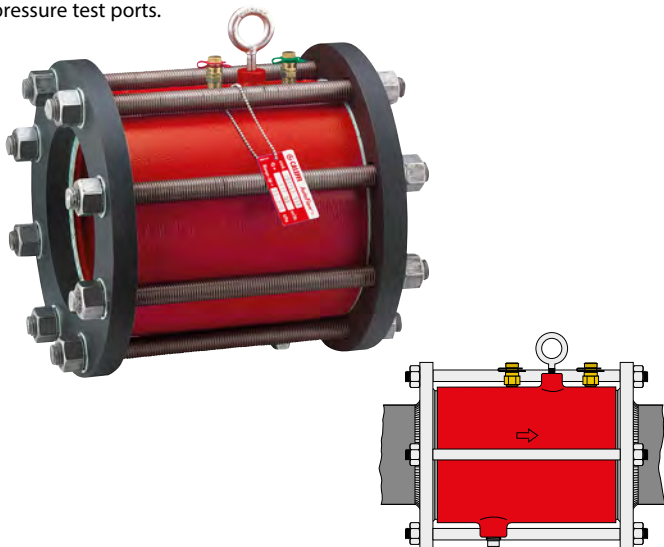
## AUTOMATIC FLOW REGULATOR WITH STAINLESS STEEL CARTRIDGE

### 103 AUTOFLOW®

tech. broch. 01041

Automatic flow rate regulator, flanged version.  
Cast iron body. Stainless steel AUTOFLOW® cartridge.  
Max. working pressure: 16 bar.  
Temperature range: -20–110°C.  
Max. percentage of glycol: 50 %.  
Δp range: 22–210 kPa; 40–390 kPa; 55–210 kPa.  
Flow rates: 9–4400 m³/h.  
Accuracy: ± 5 %.

Supplied with flat counterflanges EN 1092-1 PN 16, rods, gasket and quick-fit pressure test ports.



#### Minimum differential pressure required

This is equal to the min. working Δp of the AUTOFLOW® cartridge (22, 40 or 55 kPa).  
Pump head  $H = \Delta p_{\text{circuit}} + \Delta p_{\text{require}}$

| Code       | DN    | Min. working (kPa) | Flow rates (m³/h) | Δp range (kPa) |   |   |
|------------|-------|--------------------|-------------------|----------------|---|---|
| 103111 ... | 65    | 22                 | 9– 17             | 22–210         | 1 | – |
| 103113 ... | 65    | 40                 | 18– 23            | 40–390         | 1 | – |
| 103114 ... | 65    | 55                 | 25– 36            | 55–210         | 1 | – |
| 103121 ... | 80    | 22                 | 9– 17             | 22–210         | 1 | – |
| 103123 ... | 80    | 40                 | 18– 23            | 40–390         | 1 | – |
| 103124 ... | 80    | 55                 | 25– 36            | 55–210         | 1 | – |
| 103231 ... | 100** | 22                 | 18– 34            | 22–210         | 1 | – |
| 103233 ... | 100** | 40                 | 23– 45            | 40–390         | 1 | – |
| 103234 ... | 100** | 55                 | 50– 73            | 55–210         | 1 | – |
| 103141 ... | 125   | 22                 | 18– 34            | 22–210         | 1 | – |
| 103143 ... | 125   | 40                 | 23– 45            | 40–390         | 1 | – |
| 103144 ... | 125   | 55                 | 50– 73            | 55–210         | 1 | – |
| 103151 ... | 150   | 22                 | 40– 68            | 22–210         | 1 | – |
| 103153 ... | 150   | 40                 | 40– 91            | 40–390         | 1 | – |
| 103154 ... | 150   | 55                 | 92–145            | 55–210         | 1 | – |
| 103161 ... | 200*  | 22                 | 80–119            | 22–210         | 1 | – |
| 103163 ... | 200*  | 40                 | 80–159            | 40–390         | 1 | – |
| 103164 ... | 200*  | 55                 | 160–255           | 55–210         | 1 | – |
| 103171 ... | 250*  | 22                 | 110–187           | 22–210         | 1 | – |
| 103173 ... | 250*  | 40                 | 110–250           | 40–390         | 1 | – |
| 103174 ... | 250*  | 55                 | 251–400           | 55–210         | 1 | – |
| 103181 ... | 300   | 22                 | 150–255           | 22–210         | 1 | – |
| 103183 ... | 300   | 40                 | 150–341           | 40–390         | 1 | – |
| 103184 ... | 300   | 55                 | 342–545           | 55–210         | 1 | – |

\* Supplied with ANSI 150 flanges.

\*\* Supplied with flanges EN 1092-1 PN 25.

They are available on request in sizes DN 350 to DN 1000, with flow rates up to 4400 m³/h.

To identify AUTOFLOW® devices and their codes correctly, contact Caleffi technical support in advance.

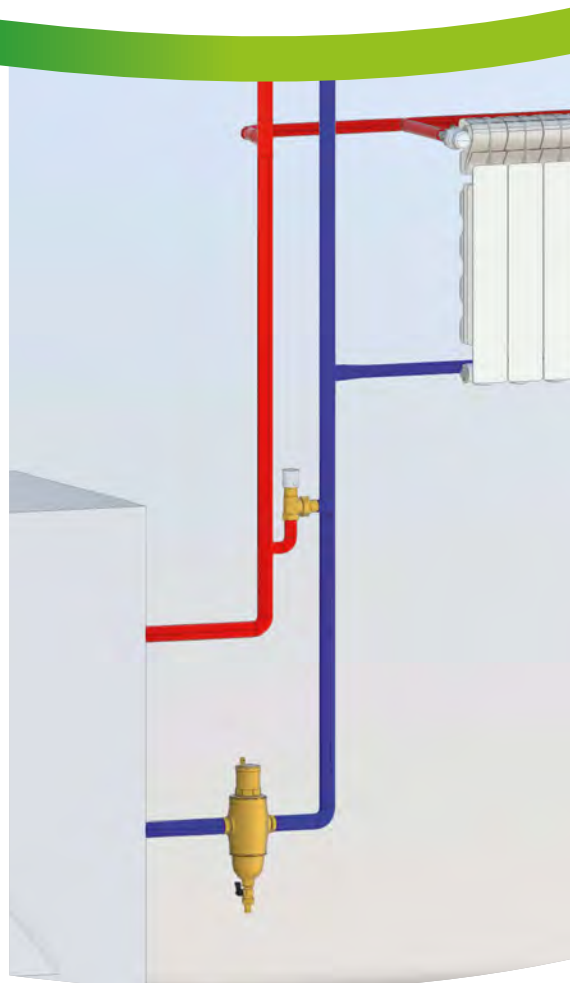
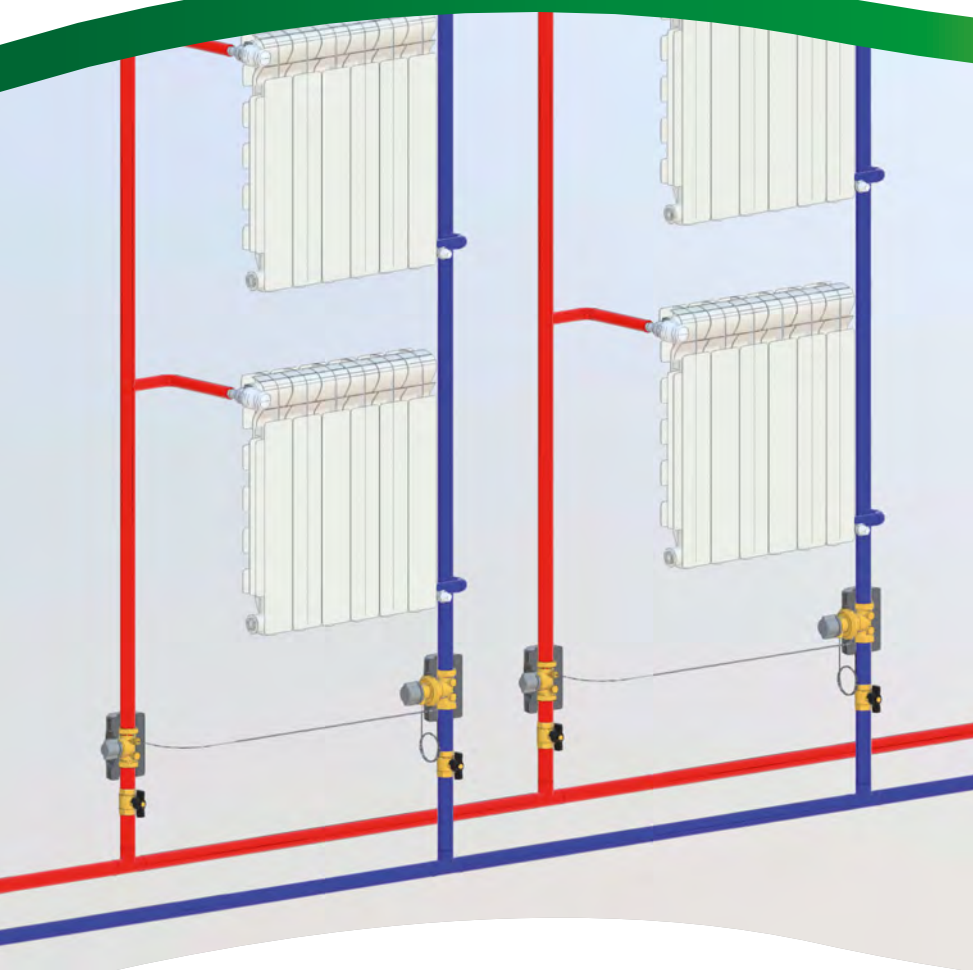
## Method of coding AUTOFLOW® 103 series

To identify AUTOFLOW® devices and their codes correctly, contact Caleffi technical support in advance.

For correct identification of the device, fill in the form indicating: size, Δp range and the flow rate.

|               |                 |  |                 |  |                 |                 |                 |                 |                 |     |        |     |     |     |
|---------------|-----------------|--|-----------------|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----|--------|-----|-----|-----|
| Complete code | 1 <sup>st</sup> | 2 <sup>nd</sup>  | 3 <sup>rd</sup> | 4 <sup>th</sup>                                      | 5 <sup>th</sup> | 6 <sup>th</sup> | 7 <sup>th</sup> | 8 <sup>th</sup> | 9 <sup>th</sup> |     |        |     |     |     |
|               | 1               | 0  | 3               | 1  |                 |                 |                 |                 |                 |     |        |     |     |     |
|               | Series          |  |                 | (*)  | SIZE            | Δp RANGE        | FLOW RATE       |                 |                 |     |        |     |     |     |
| (*)           | 4 <sup>th</sup> | for codes 103231<br>103233<br>103234                                   |                 |  |                 | DN              | 100             |                 |                 |     |        |     |     |     |
|               |                 |  |                 |  |                 | Digit           | 2               |                 |                 |     |        |     |     |     |
| SIZE          | 5 <sup>th</sup> | The fifth figure indicates the size:                                   |                 |  |                 | DN              | 65              | 80              | 100             | 125 | 150    | 200 | 250 | 300 |
|               |                 |  |                 |  |                 | Digit           | 1               | 2               | 3               | 4   | 5      | 6   | 7   | 8   |
| Δp RANGE      | 6 <sup>th</sup> | The sixth figure indicates the differential pressure range (Δp range): |                 |  |                 | kPa             | 22–210          |                 | 40–390          |     | 55–210 |     |     |     |
|               |                 |  |                 |  |                 | Digit           | 1               |                 | 3               |     | 4      |     |     |     |
| FLOW RATE     | 7 <sup>th</sup> | 8 <sup>th</sup>  | 9 <sup>th</sup> | The last three digits indicate the flow rate values. |                 |                 |                 |                 |                 |     |        |     |     |     |

## DIFFERENTIAL PRESSURE CONTROL DEVICES



 **BIM**  
bim.caleffi.com

**Differential pressure control valve**  
**Differential by-pass valve**  
**Measuring and control accessories**

## DIFFERENTIAL PRESSURE CONTROL VALVE (DPCV)



**140**



tech. broch. 01250

Differential pressure control valve (DPCV).  
CR dezincification resistant alloy body.  
Complete with capillary pipe for connection to the valve on the flow pipe.

**With insulation.**

Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Length of capillary pipe Ø 3 mm: 1,5 m.



| Code   | Differential pressure adjustable set (mbar) |         |                    |  |  |
|--------|---|---------|--------------------|---|---|
| 140340 | 1/2"  | 50–300  |                    | 1   | 5   |
| 140440 | 1/2"  | 250–600 |                    | 1   | 5   |
| 140350 | 3/4"  | 50–300  |                    | 1   | 5   |
| 140450 | 3/4"  | 250–600 |                    | 1   | 5   |
| 140360 | 1"  | 50–300  |                    | 1   | 5   |
| 140460 | 1"  | 250–600 |                    | 1   | 5   |
| 140342 | 1/2"  | 50–300  | without insulation | 1   | 5   |
| 140442 | 1/2"  | 250–600 | without insulation | 1   | 5   |
| 140352 | 3/4"  | 50–300  | without insulation | 1   | 5   |
| 140452 | 3/4"  | 250–600 | without insulation | 1   | 5   |
| 140362 | 1"  | 50–300  | without insulation | 1   | 5   |
| 140462 | 1"  | 250–600 | without insulation | 1   | 5   |



**140**



tech. broch. 01250

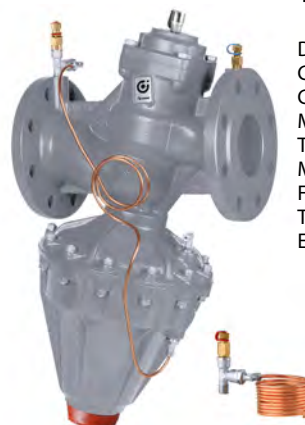
Differential pressure control valve (DPCV).  
CR dezincification resistant alloy body.  
Complete with capillary pipe for connection to the valve on the flow pipe.

**With insulation.**

Max. working pressure: 10 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Length of capillary pipe Ø 3 mm: 1,5 m.





| Code   | Differential pressure adjustable set (mbar) |         |                    |  |  |
|--------|---|---------|--------------------|---|---|
| 140370 | 1 1/4"                                      | 50–300  |                    | 1   | –   |
| 140470 | 1 1/4"                                      | 250–600 |                    | 1   | –   |
| 140380 | 1 1/2"                                      | 50–300  |                    | 1   | –   |
| 140480 | 1 1/2"                                      | 250–600 |                    | 1   | –   |
| 140372 | 1 1/4"                                      | 50–300  | without insulation | 1   | –   |
| 140472 | 1 1/4"                                      | 250–600 | without insulation | 1   | –   |
| 140382 | 1 1/2"                                      | 50–300  | without insulation | 1   | –   |
| 140482 | 1 1/2"                                      | 250–600 | without insulation | 1   | –   |
| 140392 | 2"  | 50–300  | without insulation | 1   | –   |
| 140492 | 2"  | 250–600 | without insulation | 1   | –   |



**140**

Differential pressure control valve (DPCV).  
Cast iron body.  
Complete with pressure ports.  
Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.  
Flanged connections PN 16.  
To be coupled with flat counterflanges EN 1092-1.

| Code   | Differential pressure adjustable set (mbar) |          |  |  |  |
|--------|---|----------|--|---|---|
| 140506 | DN 65                                       | 200–800  |  | 1   | –   |
| 140606 | DN 65                                       | 800–1600 |  | 1   | –   |
| 140508 | DN 80                                       | 200–800  |  | 1   | –   |
| 140608 | DN 80                                       | 800–1600 |  | 1   | –   |
| 140510 | DN 100                                      | 200–800  |  | 1   | –   |
| 140610 | DN 100                                      | 800–1600 |  | 1   | –   |
| 140512 | DN 125                                      | 200–800  |  | 1   | –   |
| 140515 | DN 150                                      | 200–800  |  | 1   | –   |





**142**

tech. broch. 01250

Shut-off and pre-regulation valve.  
CR dezincification resistant alloy body.  
Complete with pressure test ports for connection of capillary pipe.

**With insulation.**

Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.

| Code   |      |                    |  |  |  |
|--------|------|--------------------|--|---|---|
| 142140 | 1/2" |                    |  | 1   | 5   |
| 142150 | 3/4" |                    |  | 1   | 5   |
| 142160 | 1"   |                    |  | 1   | 10  |
| 142240 | 1/2" | without insulation |  | 1   | 10  |
| 142250 | 3/4" | without insulation |  | 1   | 10  |
| 142260 | 1"   | without insulation |  | 1   | 10  |





**142**

tech. broch. 01250

Shut-off and pre-regulation valve.  
CR dezincification resistant alloy body.  
Complete with pressure test ports for connection of capillary pipe.

**With insulation.**

Max. working pressure: 16 bar.  
Temperature range: -10–120 °C.  
Max. percentage of glycol: 50 %.

| Code   |        |                    |  |  |  |
|--------|--------|--------------------|--|---|---|
| 142170 | 1 1/4" |                    |  | 1   | –   |
| 142180 | 1 1/2" |                    |  | 1   | –   |
| 142270 | 1 1/4" | without insulation |  | 1   | 5   |
| 142280 | 1 1/2" | without insulation |  | 1   | 5   |
| 142290 | 2"     | without insulation |  | 1   | –   |

## DIFFERENTIAL BY-PASS VALVES



**519**

tech. broch. 01007

Differential by-pass valve, adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–110 °C.  
Max. percentage of glycol: 30 %.



### Threaded connections

| Code          |        | Setting range<br>m w.g. |   |    |
|---------------|--------|-------------------------|---|----|
| <b>519500</b> | 3/4"   | 1–6                     | 1 | 50 |
| <b>519504</b> | 3/4"   | 10–40                   | 1 | 50 |
| <b>519700</b> | 1 1/4" | 1–6                     | 1 | 10 |
| <b>519703</b> | 1 1/4" | 5–25                    | 1 | 10 |

### Compression ends

| Code          |      | Setting range<br>m w.g. |   |    |
|---------------|------|-------------------------|---|----|
| <b>519002</b> | Ø 22 | 1–6                     | 1 | 50 |



**NEW**

**519**

tech. broch. 01007

Differential by-pass valve, adjustable with graduated scale.  
Max. working pressure: 10 bar.  
Temperature range: 0–100 °C.  
Max. percentage of glycol: 30 %.

| Code          |      | Setting range<br>m w.g. |   |    |
|---------------|------|-------------------------|---|----|
| <b>519015</b> | 3/4" | 1–6                     | 1 | 25 |

## MEASURING STATION

**130**

tech. broch. 01251

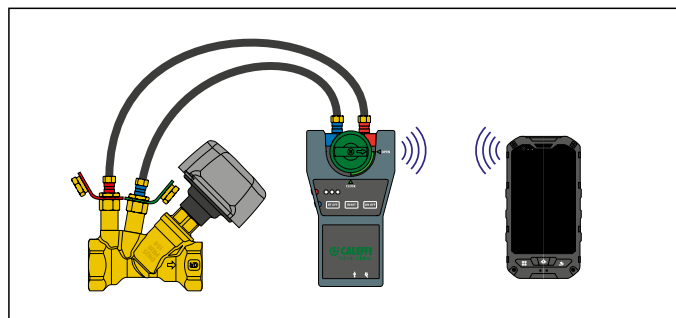
Electronic flow rate and differential pressure measuring station.  
Supplied complete with shut-off and connection fittings.  
Can be used for measuring the flow rate of balancing valves 130, 142 series and of the flow metering device 683 series.  
Suitable for  $\Delta p$  measurement of automatic flow rate regulators.  
Electric supply from battery.  
Bluetooth® transmission between  $\Delta p$  measuring station and remote control unit.  
Versions complete with remote control unit with Android® application for Smartphone and Tablet.  
Measurement range: 0–1000 kPa.  
Static Pmax: 1000 kPa.



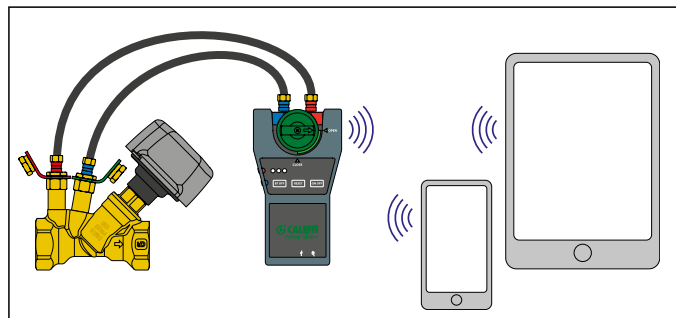
**Smart Balancing Caleffi**  
Available app for smartphone.  
Download for your Android® mobile phone.

| Code          |  |   |   |
|---------------|--|---|---|
| <b>130006</b> | complete with remote control unit, with Android® application | 1 | – |
| <b>130005</b> | without remote control unit, with Android® application       | 1 | – |

### Transmission via Bluetooth® to the terminal with Android® application



### Transmission via Bluetooth® to Smartphone/Tablet with Android® application





## MEASURING AND CONTROL ACCESSORIES



**100**

tech. broch. 01041

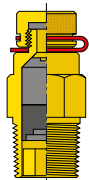
Pair of fast-plug pressure/temperature test ports. Their special construction allows rapid and accurate measurements while ensuring leaktightness.

Can be used for:

- checking the working range of AUTOFLOW®;
- checking the clog degree of strainers;
- checking the heat output of the terminals.

Cap cover facing available in:

- - **Red** for upstream pressure test port.
- - **Green** for downstream pressure test port.



Brass body.

EPDM seals.

Max. working pressure: 30 bar.

Temperature range: -5–130 °C.

Code

**100000** 1/4"



1 100



**538**

tech. broch. 01041

Drain cock with hose connection and cap.

Max. working pressure: 10 bar.

Max. working temperature: 110 °C.

Code

**538201** 1/4" M



1 -

**538400** 1/2" M

1 100



**140**

Tee for pressure test ports.

Codice

**140002** 1/4"



1 -



**538**

Manual shut-off cock.

Brass body.

Seals in non-asbestos fibre.

Max. working pressure: 16 bar.

Temperature range: -10–120 °C.

Code

**538203** 1/4"



1 -



**100**

tech. broch. 01041

Pair of fittings with fast-plug syringe for connection of pressure ports to measuring instruments.

1/4" female threaded connection.

Max. working pressure: 10 bar.

Max. working temperature: 110 °C.

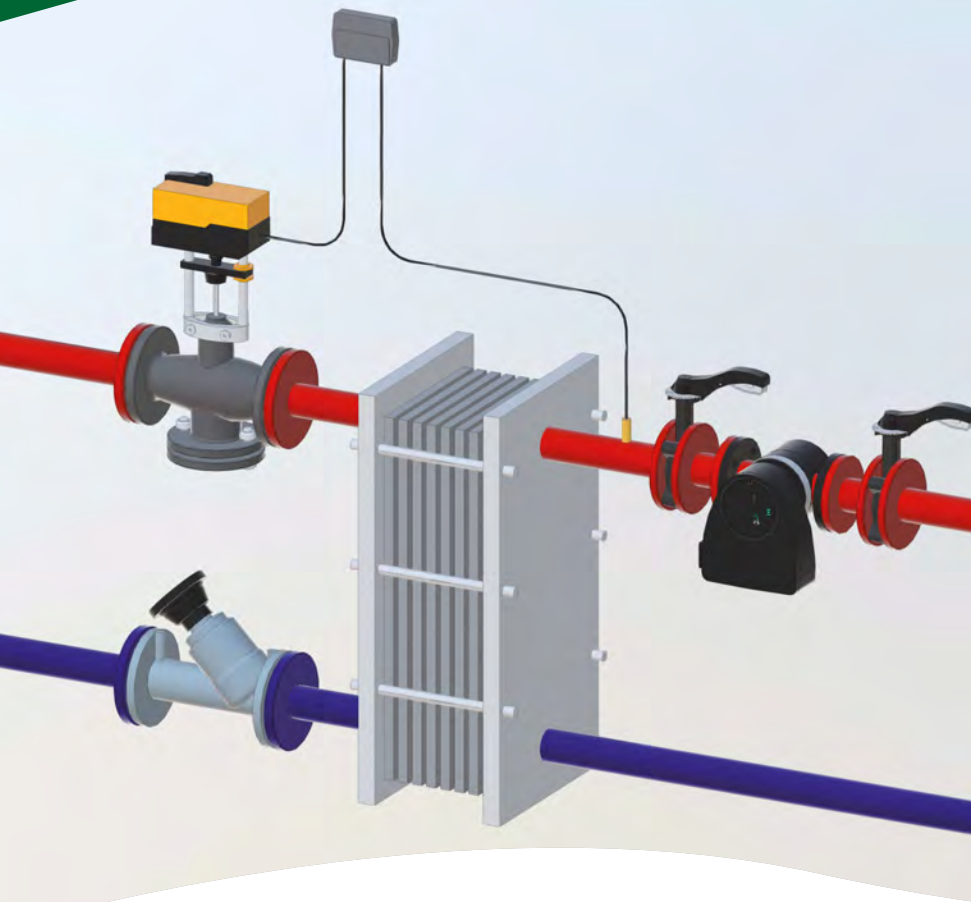
Code

**100010** 1/4"



1 -

## REGULATING VALVES



 **BIM**  
bim.caleffi.com

**Regulating valves**  
**Mixing valves**  
**Actuators for mixing valves**  
**Motorised mixing valves**  
**Actuators**  
**Temperature regulators**

## REGULATING VALVES



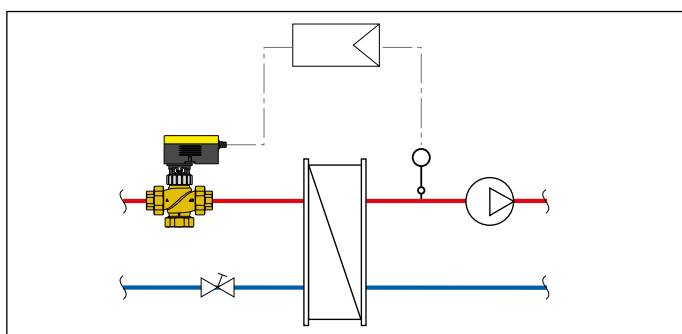
### 636

tech. broch. 01354

Two-way regulating globe valve, threaded.  
Female union connections.  
CR dezincification resistant alloy body. PN 16.  
Equipercentage regulation.  
Max. working pressure: 16 bar.  
Temperature range: 0–100 °C.

| Code   | DN | Conn.  | Kv (m³/h) |   |   |
|--------|----|--------|-----------|---|---|
| 636400 | 15 | 1/2"   | 4         | 1 | – |
| 636500 | 20 | 3/4"   | 6,3       | 1 | – |
| 636600 | 25 | 1"     | 10        | 1 | – |
| 636700 | 32 | 1 1/4" | 16        | 1 | – |
| 636800 | 40 | 1 1/2" | 22        | 1 | – |
| 636900 | 50 | 2"     | 28        | 1 | – |

Application diagram of threaded two-way regulating valve



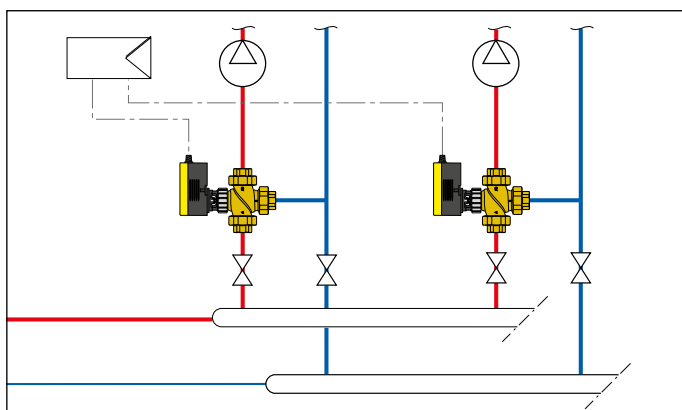
### 636

tech. broch. 01354

Three-way regulating globe valve, threaded.  
Female union connections.  
CR dezincification resistant alloy body. PN 16.  
Equipercentage/linear regulation.  
Max. working pressure: 16 bar.  
Temperature range: 0–100 °C.

| Code   | DN | Conn.  | Kv (m³/h) |   |   |
|--------|----|--------|-----------|---|---|
| 636410 | 15 | 1/2"   | 4         | 1 | – |
| 636510 | 20 | 3/4"   | 6,3       | 1 | – |
| 636610 | 25 | 1"     | 10        | 1 | – |
| 636710 | 32 | 1 1/4" | 16        | 1 | – |
| 636810 | 40 | 1 1/2" | 22        | 1 | – |
| 636910 | 50 | 2"     | 28        | 1 | – |

Application diagram of threaded three-way regulating valve



### 636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.  
Supply: **24 V**.  
Control signal: **2 points, 3 points, 0–10 V**.  
Power consumption: 8,5 VA.  
Protection class: IP 54.  
Operating time: 35 s, 60 s, 120 s.  
Ambient temperature range: -10–55 °C.



| Code   | Tension V | Nominal force (N) |   |   |
|--------|-----------|-------------------|---|---|
| 636004 | 24        | 250               | 1 | – |



### 636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.  
Supply: **230 V**.  
Control signal: **2 points, 3 points**.  
Power consumption: 4 VA.  
Protection class: IP 54.  
Operating time: 120 s.  
Ambient temperature range: -10–55 °C.



| Code   | Tension V | Nominal force (N) |   |   |
|--------|-----------|-------------------|---|---|
| 636002 | 230       | 500               | 1 | – |



### 636

tech. broch. 01354

Actuator for threaded regulating valves 636 series.  
Supply: **24 V**.  
Control signal: **2 points, 3 points, 0–10 V**.  
Power consumption: 8,7 VA.  
Protection class: IP 54.  
Operating time: 60 s, 120 s.  
Ambient temperature range: -10–55 °C.



| Code   | Tension V | Nominal force (N) |   |   |
|--------|-----------|-------------------|---|---|
| 636014 | 24        | 500               | 1 | – |

Max. Δp table: actuator + threaded valve body 636 series

| Code body valve | Actuator code 636004 | Actuator code 636002 | Actuator code 636014 |
|-----------------|----------------------|----------------------|----------------------|
| 6364.0          | 4 bar                | 6 bar                | 6 bar                |
| 6365.0          | 4 bar                | 5 bar                | 5 bar                |
| 6366.0          | 4 bar                | 4 bar                | 4 bar                |
| 6367.0          | 3 bar                | 3,5 bar              | 3,5 bar              |
| 6368.0          | 1,9 bar              | 3 bar                | 3 bar                |
| 6369.0          | 1 bar                | 2,4 bar              | 2,4 bar              |

## REGULATING VALVES



**636**

tech. broch. 01354

Two/three-way regulating globe valve, flanged.  
Grey cast iron body.  
Flanged connections. PN 16.  
To be coupled with flat counterflanges EN 1092-1.  
Equipercentage regulation (two-way).  
Equipercentage/linear regulation (three-way).  
Max. working pressure: 16 bar.  
Temperature range: 0–100 °C.  
**The valve can be transformed into a three-way valve by opening the central third port.**



**636**

tech. broch. 01354

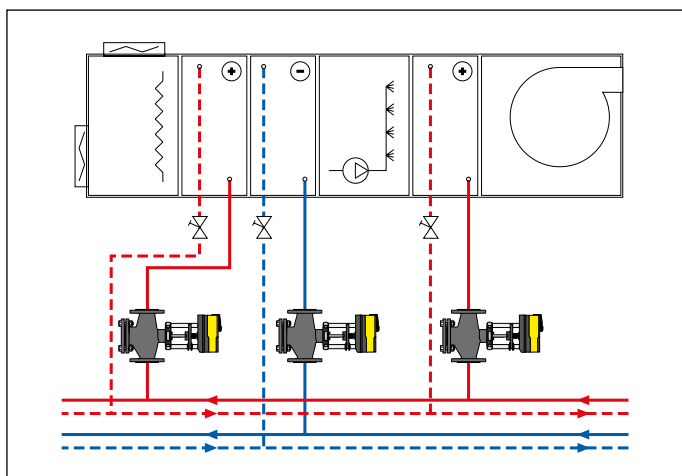
Actuator for flanged regulating valves 636 series.  
codes 636060 and 636080.  
Supply: **24 V**.  
Control signal: **2 points, 3 points, 0–10 V**.  
Power consumption: 3,5 VA.  
Protection class: IP 54.  
Operating time: 80 s / 120 s.  
Ambient temperature range: -10–55 °C.

CE

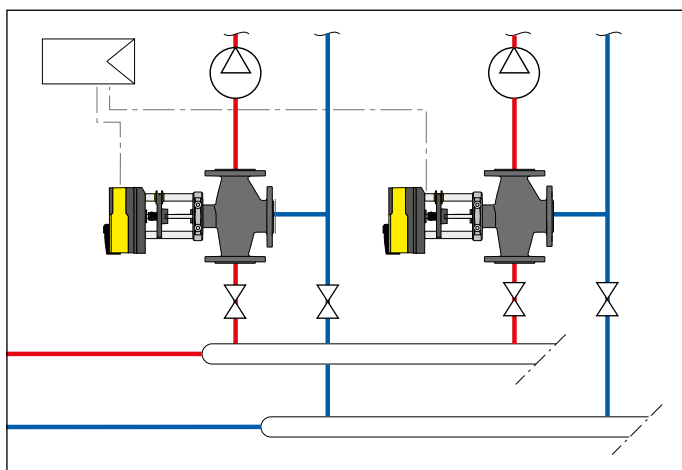
| Code   | Tension<br>V | Nominal force<br>(N) |   |   |
|--------|--------------|----------------------|---|---|
| 636024 | 24           | 1.000                | 1 | – |

| Code   |        | Kv (m³/h) |   |   |
|--------|--------|-----------|---|---|
| 636060 | DN 65  | 63        | 1 | – |
| 636080 | DN 80  | 100       | 1 | – |
| 636100 | DN 100 | 160       | 1 | – |
| 636120 | DN 125 | 220       | 1 | – |
| 636150 | DN 150 | 320       | 1 | – |

Application diagram of flanged two-way regulating valve



Application diagram of flanged three-way regulating valve



**636**

tech. broch. 01354

Actuator for flanged regulating valves 636 series.  
Supply: **24 V**.  
Control signal: **2 points, 3 points, 0–10 V**.  
Power consumption: 20 VA.  
Protection class: IP 66.  
Operating time:  
40 s / 80 s / 120 s (DN 65–DN 80),  
80 s / 160 s / 240 s (DN 100–DN 150).  
Ambient temperature range: -10–55 °C.

CE

| Code   | Tension<br>V | Nominal force<br>(N) |   |   |
|--------|--------------|----------------------|---|---|
| 636034 | 24           | 2.500                | 1 | – |

Max. Δp table: actuator + flanged valve body 636 series

| Code<br>body valve | Actuator<br>code 636024 | Actuator<br>code 636034 |
|--------------------|-------------------------|-------------------------|
| 636060             | 2,5 bar                 | 3 bar                   |
| 636080             | 1,5 bar                 | 3 bar                   |
| 636100             | –                       | 2 bar                   |
| 636125             | –                       | 1,5 bar                 |
| 636150             | –                       | 1 bar                   |

## MIXING VALVES

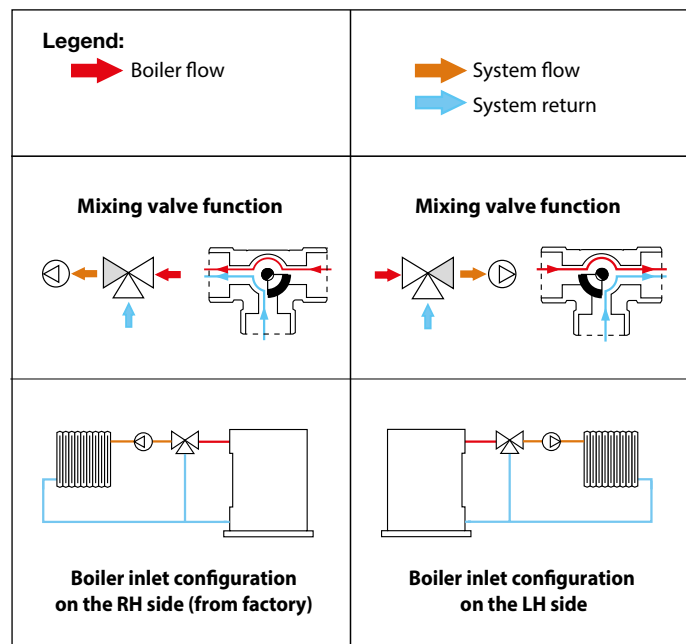
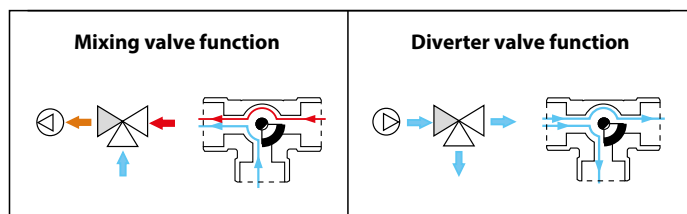


### 610

tech. broch. 01353

Three-way sector mixing valve,  
threaded connections.  
Brass body.  
PN 10.  
Max. working pressure: 10 bar.  
Max. Δp: 1 bar.  
Temperature range: 5–110 °C.  
**Factory configuration:**  
**boiler inlet on the RH connection.**

| Code   |           | Kv (m³/h) |   |   |
|--------|-----------|-----------|---|---|
| 610400 | Rp 1/2"   | 4         | 1 | – |
| 610500 | Rp 3/4"   | 6,3       | 1 | – |
| 610600 | Rp 1"     | 10        | 1 | – |
| 610700 | Rp 1 1/4" | 15        | 1 | – |
| 610800 | Rp 1 1/2" | 25        | 1 | – |
| 610900 | Rp 2"     | 40        | 1 | – |



## ACTUATORS FOR MIXING VALVES



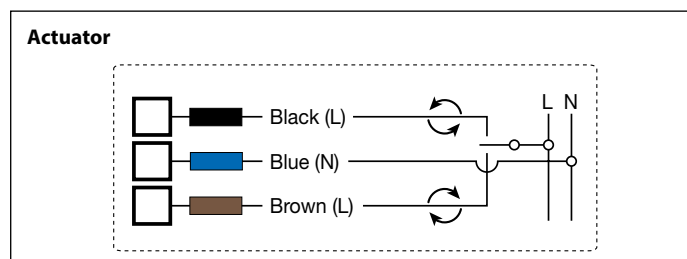
### 6370

tech. broch. 01353

Actuator for mixing valves  
codes 610.00 from 1/2" to 2".  
Supply: 230 V - 50 Hz.  
Control signal: 3 points.  
Power consumption: 3 VA.  
Protection class: IP 44.  
Rotation 90°.  
Operating time: 150 s.  
Ambient temperature range: 0–55 °C.  
Storage temperature range: -10–70 °C.  
Supply cable length: 1,5 m.

| Code   | Tension V | Actuator torque (N·m) |   |   |
|--------|-----------|-----------------------|---|---|
| 637042 | 230       | 5                     | 1 | – |

#### Wiring diagram



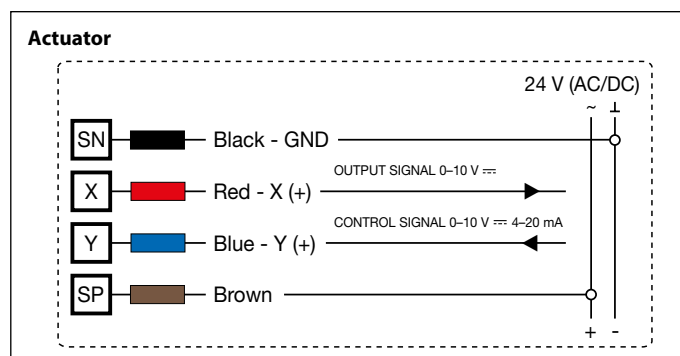
### 6370

tech. broch. 01353

Actuator for mixing valves  
codes 610.00 from 1/2" to 2".  
Supply: 24 V.  
Control signal: 0–10 V.  
Power consumption: 2 W.  
Protection class: IP 44.  
Rotation 90°.  
Operating time: 75 s.  
Ambient temperature range: 0–55 °C.  
Storage temperature range: -10–70 °C.  
Supply cable length: 1,5 m.

| Code   | Tension V | Actuator torque (N·m) |   |   |
|--------|-----------|-----------------------|---|---|
| 637044 | 24        | 5                     | 1 | – |

#### Wiring diagram





## MIXING VALVES





**610**

tech. broch. 01169

Three-way butterfly mixing valve.  
Threaded connections.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |        | Kv (m³/h) |  |  |
|--------|--------|-----------|---|---|
| 610005 | 3/4"   | 7,5       | 1   | –   |
| 610006 | 1"     | 11,9      | 1   | –   |
| 610007 | 1 1/4" | 16,8      | 1   | –   |
| 610008 | 1 1/2" | 30        | 1   | –   |
| 610009 | 2"     | 45        | 1   | –   |
| 610020 | 2 1/2" | 72        | 1   | –   |





**610**

tech. broch. 01169

Three-way butterfly mixing valve.  
Body PN 6.  
Flanged connections.  
To be coupled with  
flat counterflanges EN 1092-1.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |                | Kv (m³/h) |  |  |
|--------|----------------|-----------|---|---|
| 610050 | DN 50 (2")     | 45        | 1   | –   |
| 610060 | DN 65 (2 1/2") | 72        | 1   | –   |
| 610080 | DN 80 (3")     | 140       | 1   | –   |
| 610100 | DN 100 (4")    | 183       | 1   | –   |
| 610120 | DN 125 (5")    | 340       | 1   | –   |





**611**

tech. broch. 01169

Four-way butterfly mixing valve.  
Threaded connections.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |        | Kv (m³/h) |  |  |
|--------|--------|-----------|---|---|
| 611005 | 3/4"   | 7,8       | 1   | –   |
| 611006 | 1"     | 12,3      | 1   | –   |
| 611007 | 1 1/4" | 18,5      | 1   | –   |
| 611008 | 1 1/2" | 30        | 1   | –   |
| 611009 | 2"     | 53        | 1   | –   |
| 611020 | 2 1/2" | 80        | 1   | –   |





**611**

tech. broch. 01169

Four-way butterfly mixing valve.  
Body PN 6.  
Flanged connections.  
To be coupled with  
flat counterflanges EN 1092-1.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |                | Kv (m³/h) |  |  |
|--------|----------------|-----------|---|---|
| 611050 | DN 50 (2")     | 53        | 1   | –   |
| 611060 | DN 65 (2 1/2") | 80        | 1   | –   |
| 611080 | DN 80 (3")     | 140       | 1   | –   |
| 611100 | DN 100 (4")    | 230       | 1   | –   |
| 611120 | DN 125 (5")    | 410       | 1   | –   |





**612**

tech. broch. 01169

Three-way sector mixing valve.  
Threaded connections.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |        | Kv (m³/h) |  |  |
|--------|--------|-----------|---|---|
| 612005 | 3/4"   | 7,2       | 1   | –   |
| 612006 | 1"     | 11,9      | 1   | –   |
| 612007 | 1 1/4" | 16,5      | 1   | –   |
| 612008 | 1 1/2" | 30        | 1   | –   |
| 612009 | 2"     | 42        | 1   | –   |
| 612020 | 2 1/2" | 62        | 1   | –   |





**612**

tech. broch. 01169

Three-way sector mixing valve.  
Body PN 6.  
Flanged connections.  
To be coupled with  
flat counterflanges EN 1092-1.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.

**Heavy series.**

**Factory configuration:**  
boiler inlet on the RH connection.

| Code   |                | Kv (m³/h) |  |  |
|--------|----------------|-----------|---|---|
| 612050 | DN 50 (2")     | 42        | 1   | –   |
| 612060 | DN 65 (2 1/2") | 62        | 1   | –   |
| 612080 | DN 80 (3")     | 123       | 1   | –   |
| 612100 | DN 100 (4")    | 172       | 1   | –   |
| 612120 | DN 125 (5")    | 340       | 1   | –   |

## MOTORISED MIXING VALVES





### 6120

Motorised three-way sector mixing valve.  
Threaded connections.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.



Boiler inlet on the RH connection

| Code   |        | Supply voltage<br>V | Kv (m³/h) |  |  |
|--------|--------|---------------------|-----------|---|---|
| 612025 | 3/4"   | 230                 | 7,2       | 1   | –   |
| 612026 | 1"     | 230                 | 11,9      | 1   | –   |
| 612027 | 1 1/4" | 230                 | 16,5      | 1   | –   |
| 612028 | 1 1/2" | 230                 | 30        | 1   | –   |
| 612029 | 2"     | 230                 | 42        | 1   | –   |
| 612021 | 2 1/2" | 230                 | 62        | 1   | –   |





### 6120

Motorised three-way sector mixing valve.  
Threaded connections.  
Max. working pressure: 6 bar.  
Temperature range: 2–110 °C.



Boiler inlet on the LH connection

| Code   |        | Supply voltage<br>V | Kv (m³/h) |  |  |
|--------|--------|---------------------|-----------|---|---|
| 612015 | 3/4"   | 230                 | 7,2       | 1   | –   |
| 612016 | 1"     | 230                 | 11,9      | 1   | –   |
| 612017 | 1 1/4" | 230                 | 16,5      | 1   | –   |
| 612018 | 1 1/2" | 230                 | 30        | 1   | –   |
| 612019 | 2"     | 230                 | 42        | 1   | –   |
| 612011 | 2 1/2" | 230                 | 62        | 1   | –   |

## ACTUATORS





### 6370

tech. broch. 01169

Actuator for mixing valves  
from 3/4" to 1 1/2".  
With auxiliary microswitch.  
Supply: 230 V or 24 V - 50 Hz.  
Power consumption: 3 VA.  
Auxiliary microswitch contact rating:  
10 (2) A - 250 V (AC).  
Protection class: IP 42.  
Operating time: 60 s.  
With adapter.



Boiler inlet on the RH connection

| Code   | Supply voltage<br>V | Actuator torque<br>(N-m) |  |  |
|--------|---------------------|--------------------------|---|---|
| 637002 | 230                 | 15                       | 1   | –   |
| 637004 | 24                  | 15                       | 1   | –   |





### 6370

tech. broch. 01169

Actuator for mixing valves  
from 2" to 5".  
With double auxiliary microswitches.  
Supply: 230 V or 24 V - 50 Hz.  
Power consumption: 4,5 VA.  
Auxiliary microswitch contact rating:  
16 (4) A - 250 V (AC).  
Protection class: IP 42.  
Operating time: 180 s.  
With adapter.



| Code   | Supply voltage<br>V | Actuator torque<br>(N-m) |  |  |
|--------|---------------------|--------------------------|---|---|
| 637012 | 230                 | 35                       | 1   | –   |
| 637014 | 24                  | 35                       | 1   | –   |





### 6370

Actuator for mixing valves  
from 3/4" to 1 1/2".  
With auxiliary microswitch.  
Supply: 230 V or 24 V - 50 Hz.  
Power consumption: 3 VA.  
Auxiliary microswitch contact rating:  
10 (2) A - 250 V (AC).  
Protection class: IP 42.  
Operating time: 60 s.  
With adapter.



Boiler inlet on the LH connection

| Code   | Supply voltage<br>V | Actuator torque<br>(N-m) |  |  |
|--------|---------------------|--------------------------|---|---|
| 637001 | 230                 | 15                       | 1   | –   |
| 637003 | 24                  | 15                       | 1   | –   |

## TEMPERATURE REGULATORS



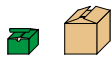
**161**

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probes with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe, see accessories).  
Optional outside compensated probe.  
Temperature adjustment range: 5–95 °C.  
Supply: 230 V - 50/60 Hz.  
Control signal: 3-point, 0–10 V.  
Protection class: IP 20 / EN 60529.  
Probe cable length: 1,5 m.



Code

**161010**



1

-

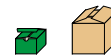


**161**

Remote regulator.  
Functions:  
- translation of regulation curves from +15 K to -15 K  
- max. temperature  
- position OFF.

Code

**161005**



1

-

Accessories for regulator code 161010.

Code

|               |  |
|---------------|--|
| <b>161012</b> | Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m |
| <b>161013</b> | immersion pocket for Pt1000 probe 1/2" M, 60 mm      |
| <b>161014</b> | immersion pocket for Pt1000 probe 1/2" M, 100 mm     |
| <b>161015</b> | Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m         |
| <b>161006</b> | Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m         |



**161**

Outside temperature probe.

Code

**161002**



1

-



**1520**

Digital temperature controller for heating and cooling.  
Complete with flow probe, outside probe and max. relative humidity probe.  
Supply: 230 V - 50/60 Hz.  
Power consumption: 5,5 VA.  
Protection class: IP 40.



Codice

**152021** 1 channel



1

-



**161**

Pressure switch with preconnected pin.  
Working range: 0,5–10 bar.  
Max. working temperature: 100 °C.  
Cable length: 1 m.

Code

**161003**



1

-



**161**

Dew point detector.  
Working range: 30–100 RH %.

Code

**161004**



1

-



**1520**

Outside compensated digital temperature regulator. Complete with contact flow probe and outside probe.  
Adjustment range: 20–90 °C.  
Supply: 230 V - 50/60 Hz.  
Control signal: 3-point.  
Protection class: IP 40.



Code

|               |            |
|---------------|------------|
| <b>152001</b> | 1 channel  |
| <b>152002</b> | 2 channels |
| <b>152003</b> | 3 channels |



1

-

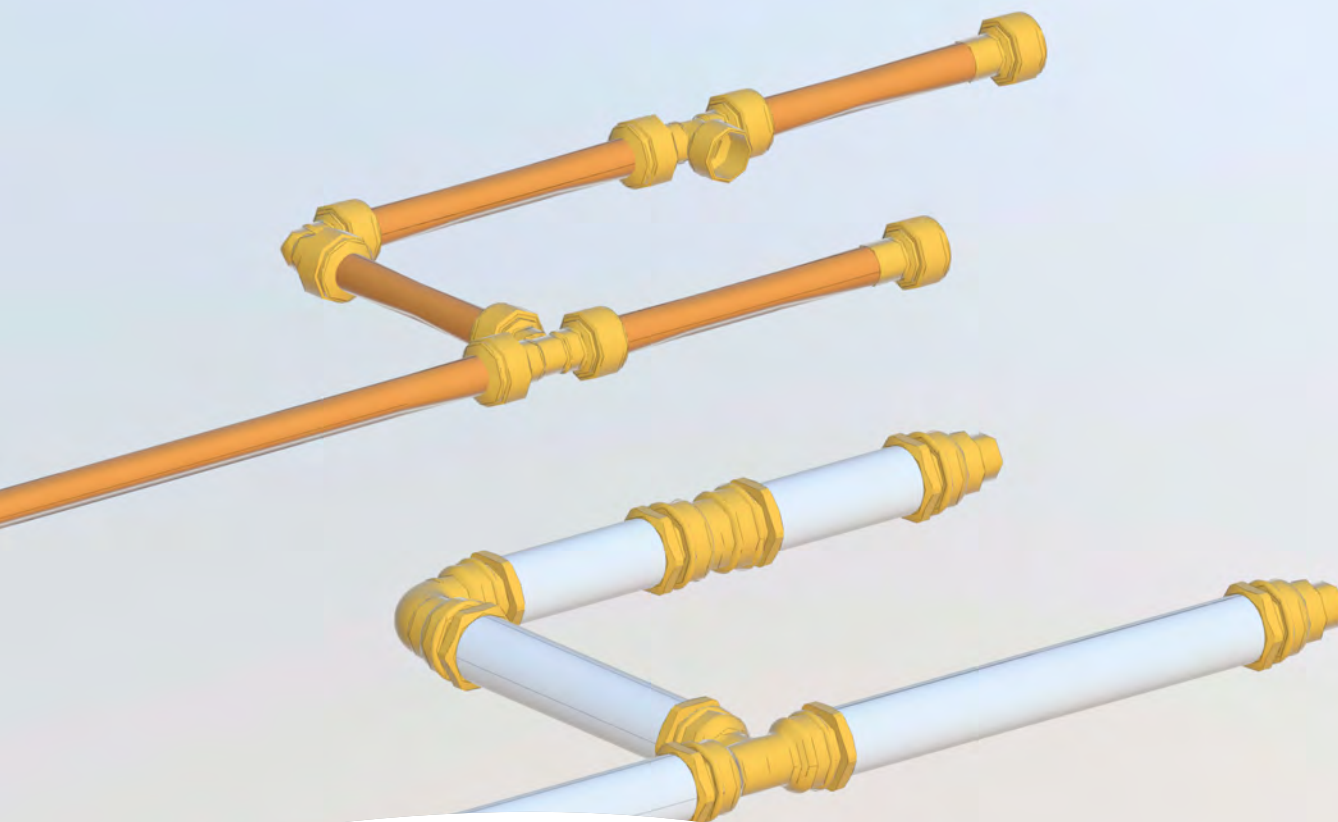
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## FITTINGS



**BIM**  
bim.caleffi.com

**Three-piece union fittings**

**Fittings for polyethylene pipes (PE-X)**

**Mechanical fittings with O-Ring seal**

**DECA-fittings for polyethylene pipes**

**Dezincification resistant alloy fittings for polyethylene pipes**

**DECA-fittings for steel pipes**



## THREE-PIECE UNION FITTINGS

**for gas and hydrocarbons - EN 549 standard**

**for hydraulic and domestic water systems - EN 681.1 standard**

Fittings highlighted in yellow are supplied with two O-Rings:  
yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems.

To be used for gas systems with power output up to 35 kW, according to UNI 7129-2015 standard only.



**588**

Three-piece straight union fitting. PN 16.  
**For gas and fluid hydrocarbons:**  
yellow O-Ring according to EN 549 standard.  
Temperature range: -20–100 °C.  
**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.

Code

|               |          |                |   |    |
|---------------|----------|----------------|---|----|
| <b>588030</b> | 3/8" F   | x M with union | 1 | 50 |
| <b>588040</b> | 1/2" F   | x M with union | 1 | 50 |
| <b>588050</b> | 3/4" F   | x M with union | 1 | 25 |
| <b>588060</b> | 1" F     | x M with union | 1 | 20 |
| <b>588070</b> | 1 1/4" F | x M with union | 1 | 10 |
| <b>588080</b> | 1 1/2" F | x M with union | 1 | –  |
| <b>588090</b> | 2" F     | x M with union | 1 | –  |



**5881**

Three-piece elbow union fitting. PN 16.  
**For gas and fluid hydrocarbons:**  
yellow O-Ring according to EN 549 standard.  
Temperature range: -20–100 °C.  
**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.

Code

|               |          |                |   |    |
|---------------|----------|----------------|---|----|
| <b>588130</b> | 3/8" F   | x M with union | 1 | 50 |
| <b>588140</b> | 1/2" F   | x M with union | 1 | 25 |
| <b>588150</b> | 3/4" F   | x M with union | 1 | 25 |
| <b>588160</b> | 1" F     | x M with union | 1 | 15 |
| <b>588170</b> | 1 1/4" F | x M with union | 1 | 10 |

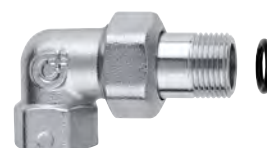


**588**

Three-piece straight union fitting. PN 16.  
Chrome plated.  
**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.

Code

|               |          |                |   |    |
|---------------|----------|----------------|---|----|
| <b>588031</b> | 3/8" F   | x M with union | 1 | 50 |
| <b>588041</b> | 1/2" F   | x M with union | 1 | 50 |
| <b>588051</b> | 3/4" F   | x M with union | 1 | 25 |
| <b>588061</b> | 1" F     | x M with union | 1 | 20 |
| <b>588071</b> | 1 1/4" F | x M with union | 1 | 10 |
| <b>588081</b> | 1 1/2" F | x M with union | 1 | –  |
| <b>588091</b> | 2" F     | x M with union | 1 | –  |



**5881**

Three-piece elbow union fitting. PN 16.  
Chrome plated.  
**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.

Code

|               |          |                |   |    |
|---------------|----------|----------------|---|----|
| <b>588131</b> | 3/8" F   | x M with union | 1 | 50 |
| <b>588141</b> | 1/2" F   | x M with union | 1 | 25 |
| <b>588151</b> | 3/4" F   | x M with union | 1 | 25 |
| <b>588161</b> | 1" F     | x M with union | 1 | 15 |
| <b>588171</b> | 1 1/4" F | x M with union | 1 | 10 |

## UNIONS



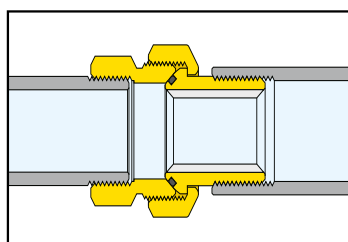
Flat seat union  
with gasket.

Code

|               |          |            |
|---------------|----------|------------|
| <b>R59787</b> | 3/4" F   | x 1/2" M   |
| <b>R59788</b> | 1" F     | x 3/4" M   |
| <b>R59789</b> | 1 1/4" F | x 1" M     |
| <b>R59485</b> | 1 1/2" F | x 1 1/4" M |
| <b>R59581</b> | 2" F     | x 1 1/2" M |
| <b>R59487</b> | 2 1/2" F | x 2" M     |

### O-Ring seal

The hydraulic tightness between the two fitting components is a tapered type with O-Ring. This allows to screw the fitting up smoothly with a full safety warranty.



## FITTINGS FOR POLYETHYLENE PIPES (PE-X)



### 933

Elbow fitting  
with plastic wall mounting case.

Code

|               |                   |   |   |
|---------------|-------------------|---|---|
| <b>933000</b> | 1/2" F x 23 p.1,5 | 5 | - |
|---------------|-------------------|---|---|



### 933

Elbow fitting  
with plastic wall mounting case  
with 10 mm collar.

Code

|               |                   |   |    |
|---------------|-------------------|---|----|
| <b>933001</b> | 1/2" F x 23 p.1,5 | 5 | -  |
| <b>933501</b> | 3/4" F x 3/4"     | 1 | 10 |



### R96006

Plastic case plug  
for elbow fitting 933 series.

Code

|               |  |   |     |
|---------------|--|---|-----|
| <b>R96006</b> |  | 5 | 100 |
|---------------|--|---|-----|

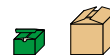


### 930

Male elbow fitting with wall connection.  
Fitted for coupling with fittings 347, 438  
and 680 series for water use.

Code

|               |                     |   |   |
|---------------|---------------------|---|---|
| <b>930418</b> | 1/2" F x 23 p.1,5 M | 5 | - |
|---------------|---------------------|---|---|



### 936

Extension for connection between  
elbow fitting 933 series and radiator valve.  
Annealed copper, chrome plated.

With shaped rubber seal.  
Length: 200 mm  
(useful 188 mm).

Code

|               |             |   |    |
|---------------|-------------|---|----|
| <b>936400</b> | 1/2" x Ø 16 | 1 | 50 |
|---------------|-------------|---|----|



## FITTINGS FOR POLYETHYLENE PIPES (PE-X) Fitted for coupling with 680 and 679 series



### 940

Male fitting.

Code

|               |                   |    |   |
|---------------|-------------------|----|---|
| <b>940300</b> | 3/8" M x 23 p.1,5 | 50 | – |
| <b>940400</b> | 1/2" M x 23 p.1,5 | 50 | – |
| <b>940450</b> | 1/2" M x 3/4"     | 50 | – |
| <b>940500</b> | 3/4" M x 23 p.1,5 | 50 | – |
| <b>942550</b> | 3/4" M x 3/4"     | 50 | – |
| <b>942560</b> | 3/4" M x 1"       | 50 | – |
| <b>942650</b> | 1" M x 3/4"       | 50 | – |



### 941

Female fitting.

Code

|               |                   |    |   |
|---------------|-------------------|----|---|
| <b>941300</b> | 3/8" F x 23 p.1,5 | 50 | – |
| <b>941400</b> | 1/2" F x 23 p.1,5 | 50 | – |
| <b>941450</b> | 1/2" F x 3/4"     | 50 | – |
| <b>941500</b> | 3/4" F x 23 p.1,5 | 50 | – |
| <b>941550</b> | 3/4" F x 3/4"     | 50 | – |
| <b>941560</b> | 3/4" F x 1"       | 50 | – |



### 942

Sleeve.

Code

|               |                     |    |   |
|---------------|---------------------|----|---|
| <b>942000</b> | 23 p.1,5 x 23 p.1,5 | 50 | – |
| <b>942550</b> | 3/4" x 3/4"         | 50 | – |
| <b>942560</b> | 3/4" x 1"           | 50 | – |



### 943

Elbow fitting.

Code

|               |                     |    |   |
|---------------|---------------------|----|---|
| <b>943000</b> | 23 p.1,5 x 23 p.1,5 | 50 | – |
| <b>943550</b> | 3/4" x 3/4"         | 50 | – |



### 944

Male elbow fitting.

Code

|               |                   |    |   |
|---------------|-------------------|----|---|
| <b>944400</b> | 1/2" M x 23 p.1,5 | 50 | – |
| <b>943550</b> | 3/4" M x 3/4"     | 50 | – |



### 945

Female elbow fitting.

Code

|               |                   |    |   |
|---------------|-------------------|----|---|
| <b>945400</b> | 1/2" F x 23 p.1,5 | 50 | – |
| <b>945550</b> | 3/4" F x 3/4"     | 50 | – |



### 946

Tee piece.

Code

|               |                                |    |   |
|---------------|--------------------------------|----|---|
| <b>946000</b> | 23 p.1,5 x 23 p.1,5 x 23 p.1,5 | 50 | – |
| <b>946500</b> | 3/4" x 3/4" x 3/4"             | 25 | – |



### 947

Side male tee piece.

Code

|               |                              |                      |    |
|---------------|------------------------------|----------------------|----|
| <b>947400</b> | 1/2" M x 23 p.1,5 x 23 p.1,5 | 50                   | –  |
| <b>947500</b> | 3/4" M x 3/4" x 3/4"         | (use <b>946500</b> ) | 50 |



### 948

Central male tee piece.

Code

|               |                              |    |   |
|---------------|------------------------------|----|---|
| <b>948400</b> | 23 p.1,5 x 1/2" M x 23 p.1,5 | 50 | – |
| <b>946500</b> | 3/4" x 3/4" M x 3/4"         | 50 | – |

## MECHANICAL FITTINGS WITH O-RING SEAL

according to EN 1254-2 and EN 1254-4 standards

**for gas and fluid hydrocarbons - EN 549 standard (not including gasoline)**

**for hydraulic and domestic water systems - EN 681.1 standard**

Fittings highlighted in yellow are supplied with two O-Rings:  
yellow to be used for gas and fluid hydrocarbons - black to be used for hydraulic systems



### 900

Female fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.  
**For gas and fluid hydrocarbons:** yellow O-Ring according to EN 549 standard. Temperature range: -20–100 °C.  
**For hydraulic and domestic water systems:** black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120 °C.

| Code    |               |    |   |
|---------|---------------|----|---|
| 900308  | 3/8" F - Ø 8  | 50 | – |
| 900310  | 3/8" F - Ø 10 | 50 | – |
| 900312  | 3/8" F - Ø 12 | 50 | – |
| 900314  | 3/8" F - Ø 14 | 50 | – |
| 900410  | 1/2" F - Ø 10 | 50 | – |
| 900412  | 1/2" F - Ø 12 | 50 | – |
| 900414  | 1/2" F - Ø 14 | 50 | – |
| 900415  | 1/2" F - Ø 15 | 50 | – |
| 900416  | 1/2" F - Ø 16 | 50 | – |
| 900418  | 1/2" F - Ø 18 | 25 | – |
| 900516  | 3/4" F - Ø 16 | 50 | – |
| 900518  | 3/4" F - Ø 18 | 25 | – |
| 900522  | 3/4" F - Ø 22 | 25 | – |
| 900622  | 1" F - Ø 22   | 25 | – |
| 900628* | 1" F - Ø 28   | 25 | – |

\* To be used only with water and non-dangerous glycol solutions



### 904

Male fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring. According to EN 1254-4 standard.  
**For gas and fluid hydrocarbons:** yellow O-Ring according to EN 549 standard. Temperature range: -20–100 °C.  
**For hydraulic and domestic water systems:** black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120 °C.

| Code     |               |    |   |
|----------|---------------|----|---|
| 904308   | 3/8" M - Ø 8  | 50 | – |
| 904310   | 3/8" M - Ø 10 | 50 | – |
| 904312   | 3/8" M - Ø 12 | 50 | – |
| 904314   | 3/8" M - Ø 14 | 50 | – |
| 904410   | 1/2" M - Ø 10 | 50 | – |
| 904412   | 1/2" M - Ø 12 | 50 | – |
| 904414   | 1/2" M - Ø 14 | 50 | – |
| 904415   | 1/2" M - Ø 15 | 50 | – |
| 904416   | 1/2" M - Ø 16 | 50 | – |
| 904418   | 1/2" M - Ø 18 | 25 | – |
| 904514   | 3/4" M - Ø 14 | 50 | – |
| 904516   | 3/4" M - Ø 16 | 50 | – |
| 904518   | 3/4" M - Ø 18 | 25 | – |
| 904522   | 3/4" M - Ø 22 | 25 | – |
| 904618   | 1" M - Ø 18   | 25 | – |
| 904622   | 1" M - Ø 22   | 25 | – |
| 904628 * | 1" M - Ø 28   | 10 | – |

\* To be used only with water and non-dangerous glycol solutions



### 903

Coupling sleeve. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.  
**For hydraulic and domestic water systems:** black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120 °C.

| Code   |      |    |   |
|--------|------|----|---|
| 903008 | Ø 8  | 50 | – |
| 903010 | Ø 10 | 50 | – |
| 903012 | Ø 12 | 50 | – |
| 903014 | Ø 14 | 50 | – |
| 903015 | Ø 15 | 50 | – |
| 903016 | Ø 16 | 50 | – |
| 903018 | Ø 18 | 25 | – |
| 903022 | Ø 22 | 25 | – |



### 9050

Elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.  
**For hydraulic and domestic water systems:** black O-Ring according to EN 681.1 standard. Max. working pressure: 16 bar. Temperature range: -25–120 °C.

| Code   |      |    |   |
|--------|------|----|---|
| 905010 | Ø 10 | 25 | – |
| 905012 | Ø 12 | 25 | – |
| 905014 | Ø 14 | 25 | – |
| 905015 | Ø 15 | 25 | – |
| 905016 | Ø 16 | 25 | – |
| 905018 | Ø 18 | 25 | – |
| 905022 | Ø 22 | 25 | – |

## MECHANICAL FITTINGS WITH O-RING SEAL

### 9057



Male elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring.

According to EN 1254-4 standard.

**For gas and fluid hydrocarbons:**

yellow O-Ring according to EN 549 standard.

Temperature range: -20–100 °C.

**For hydraulic and domestic water systems:**

black O-Ring according to EN 681.1 standard.

Max. working pressure: 16 bar.

Temperature range: -25–120 °C.

Code



|        |               |    |   |
|--------|---------------|----|---|
| 905730 | 3/8" M - Ø 10 | 25 | – |
| 905732 | 3/8" M - Ø 12 | 25 | – |
| 905740 | 1/2" M - Ø 10 | 25 | – |
| 905742 | 1/2" M - Ø 12 | 25 | – |
| 905744 | 1/2" M - Ø 14 | 25 | – |
| 905745 | 1/2" M - Ø 15 | 25 | – |
| 905746 | 1/2" M - Ø 16 | 25 | – |
| 905748 | 1/2" M - Ø 18 | 25 | – |
| 905756 | 3/4" M - Ø 16 | 25 | – |
| 905758 | 3/4" M - Ø 18 | 25 | – |
| 905752 | 3/4" M - Ø 22 | 25 | – |

### 9060



Tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.

**For hydraulic and domestic water systems:**

black O-Ring according to EN 681.1 standard.

Max. working pressure: 16 bar.

Temperature range: -25–120 °C.

Code



|        |      |    |   |
|--------|------|----|---|
| 906010 | Ø 10 | 25 | – |
| 906012 | Ø 12 | 25 | – |
| 906014 | Ø 14 | 25 | – |
| 906015 | Ø 15 | 25 | – |
| 906016 | Ø 16 | 25 | – |
| 906018 | Ø 18 | 25 | – |
| 906022 | Ø 22 | 20 | – |

### 9058



Female elbow fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. Double O-Ring.

According to EN 1254-4 standard.

**For gas and fluid hydrocarbons:**

yellow O-Ring according to EN 549 standard.

Temperature range: -20–100 °C.

**For hydraulic and domestic water systems:**

black O-Ring according to EN 681.1 standard.

Max. working pressure: 16 bar.

Temperature range: -25–120 °C.

Code



|        |               |    |   |
|--------|---------------|----|---|
| 905830 | 3/8" F - Ø 10 | 25 | – |
| 905832 | 3/8" F - Ø 12 | 25 | – |
| 905840 | 1/2" F - Ø 10 | 25 | – |
| 905842 | 1/2" F - Ø 12 | 25 | – |
| 905844 | 1/2" F - Ø 14 | 25 | – |
| 905845 | 1/2" F - Ø 15 | 25 | – |
| 905846 | 1/2" F - Ø 16 | 25 | – |
| 905848 | 1/2" F - Ø 18 | 25 | – |
| 905856 | 3/4" F - Ø 16 | 25 | – |
| 905858 | 3/4" F - Ø 18 | 25 | – |
| 905852 | 3/4" F - Ø 22 | 25 | – |

### 9067



Male tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-4 standard.

**For hydraulic and domestic water systems:**

black O-Ring according to EN 681.1 standard.

Max. working pressure: 16 bar.

Temperature range: -25–120 °C.

Code



|        |               |    |   |
|--------|---------------|----|---|
| 906740 | 1/2" M - Ø 10 | 25 | – |
| 906742 | 1/2" M - Ø 12 | 25 | – |
| 906744 | 1/2" M - Ø 14 | 25 | – |
| 906745 | 1/2" M - Ø 15 | 25 | – |
| 906746 | 1/2" M - Ø 16 | 25 | – |
| 906758 | 3/4" M - Ø 18 | 25 | – |
| 906752 | 3/4" M - Ø 22 | 20 | – |



## MECHANICAL FITTINGS WITH O-RING SEAL

### 9068

Female tee fitting. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-4 standard.

**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.



| Code   |               |    |   |
|--------|---------------|----|---|
| 906830 | 3/8" F - Ø 10 | 25 | – |
| 906832 | 3/8" F - Ø 12 | 25 | – |
| 906840 | 1/2" F - Ø 10 | 25 | – |
| 906842 | 1/2" F - Ø 12 | 25 | – |
| 906844 | 1/2" F - Ø 14 | 25 | – |
| 906845 | 1/2" F - Ø 15 | 25 | – |
| 906846 | 1/2" F - Ø 16 | 25 | – |
| 906858 | 3/4" F - Ø 18 | 25 | – |
| 906852 | 3/4" F - Ø 22 | 20 | – |

### 910

Female fitting. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-4 standard.

**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.



| Code   |               |    |   |
|--------|---------------|----|---|
| 910310 | 3/8" F - Ø 10 | 50 | – |
| 910312 | 3/8" F - Ø 12 | 50 | – |
| 910314 | 3/8" F - Ø 14 | 50 | – |
| 910410 | 1/2" F - Ø 10 | 50 | – |
| 910412 | 1/2" F - Ø 12 | 50 | – |
| 910414 | 1/2" F - Ø 14 | 50 | – |
| 910415 | 1/2" F - Ø 15 | 50 | – |

### 914

Male fitting. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-4 standard.

**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.



| Code   |               |    |   |
|--------|---------------|----|---|
| 914310 | 3/8" M - Ø 10 | 50 | – |
| 914312 | 3/8" M - Ø 12 | 50 | – |
| 914314 | 3/8" M - Ø 14 | 50 | – |
| 914410 | 1/2" M - Ø 10 | 50 | – |
| 914412 | 1/2" M - Ø 12 | 50 | – |
| 914414 | 1/2" M - Ø 14 | 50 | – |
| 914415 | 1/2" M - Ø 15 | 50 | – |

### 930

Elbow fitting with wall connection. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-4 standard. With double O-Ring.

**For gas and fluid hydrocarbons:**  
yellow O-Ring according to EN 549 standard.  
Temperature range: -20–100 °C.

**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.



| Code   |               |    |   |
|--------|---------------|----|---|
| 930412 | 1/2" F - Ø 12 | 25 | – |
| 930414 | 1/2" F - Ø 14 | 25 | – |
| 930416 | 1/2" F - Ø 16 | 25 | – |

### 913

Coupling sleeve. Chrome plated. For annealed copper, hard copper, brass, mild steel and stainless steel pipes. According to EN 1254-2 standard.

**For hydraulic and domestic water systems:**  
black O-Ring according to EN 681.1 standard.  
Max. working pressure: 16 bar.  
Temperature range: -25–120 °C.



| Code   |      |    |   |
|--------|------|----|---|
| 913010 | Ø 10 | 50 | – |
| 913012 | Ø 12 | 50 | – |
| 913014 | Ø 14 | 50 | – |

## DECA-FITTINGS FOR POLYETHYLENE PIPES



### 860

tech. broch. 01037

Female fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



| Code           |                 |    |    |
|----------------|-----------------|----|----|
| <b>860420</b>  | Ø 20 x 1/2" F   | 12 | 60 |
| <b>860421*</b> | Ø 21 x 1/2" F   | 12 | 60 |
| <b>860525</b>  | Ø 25 x 3/4" F   | 10 | 50 |
| <b>860527*</b> | Ø 27 x 3/4" F   | 10 | 50 |
| <b>860625</b>  | Ø 25 x 1" F     | 10 | 60 |
| <b>860632</b>  | Ø 32 x 1" F     | 10 | 50 |
| <b>860634*</b> | Ø 34 x 1" F     | 10 | 50 |
| <b>860740</b>  | Ø 40 x 1 1/4" F | 10 | 50 |
| <b>860850</b>  | Ø 50 x 1 1/2" F | 5  | 25 |
| <b>860963</b>  | Ø 63 x 2" F     | 8  | –  |

\* Without DVGW and SVGW certifications



### 861

tech. broch. 01037

Male fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



| Code           |                 |    |    |
|----------------|-----------------|----|----|
| <b>861420</b>  | Ø 20 x 1/2" M   | 12 | 60 |
| <b>861421*</b> | Ø 21 x 1/2" M   | 12 | 60 |
| <b>861525</b>  | Ø 25 x 3/4" M   | 10 | 50 |
| <b>861527*</b> | Ø 27 x 3/4" M   | 10 | 50 |
| <b>861625</b>  | Ø 25 x 1" M     | 10 | 60 |
| <b>861632</b>  | Ø 32 x 1" M     | 10 | 50 |
| <b>861634*</b> | Ø 34 x 1" M     | 10 | 50 |
| <b>861740</b>  | Ø 40 x 1 1/4" M | 10 | 50 |
| <b>861850</b>  | Ø 50 x 1 1/2" M | 5  | 25 |
| <b>861963</b>  | Ø 63 x 2" M     | 8  | –  |

\* Without DVGW and SVGW certifications



### 860

tech. broch. 01037

Female fitting.  
In cast iron.  
Stainless steel rods.  
For polyethylene pipes.  
Max. working pressure: 10 bar.  
Max. working temperature: 40 °C.

| Code          |                 |   |   |
|---------------|-----------------|---|---|
| <b>860075</b> | Ø 75 x 2 1/2" F | 1 | – |
| <b>860090</b> | Ø 90 x 3" F     | 1 | – |
| <b>860110</b> | Ø 110 x 4" F    | 1 | – |



### 861

tech. broch. 01037

Male fitting.  
In cast iron.  
Stainless steel rods.  
For polyethylene pipes.  
Max. working pressure: 10 bar.  
Max. working temperature: 40 °C.

| Code          |                 |   |   |
|---------------|-----------------|---|---|
| <b>861075</b> | Ø 75 x 2 1/2" M | 1 | – |
| <b>861090</b> | Ø 90 x 3" M     | 1 | – |
| <b>861110</b> | Ø 110 x 4" M    | 1 | – |



### 875

tech. broch. 01037

Reduced female fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



| Code          |               |    |    |
|---------------|---------------|----|----|
| <b>875425</b> | Ø 25 x 1/2" F | 10 | 50 |
| <b>875532</b> | Ø 32 x 3/4" F | 10 | 50 |
| <b>875640</b> | Ø 40 x 1" F   | 10 | 50 |



### 876

tech. broch. 01037

Female fitting with union.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



| Code          |             |    |    |
|---------------|-------------|----|----|
| <b>876520</b> | Ø 20 x 3/4" | 15 | 75 |
| <b>876525</b> | Ø 25 x 3/4" | 12 | 60 |
| <b>876625</b> | Ø 25 x 1"   | 12 | 60 |
| <b>876632</b> | Ø 32 x 1"   | 10 | 50 |

## DECA-FITTINGS FOR POLYETHYLENE PIPES



**862**

tech. broch. 01037

Reduced male fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code          |                 |    |    |
|---------------|-----------------|----|----|
| <b>862320</b> | Ø 20 x 3/8" M   | 12 | 60 |
| <b>862425</b> | Ø 25 x 1/2" M   | 10 | 50 |
| <b>862532</b> | Ø 32 x 3/4" M   | 10 | 50 |
| <b>862640</b> | Ø 40 x 1" M     | 10 | 50 |
| <b>862750</b> | Ø 50 x 1 1/4" M | 5  | 25 |
| <b>862863</b> | Ø 63 x 1 1/2" M | 8  | –  |



**863**

tech. broch. 01037

Sleeve fitting.  
In cast iron.  
Stainless steel rods.  
For polyethylene pipes.  
Max. working pressure: 10 bar.  
Max. working temperature: 40 °C.

Code

| Code          |       |   |   |
|---------------|-------|---|---|
| <b>863075</b> | Ø 75  | 1 | – |
| <b>863090</b> | Ø 90  | 1 | – |
| <b>863110</b> | Ø 110 | 1 | – |
| <b>863125</b> | Ø 125 | 1 | – |



**888**

tech. broch. 01037

Flanged fitting,  
PN 10 UNI 2277 series.  
In cast iron.  
Stainless steel rods.  
For polyethylene pipes.  
Max. working pressure: 10 bar.  
Max. working temperature: 40 °C.

Code

| Code          |                |   |   |
|---------------|----------------|---|---|
| <b>888075</b> | Ø 75 x DN 65   | 1 | – |
| <b>888090</b> | Ø 90 x DN 80   | 1 | – |
| <b>888110</b> | Ø 110 x DN 100 | 1 | – |
| <b>888125</b> | Ø 125 x DN 100 | 1 | – |



**864**

tech. broch. 01037

Tee fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code           |      |    |    |
|----------------|------|----|----|
| <b>864020</b>  | Ø 20 | 10 | 50 |
| <b>864021*</b> | Ø 21 | 10 | 50 |
| <b>864025</b>  | Ø 25 | 10 | 50 |
| <b>864027*</b> | Ø 27 | 5  | 25 |
| <b>864032</b>  | Ø 32 | 5  | 25 |
| <b>864034*</b> | Ø 34 | 4  | 20 |
| <b>864040</b>  | Ø 40 | 5  | –  |
| <b>864050</b>  | Ø 50 | 5  | –  |
| <b>864063</b>  | Ø 63 | 5  | –  |

\* Without DVGW and SVGW certifications



**863**

tech. broch. 01037

Sleeve fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code           |      |    |    |
|----------------|------|----|----|
| <b>863020</b>  | Ø 20 | 15 | 75 |
| <b>863021*</b> | Ø 21 | 15 | 75 |
| <b>863025</b>  | Ø 25 | 12 | 60 |
| <b>863027*</b> | Ø 27 | 10 | 50 |
| <b>863032</b>  | Ø 32 | 10 | 50 |
| <b>863034*</b> | Ø 34 | 5  | 25 |
| <b>863040</b>  | Ø 40 | 5  | 25 |
| <b>863050</b>  | Ø 50 | 5  | 25 |
| <b>863063</b>  | Ø 63 | 6  | –  |

\* Without DVGW and SVGW certifications



**865**

tech. broch. 01037

Reduced male-female tee fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code          |                            |    |    |
|---------------|----------------------------|----|----|
| <b>865420</b> | Ø 20 x 1/2" M x 3/8" F     | 10 | 50 |
| <b>865525</b> | Ø 25 x 3/4" M x 1/2" F     | 10 | 50 |
| <b>865632</b> | Ø 32 x 1" M x 3/4" F       | 5  | 25 |
| <b>865740</b> | Ø 40 x 1 1/4" M x 1" F     | 5  | –  |
| <b>865850</b> | Ø 50 x 1 1/2" M x 1 1/4" F | 5  | –  |
| <b>865963</b> | Ø 63 x 2" M x 1 1/2" F     | 5  | –  |

## DECA-FITTINGS FOR POLYETHYLENE PIPES



### 866

tech. broch. 01037

Elbow fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code   |      |    |    |
|--------|------|----|----|
| 866020 | Ø 20 | 10 | 50 |
| 866025 | Ø 25 | 10 | 50 |
| 866032 | Ø 32 | 5  | 25 |
| 866040 | Ø 40 | 4  | 20 |
| 866050 | Ø 50 | 3  | 15 |
| 866063 | Ø 63 | 5  | –  |



### 869

tech. broch. 01037

Female elbow fitting  
with wall connections.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code   |               |   |    |
|--------|---------------|---|----|
| 869420 | Ø 20 x 1/2" F | 5 | 25 |
| 869425 | Ø 25 x 1/2" F | 4 | 20 |
| 869525 | Ø 25 x 3/4" F | 4 | 20 |



### 867

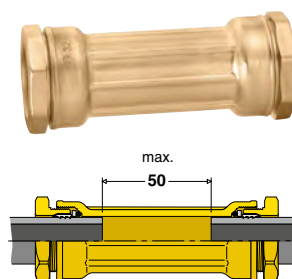
tech. broch. 01037

Male elbow fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code   |                 |    |    |
|--------|-----------------|----|----|
| 867420 | Ø 20 x 1/2" M   | 10 | 50 |
| 867525 | Ø 25 x 3/4" M   | 10 | 50 |
| 867632 | Ø 32 x 1" M     | 10 | 50 |
| 867740 | Ø 40 x 1 1/4" M | 4  | 20 |
| 867850 | Ø 50 x 1 1/2" M | 4  | 20 |
| 867963 | Ø 63 x 2" M     | 5  | –  |



### 870

tech. broch. 01037

Long sleeve fitting.  
Can be used for pipe repairs.  
In brass.  
For polyethylene pipes.

Allows pipe repairs  
with a maximum distance of 50 mm  
between pipe ends.

Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code   |      |    |    |
|--------|------|----|----|
| 870025 | Ø 25 | 10 | 50 |
| 870032 | Ø 32 | 5  | 25 |
| 870040 | Ø 40 | 4  | 20 |
| 870050 | Ø 50 | 3  | 15 |



### 868

tech. broch. 01037

Female elbow fitting.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

| Code   |                 |    |    |
|--------|-----------------|----|----|
| 868420 | Ø 20 x 1/2" F   | 10 | 50 |
| 868525 | Ø 25 x 3/4" F   | 10 | 50 |
| 868632 | Ø 32 x 1" F     | 10 | 50 |
| 868740 | Ø 40 x 1 1/4" F | 4  | 20 |
| 868850 | Ø 50 x 1 1/2" F | 4  | 20 |
| 868963 | Ø 63 x 2" F     | 5  | –  |



### 871

tech. broch. 01037

Fitting with ball valve.  
In brass.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

| Code   |               |    |    |
|--------|---------------|----|----|
| 871425 | Ø 25 x 1/2" F | 10 | 50 |
| 871525 | Ø 25 x 3/4" F | 5  | 25 |
| 871532 | Ø 32 x 3/4" F | 5  | 25 |

## DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES



### 960

Female fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



### 962

Reduced male fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

| Code   |                 |    |    |
|--------|-----------------|----|----|
| 960420 | Ø 20 x 1/2" F   | 12 | 60 |
| 960525 | Ø 25 x 3/4" F   | 10 | 50 |
| 960625 | Ø 25 x 1" F     | 10 | 60 |
| 960632 | Ø 32 x 1" F     | 10 | 50 |
| 960740 | Ø 40 x 1 1/4" F | 6  | 30 |
| 960850 | Ø 50 x 1 1/2" F | 5  | 20 |
| 960963 | Ø 63 x 2" F     | 8  | –  |



Code

| Code   |               |    |    |
|--------|---------------|----|----|
| 962532 | Ø 32 x 3/4" M | 10 | 50 |
| 962640 | Ø 40 x 1" M   | 6  | 30 |



### 975

Reduced female fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



### 963

Sleeve fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

| Code   |                 |    |    |
|--------|-----------------|----|----|
| 975532 | Ø 32 x 3/4" F   | 10 | 50 |
| 975640 | Ø 40 x 1" F     | 6  | 30 |
| 975732 | Ø 32 x 1 1/4" F | 6  | 30 |
| 975750 | Ø 50 x 1 1/4" F | 5  | 20 |



Code

| Code   |      |    |    |
|--------|------|----|----|
| 963020 | Ø 20 | 15 | 75 |
| 963025 | Ø 25 | 12 | 60 |
| 963032 | Ø 32 | 10 | 50 |
| 963040 | Ø 40 | 5  | 20 |
| 963050 | Ø 50 | 6  | –  |
| 963063 | Ø 63 | 5  | –  |



### 961

Male fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



### 964

Tee fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

| Code   |                 |    |    |
|--------|-----------------|----|----|
| 961420 | Ø 20 x 1/2" M   | 12 | 60 |
| 961520 | Ø 20 x 3/4" M   | 12 | 60 |
| 961525 | Ø 25 x 3/4" M   | 10 | 50 |
| 961625 | Ø 25 x 1" M     | 10 | 60 |
| 961632 | Ø 32 x 1" M     | 10 | 50 |
| 961732 | Ø 32 x 1 1/4" M | 10 | 50 |
| 961740 | Ø 40 x 1 1/4" M | 6  | 30 |
| 961840 | Ø 40 x 1 1/2" M | 6  | 30 |
| 961850 | Ø 50 x 1 1/2" M | 5  | 20 |
| 961950 | Ø 50 x 2" M     | 5  | 20 |
| 961963 | Ø 63 x 2" M     | 8  | –  |



Code

| Code   |      |    |    |
|--------|------|----|----|
| 964020 | Ø 20 | 10 | 50 |
| 964025 | Ø 25 | 10 | 50 |
| 964032 | Ø 32 | 5  | 25 |
| 964040 | Ø 40 | 5  | –  |
| 964050 | Ø 50 | 5  | –  |





## DEZINCIFICATION RESISTANT ALLOY FITTINGS FOR POLYETHYLENE PIPES



### 966

Elbow fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

|               |      |    |    |
|---------------|------|----|----|
| <b>966025</b> | Ø 25 | 10 | 50 |
| <b>966032</b> | Ø 32 | 5  | 25 |
| <b>966040</b> | Ø 40 | 3  | 15 |



### 967

Male elbow fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

|               |             |    |    |
|---------------|-------------|----|----|
| <b>967632</b> | Ø 32 x 1" M | 10 | 50 |
|---------------|-------------|----|----|



### 968

Female elbow fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

Code

|               |                 |    |    |
|---------------|-----------------|----|----|
| <b>968632</b> | Ø 32 x 1" F     | 10 | 50 |
| <b>968740</b> | Ø 40 x 1 1/4" F | 4  | 20 |

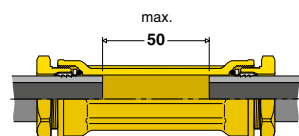


### 970

Long sleeve fitting.  
In **CR** dezincification resistant alloy.  
For polyethylene pipes.

Allows pipe repairs  
with a maximum distance of 50 mm  
between pipe ends.

Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

|               |      |   |    |
|---------------|------|---|----|
| <b>970032</b> | Ø 32 | 5 | 25 |
| <b>970040</b> | Ø 40 | 5 | –  |
| <b>970050</b> | Ø 50 | 4 | –  |



### 986

Reduction kit.

Code

|               |                   |    |    |
|---------------|-------------------|----|----|
| <b>986032</b> | from Ø 32 to Ø 25 | 12 | 60 |
| <b>986043</b> | from Ø 40 to Ø 32 | 10 | 50 |
| <b>986053</b> | from Ø 50 to Ø 32 | 6  | 30 |
| <b>986054</b> | from Ø 50 to Ø 40 | 6  | 30 |



### 980

Kit.

Code

|               |      |     |   |
|---------------|------|-----|---|
| <b>980025</b> | Ø 25 | 100 | – |
| <b>980032</b> | Ø 32 | 100 | – |
| <b>980040</b> | Ø 40 | 50  | – |
| <b>980050</b> | Ø 50 | 50  | – |
| <b>980063</b> | Ø 63 | 50  | – |

## DECA-FITTINGS FOR STEEL PIPES

### Steel series

For steel pipes with nominal outer diameters for gas threading. Stainless steel pipe clenching ring.



**890**

Female fitting. In brass.  
For steel pipe.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

|               |               |    |    |
|---------------|---------------|----|----|
| <b>890421</b> | Ø 21 x 1/2" F | 12 | 60 |
| <b>890527</b> | Ø 27 x 3/4" F | 10 | 50 |
| <b>890634</b> | Ø 34 x 1" F   | 10 | 50 |



**891**

Male fitting. In brass.  
For steel pipe.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

|               |               |    |    |
|---------------|---------------|----|----|
| <b>891421</b> | Ø 21 x 1/2" M | 12 | 60 |
| <b>891527</b> | Ø 27 x 3/4" M | 10 | 50 |
| <b>891634</b> | Ø 34 x 1" M   | 10 | 50 |



**893**

Sleeve fitting. In brass.  
For steel pipe.  
Without internal stop to be used as joint repair sleeve.

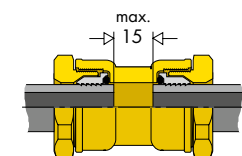
Can be used for pipe repair with a maximum distance of 15 mm between pipe ends.

Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



Code

|               |      |    |    |
|---------------|------|----|----|
| <b>893021</b> | Ø 21 | 15 | 75 |
| <b>893027</b> | Ø 27 | 10 | 50 |
| <b>893034</b> | Ø 34 | 5  | 25 |



**894**

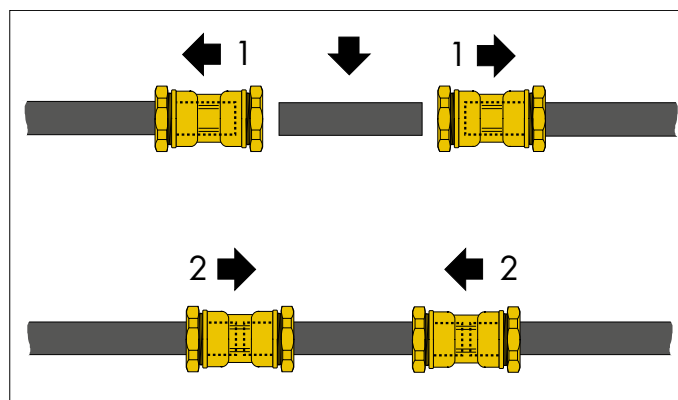
Tee fitting. In brass.  
For steel pipe.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.



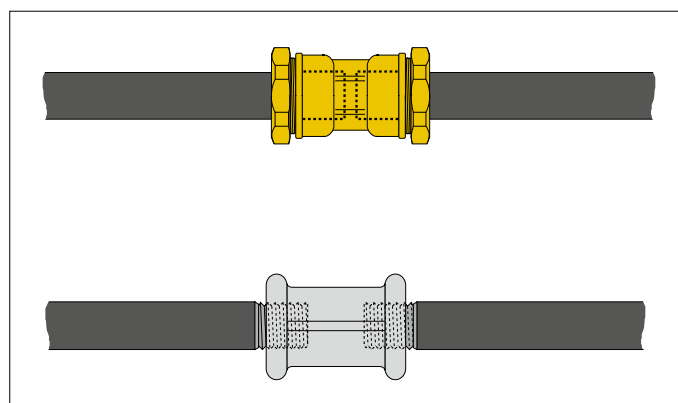
Code

|               |      |    |    |
|---------------|------|----|----|
| <b>894021</b> | Ø 21 | 10 | 50 |
| <b>894027</b> | Ø 27 | 5  | 25 |
| <b>894034</b> | Ø 34 | 4  | 20 |

#### Example of use on steel pipes



#### Example of repair with the insertion of a supplementary sleeve.



In order to avoid corrosion, which is typical when traditional threaded sleeves are used (see diagram in grey colour), the application of the **Steel** series fittings (see diagram in yellow colour) allows piping to keep the complete galvanisation. The traditional sleeve in fact does not cover the entire threaded part which is therefore subjected to high corrosion since it features no galvanisation and is weakened on the diameter.

## ACCESSORIES AND SPARE PARTS FOR DECA-FITTINGS



### 886

Reduction kit.



Code

| Code          |                   |   |   |
|---------------|-------------------|---|---|
| <b>886022</b> | from Ø 25 to Ø 20 | 1 | – |
| <b>886032</b> | from Ø 32 to Ø 25 | 1 | – |
| <b>886043</b> | from Ø 40 to Ø 32 | 1 | – |
| <b>886054</b> | from Ø 50 to Ø 40 | 1 | – |
| <b>886065</b> | from Ø 63 to Ø 50 | 1 | – |



### 887

Pipe stiffener.



PN 10 series

Code

| Code          |          |    |   |
|---------------|----------|----|---|
| <b>887120</b> | 20 x 2   | 10 | – |
| <b>887223</b> | 25 x 2,3 | 10 | – |
| <b>887330</b> | 32 x 3   | 10 | – |
| <b>887437</b> | 40 x 3,7 | 5  | – |
| <b>887546</b> | 50 x 4,6 | 5  | – |
| <b>887658</b> | 63 x 5,8 | 5  | – |

For REHAU pipes

Code

| Code          |          |    |   |
|---------------|----------|----|---|
| <b>887128</b> | 20 x 2,8 | 10 | – |
| <b>887235</b> | 25 x 3,5 | 10 | – |

S 5 PN 4 series

Code

| Code          |          |    |   |
|---------------|----------|----|---|
| <b>887130</b> | 20 x 3   | 10 | – |
| <b>887230</b> | 25 x 3   | 10 | – |
| <b>887330</b> | 32 x 3   | 10 | – |
| <b>887437</b> | 40 x 3,7 | 5  | – |
| <b>887546</b> | 50 x 4,6 | 5  | – |
| <b>887658</b> | 63 x 5,8 | 5  | – |

S 8 PN 2,5–4 series

Code

| Code          |          |   |   |
|---------------|----------|---|---|
| <b>887430</b> | 40 x 3   | 5 | – |
| <b>887530</b> | 50 x 3   | 5 | – |
| <b>887636</b> | 63 x 3,6 | 5 | – |



### 877

Pipe clenching ring.

Code

| Code          |                      |   |   |
|---------------|----------------------|---|---|
| <b>877020</b> | Ø 20 brass           | 1 | – |
| <b>877021</b> | Ø 21 brass           | 1 | – |
| <b>877121</b> | Ø 21 stainless steel | 1 | – |
| <b>877025</b> | Ø 25 brass           | 1 | – |
| <b>877027</b> | Ø 27 brass           | 1 | – |
| <b>877127</b> | Ø 27 stainless steel | 1 | – |
| <b>877032</b> | Ø 32 brass           | 1 | – |
| <b>877034</b> | Ø 34 brass           | 1 | – |
| <b>877134</b> | Ø 34 stainless steel | 1 | – |
| <b>877040</b> | Ø 40 brass           | 1 | – |
| <b>877050</b> | Ø 50 brass           | 1 | – |
| <b>877063</b> | Ø 63 brass           | 1 | – |



### 878

Brass washer.

Code

| Code          |      |   |   |
|---------------|------|---|---|
| <b>878020</b> | Ø 20 | 1 | – |
| <b>878021</b> | Ø 21 | 1 | – |
| <b>878025</b> | Ø 25 | 1 | – |
| <b>878027</b> | Ø 27 | 1 | – |
| <b>878032</b> | Ø 32 | 1 | – |
| <b>878034</b> | Ø 34 | 1 | – |
| <b>878040</b> | Ø 40 | 1 | – |
| <b>878050</b> | Ø 50 | 1 | – |
| <b>878063</b> | Ø 63 | 1 | – |

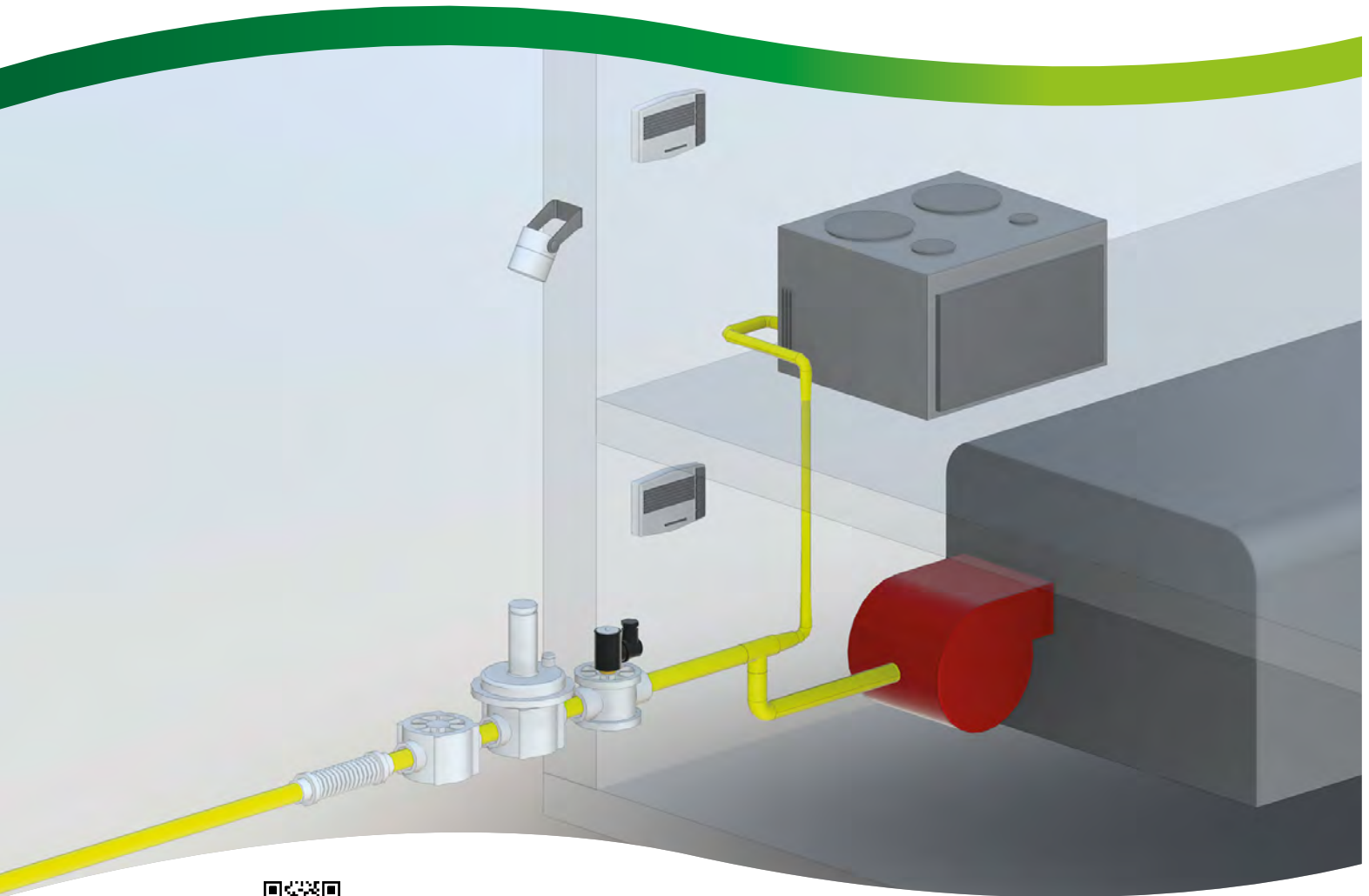


### 879

O-Ring.

Code

| Code          |      |   |   |
|---------------|------|---|---|
| <b>879020</b> | Ø 20 | 1 | – |
| <b>879021</b> | Ø 21 | 1 | – |
| <b>879025</b> | Ø 25 | 1 | – |
| <b>879027</b> | Ø 27 | 1 | – |
| <b>879032</b> | Ø 32 | 1 | – |
| <b>879034</b> | Ø 34 | 1 | – |
| <b>879040</b> | Ø 40 | 1 | – |
| <b>879050</b> | Ø 50 | 1 | – |
| <b>879063</b> | Ø 63 | 1 | – |



**G' BIM**  
bim.caleffi.com

**Gas filters**  
**Gas pressure filter regulators**  
**Gas pressure regulators**  
**Antivibration extendible joints for gas systems**  
**Pressure gauge for gas**  
**Solenoid valves for gas**  
**Gas detectors**



## 847

Compact gas filter.  
Max. pressure: 2 bar.  
Filtration:  $\varnothing \geq 50 \mu\text{m}$ .  
Filtration class: G 2 (to EN 779).



Code

|               |      |   |   |
|---------------|------|---|---|
| <b>847004</b> | 1/2" | 1 | — |
| <b>847005</b> | 3/4" | 1 | — |



## 848

Gas filter.  
Max. pressure: 2 bar.  
Filtration:  $\varnothing \geq 50 \mu\text{m}$ .  
Filtration class: G 2 (to EN 779).



Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>848004</b> | 1/2"   | 1 | — |
| <b>848005</b> | 3/4"   | 1 | — |
| <b>848006</b> | 1"     | 1 | — |
| <b>848007</b> | 1 1/4" | 1 | — |
| <b>848008</b> | 1 1/2" | 1 | — |
| <b>848009</b> | 2"     | 1 | — |



## 848

Gas filter.  
Body PN 16.  
Flanged connection.  
To be coupled with flat counterflanges EN 1092-1.  
Max. pressure: 2 bar.  
Filtration:  $\varnothing \geq 50 \mu\text{m}$ .  
Filtration class: G 2 (to EN 779).



Code

|               |        |   |   |
|---------------|--------|---|---|
| <b>848060</b> | DN 65  | 1 | — |
| <b>848080</b> | DN 80  | 1 | — |
| <b>848100</b> | DN 100 | 1 | — |



## 850

Gas pressure closing filter regulator, double diaphragm.  
Threaded connections.  
Max. inlet pressure: 500 mbar.  
Temperature range: -15–60 °C.  
Regulation and closing at null flow according to UNI EN 88.  
Filtration:  $\varnothing \geq 50 \mu\text{m}$ .  
Filtration class: G 2 (to EN 779).  
Conformity to Directive ATEX (II 2G - II 2D).



Code Adjustment (mbar)

|               |        |       |   |   |
|---------------|--------|-------|---|---|
| <b>850004</b> | 1/2"   | 18–40 | 1 | — |
| <b>850005</b> | 3/4"   | 18–40 | 1 | — |
| <b>850006</b> | 1"     | 18–40 | 1 | — |
| <b>850007</b> | 1 1/4" | 13–23 | 1 | — |
| <b>850008</b> | 1 1/2" | 13–23 | 1 | — |
| <b>850009</b> | 2"     | 13–23 | 1 | — |



## 850

Gas pressure closing filter regulator, double diaphragm.  
Body PN 16.  
Flanged connection.  
To be coupled with flat counterflanges EN 1092-1.  
Max. inlet pressure: 500 mbar.  
Temperature range: -15–60 °C.  
Regulation and closing at null flow according to UNI EN 88.  
Filtration:  $\varnothing \geq 50 \mu\text{m}$ .  
Filtration class: G 2 (to EN 779).  
Conformity to Directive ATEX (II 2G - II 2D).



Code Adjustment (mbar)

|               |        |       |   |   |
|---------------|--------|-------|---|---|
| <b>850060</b> | DN 65  | 13–27 | 1 | — |
| <b>850080</b> | DN 80  | 13–27 | 1 | — |
| <b>850100</b> | DN 100 | 15–27 | 1 | — |







## 852

Gas pressure closing regulator, double diaphragm. Threaded connections. Max. inlet pressure: 500 mbar. Temperature range: -15–60 °C. Regulation and closing at null flow according to UNI EN 88. Conformity to Directive ATEX (II 2G - II 2D).



| Code          | Adjustment (mbar) |       |     |
|---------------|-------------------|-------|-----|
| <b>852004</b> | 1/2"              | 18–40 | 1 – |
| <b>852005</b> | 3/4"              | 18–40 | 1 – |
| <b>852006</b> | 1"                | 18–40 | 1 – |
| <b>852007</b> | 1 1/4"            | 13–23 | 1 – |
| <b>852008</b> | 1 1/2"            | 13–23 | 1 – |
| <b>852009</b> | 2"                | 13–23 | 1 – |



## 852

Gas pressure closing regulator, double diaphragm. Body PN 16. Flanged connection. To be coupled with flat counterflanges EN 1092-1. Max. inlet pressure: 500 mbar. Temperature range: -15–60 °C. Regulation and closing at null flow according to UNI EN 88. Conformity to Directive ATEX (II 2G - II 2D).



| Code          | Adjustment (mbar) |       |     |
|---------------|-------------------|-------|-----|
| <b>852060</b> | DN 65             | 13–27 | 1 – |
| <b>852080</b> | DN 80             | 13–27 | 1 – |
| <b>852100</b> | DN 100            | 15–27 | 1 – |



## 841

Extendible stainless steel joint according to UNI 11353, for gas systems in domestic applications (max. 35 kW). Max. working pressure PS: 0,5 bar.

Fixed male connection: AISI 303. Flexible: AISI 316L. Captive female connection: AISI 303.

| Code          | Min./max. L |         |     |
|---------------|-------------|---------|-----|
| <b>841414</b> | 1/2"        | 90/130  | 3 – |
| <b>841514</b> | 3/4"        | 90/130  | 3 – |
| <b>841614</b> | 1"          | 90/130  | 3 – |
| <b>841420</b> | 1/2"        | 120/210 | 3 – |
| <b>841520</b> | 3/4"        | 120/210 | 3 – |
| <b>841620</b> | 1"          | 120/210 | 3 – |
| <b>841440</b> | 1/2"        | 240/410 | 3 – |
| <b>841540</b> | 3/4"        | 240/410 | 3 – |
| <b>841640</b> | 1"          | 240/410 | 3 – |



## 842

Antivibration joint for gas systems. According to EN 676 standard. Max. working pressure PS: 0,5 bar.

Threaded version: body AISI 316L, fixed male connection: FE 37.

Flanged version: body AISI 321, free flanged connections: ASTM A 105 - PN 10. To be coupled with flat counterflanges EN 1092-1 (PN 10 - PN 16).

| Code          | L (mm) |     |     |
|---------------|--------|-----|-----|
| <b>842004</b> | 1/2"   | 145 | 3 – |
| <b>842005</b> | 3/4"   | 150 | 3 – |
| <b>842006</b> | 1"     | 165 | 3 – |
| <b>842007</b> | 1 1/4" | 180 | 1 – |
| <b>842008</b> | 1 1/2" | 210 | 1 – |
| <b>842009</b> | 2"     | 230 | 1 – |
| <b>842060</b> | DN 65  | 175 | 1 – |
| <b>842080</b> | DN 80  | 175 | 1 – |
| <b>842100</b> | DN 100 | 195 | 1 – |



## 8460

Tap for gas pressure gauge, with opening button. Female connections.

| Code          |      |   |   |
|---------------|------|---|---|
| <b>846002</b> | 1/4" | 1 | – |
| <b>846003</b> | 3/8" | 1 | – |



## 8461

Pressure gauge for gas. Diaphragm precision sensitive element. Bottom connection. Accuracy: UNI 1,6.

| Code          | mbar | Ø     |    |     |
|---------------|------|-------|----|-----|
| <b>846101</b> | 1/4" | 0–60  | 60 | 1 – |
| <b>846102</b> | 1/4" | 0–100 | 60 | 1 – |
| <b>846103</b> | 3/8" | 0–60  | 80 | 1 – |
| <b>846104</b> | 3/8" | 0–100 | 80 | 1 – |

## SOLENOID VALVES FOR GAS - NORMALLY OPEN - MANUAL RESET



### 8540

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>854024</b> | 1/2"            | 230 V (AC) | 1 | – |
| <b>854025</b> | 3/4"            | 230 V (AC) | 1 | – |
| <b>854044</b> | 1/2"            | 24 V (AC)  | 1 | – |
| <b>854045</b> | 3/4"            | 24 V (AC)  | 1 | – |

Spare coil, complete with connector.

| Code          | Electric supply | Use         |   |   |
|---------------|-----------------|-------------|---|---|
| <b>854012</b> | 230 V (AC)      | 1/2" - 3/4" | 1 | – |
| <b>854014</b> | 24 V (AC)       | 1/2" - 3/4" | 1 | – |



### 8540

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>854026</b> | 1"              | 230 V (AC) | 1 | – |
| <b>854046</b> | 1"              | 24 V (AC)  | 1 | – |

Spare coil, complete with connector.

| Code          | Electric supply | Use |   |   |
|---------------|-----------------|-----|---|---|
| <b>854002</b> | 230 V (AC)      | 1"  | 1 | – |
| <b>854004</b> | 24 V (AC)       | 1"  | 1 | – |



### 839

Solenoid valve for gas, normally open, with manual reset. Max. pressure: 500 mbar. Protection class: IP 65.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>839005</b> | 3/4"            | 230 V (AC) | 1 | – |
| <b>839006</b> | 1"              | 230 V (AC) | 1 | – |
| <b>839007</b> | 1 1/4"          | 230 V (AC) | 1 | – |
| <b>839008</b> | 1 1/2"          | 230 V (AC) | 1 | – |
| <b>839009</b> | 2"              | 230 V (AC) | 1 | – |
| <b>839105</b> | 3/4"            | 24 V (AC)  | 1 | – |
| <b>839106</b> | 1"              | 24 V (AC)  | 1 | – |
| <b>839107</b> | 1 1/4"          | 24 V (AC)  | 1 | – |
| <b>839108</b> | 1 1/2"          | 24 V (AC)  | 1 | – |
| <b>839109</b> | 2"              | 24 V (AC)  | 1 | – |
| <b>839205</b> | 3/4"            | 12 V (DC)  | 1 | – |
| <b>839206</b> | 1"              | 12 V (DC)  | 1 | – |
| <b>839207</b> | 1 1/4"          | 12 V (DC)  | 1 | – |
| <b>839208</b> | 1 1/2"          | 12 V (DC)  | 1 | – |
| <b>839209</b> | 2"              | 12 V (DC)  | 1 | – |



### 839

Solenoid valve for gas, normally open, with manual reset. Body PN 16. Max. pressure: 500 mbar. Protection class: IP 65.

Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>839060</b> | DN 65           | 230 V (AC) | 1 | – |
| <b>839080</b> | DN 80           | 230 V (AC) | 1 | – |
| <b>839100</b> | DN 100          | 230 V (AC) | 1 | – |
| <b>839120</b> | DN 125          | 230 V (AC) | 1 | – |
| <b>839150</b> | DN 150          | 230 V (AC) | 1 | – |
| <b>839160</b> | DN 65           | 24 V (AC)  | 1 | – |
| <b>839180</b> | DN 80           | 24 V (AC)  | 1 | – |
| <b>839190</b> | DN 100          | 24 V (AC)  | 1 | – |
| <b>839220</b> | DN 125          | 24 V (AC)  | 1 | – |
| <b>839250</b> | DN 150          | 24 V (AC)  | 1 | – |

Spare coil, complete with connector.

| Code          | Electric supply | Use         |   |   |
|---------------|-----------------|-------------|---|---|
| <b>839A05</b> | 230 V (AC)      | 3/4"-DN 150 | 1 | – |
| <b>839B05</b> | 24 V (AC)       | 3/4"-DN 150 | 1 | – |
| <b>839C05</b> | 12 V (DC)       | 3/4"-DN 150 | 1 | – |

## SOLENOID VALVES FOR GAS - NORMALLY CLOSED - MANUAL RESET



### 8541

Solenoid valve for gas, normally closed, with manual reset. Max. pressure: 500 mbar. Class A - Group 2. Protection class: IP 65.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>854124</b> | 1/2"            | 230 V (AC) | 1 | — |
| <b>854125</b> | 3/4"            | 230 V (AC) | 1 | — |
| <b>854126</b> | 1"              | 230 V (AC) | 1 | — |
| <b>854144</b> | 1/2"            | 24 V (AC)  | 1 | — |
| <b>854145</b> | 3/4"            | 24 V (AC)  | 1 | — |
| <b>854146</b> | 1"              | 24 V (AC)  | 1 | — |

Spare coil, complete with connector.

| Code          | Electric supply | Use     |   |   |
|---------------|-----------------|---------|---|---|
| <b>854102</b> | 230 V (AC)      | 1/2"-1" | 1 | — |
| <b>854104</b> | 24 V (AC)       | 1/2"-1" | 1 | — |



### 837

Solenoid valve for gas, normally closed, with manual reset. Max. pressure: 500 mbar. Class A - Group 2. Protection class: IP 65.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>837005</b> | 3/4"            | 230 V (AC) | 1 | — |
| <b>837006</b> | 1"              | 230 V (AC) | 1 | — |
| <b>837007</b> | 1 1/4"          | 230 V (AC) | 1 | — |
| <b>837008</b> | 1 1/2"          | 230 V (AC) | 1 | — |
| <b>837009</b> | 2"              | 230 V (AC) | 1 | — |
| <b>837105</b> | 3/4"            | 24 V (AC)  | 1 | — |
| <b>837106</b> | 1"              | 24 V (AC)  | 1 | — |
| <b>837107</b> | 1 1/4"          | 24 V (AC)  | 1 | — |
| <b>837108</b> | 1 1/2"          | 24 V (AC)  | 1 | — |
| <b>837109</b> | 2"              | 24 V (AC)  | 1 | — |
| <b>837205</b> | 3/4"            | 12 V (DC)  | 1 | — |
| <b>837206</b> | 1"              | 12 V (DC)  | 1 | — |
| <b>837207</b> | 1 1/4"          | 12 V (DC)  | 1 | — |
| <b>837208</b> | 1 1/2"          | 12 V (DC)  | 1 | — |
| <b>837209</b> | 2"              | 12 V (DC)  | 1 | — |

Spare coil, complete with connector.

| Code          | Electric supply | Use     |   |   |
|---------------|-----------------|---------|---|---|
| <b>837A05</b> | 230 V (AC)      | 3/4"-2" | 1 | — |
| <b>837B05</b> | 24 V (AC)       | 3/4"-2" | 1 | — |
| <b>837C05</b> | 12 V (DC)       | 3/4"-2" | 1 | — |



### 837

Solenoid valve for gas, normally closed, with manual reset. Body PN 16. Max. pressure: 500 mbar. Class A - Group 2. Protection class: IP 65.

Flanged connections PN 16. To be coupled with flat counterflanges EN 1092-1.



| Code          | Electric supply |            |   |   |
|---------------|-----------------|------------|---|---|
| <b>837060</b> | DN 65           | 230 V (AC) | 1 | — |
| <b>837080</b> | DN 80           | 230 V (AC) | 1 | — |
| <b>837100</b> | DN 100          | 230 V (AC) | 1 | — |
| <b>837120</b> | DN 125          | 230 V (AC) | 1 | — |
| <b>837150</b> | DN 150          | 230 V (AC) | 1 | — |
| <b>837160</b> | DN 65           | 24 V (AC)  | 1 | — |
| <b>837180</b> | DN 80           | 24 V (AC)  | 1 | — |
| <b>837190</b> | DN 100          | 24 V (AC)  | 1 | — |
| <b>837220</b> | DN 125          | 24 V (AC)  | 1 | — |
| <b>837250</b> | DN 150          | 24 V (AC)  | 1 | — |

Spare coil, complete with connector.

| Code          | Electric supply | Use          |   |   |
|---------------|-----------------|--------------|---|---|
| <b>837A60</b> | 230 V (AC)      | DN 65-DN 150 | 1 | — |
| <b>837B60</b> | 24 V (AC)       | DN 65-DN 150 | 1 | — |

## SOLENOID VALVES FOR GAS - NORMALLY CLOSED



### 838

Solenoid valve for gas,  
normally closed.  
Max. pressure: 360 mbar.  
Class A - Group 2.  
Protection class: IP 65.



| Code           | Electric supply |            |     |
|----------------|-----------------|------------|-----|
| <b>838004</b>  | 1/2"            | 230 V (AC) | 1 - |
| <b>838005</b>  | 3/4"            | 230 V (AC) | 1 - |
| <b>838006</b>  | 1"              | 230 V (AC) | 1 - |
| <b>838007*</b> | 1 1/4"          | 230 V (AC) | 1 - |
| <b>838008*</b> | 1 1/2"          | 230 V (AC) | 1 - |
| <b>838009*</b> | 2"              | 230 V (AC) | 1 - |
| <b>838104</b>  | 1/2"            | 24 V (AC)  | 1 - |
| <b>838105</b>  | 3/4"            | 24 V (AC)  | 1 - |
| <b>838106</b>  | 1"              | 24 V (AC)  | 1 - |
| <b>838107*</b> | 1 1/4"          | 24 V (AC)  | 1 - |
| <b>838108*</b> | 1 1/2"          | 24 V (AC)  | 1 - |
| <b>838109*</b> | 2"              | 24 V (AC)  | 1 - |

\* With upper hexagonal fixing nut



### 838

Solenoid valve for gas,  
normally closed.  
Body PN 16.  
Max. pressure: 200 mbar.  
Class A - Group 2.  
Protection class: IP 65.

Flanged connections PN 16.  
To be coupled with flat  
counterflanges EN 1092-1.



| Code          | Electric supply |            |     |
|---------------|-----------------|------------|-----|
| <b>838060</b> | DN 65           | 230 V (AC) | 1 - |
| <b>838080</b> | DN 80           | 230 V (AC) | 1 - |
| <b>838100</b> | DN 100          | 230 V (AC) | 1 - |
| <b>838120</b> | DN 125          | 230 V (AC) | 1 - |
| <b>838150</b> | DN 150          | 230 V (AC) | 1 - |
| <b>838160</b> | DN 65           | 24 V (AC)  | 1 - |
| <b>838180</b> | DN 80           | 24 V (AC)  | 1 - |
| <b>838190</b> | DN 100          | 24 V (AC)  | 1 - |
| <b>838220</b> | DN 125          | 24 V (AC)  | 1 - |
| <b>838250</b> | DN 150          | 24 V (AC)  | 1 - |



Spare coil,  
complete with connector.

| Code          | Electric supply | Use                         |   |   |
|---------------|-----------------|-----------------------------|---|---|
| <b>838A04</b> | 230 V (AC)      | 1/2" - 3/4" (round version) | 1 | - |
| <b>838A06</b> | 230 V (AC)      | 1" (round version)          | 1 | - |
| <b>838A07</b> | 230 V (AC)      | 1 1/4"-2" (round version)   | 1 | - |
| <b>838A17</b> | 230 V (AC)      | 1 1/4"-2" (round version)*  | 1 | - |
| <b>838B04</b> | 24 V (AC)       | 1/2" - 3/4" (round version) | 1 | - |
| <b>838B06</b> | 24 V (AC)       | 1" (round version)          | 1 | - |
| <b>838B07</b> | 24 V (AC)       | 1 1/4"-2" (round version)   | 1 | - |
| <b>838B17</b> | 24 V (AC)       | 1 1/4"-2" (round version)*  | 1 | - |

\* With upper hexagonal fixing nut



Spare coil,  
complete with connector.

| Code          | Electric supply | Use             |   |   |
|---------------|-----------------|-----------------|---|---|
| <b>838A60</b> | 230 V (AC)      | DN 65 - DN 80   | 1 | - |
| <b>838A00</b> | 230 V (AC)      | DN 100          | 1 | - |
| <b>838A20</b> | 230 V (AC)      | DN 125 - DN 150 | 1 | - |
| <b>838B60</b> | 24 V (AC)       | DN 65 - DN 80   | 1 | - |
| <b>838B00</b> | 24 V (AC)       | DN 100          | 1 | - |
| <b>838B20</b> | 24 V (AC)       | DN 125 - DN 150 | 1 | - |

## ROTATING SIREN - BLINKER



### 8561

Rotating siren.  
230 V (AC) - 112 dB/1 m.



| Code          |   |   |
|---------------|---|---|
| <b>856102</b> | 1 | - |



### 8562

Electronic intermittence blinker.  
230 V (AC) - Lamp power: 40 W.



| Code          |   |   |
|---------------|---|---|
| <b>856202</b> | 1 | - |

## GAS DETECTORS



### 8563

Gas detector, with built-in sensor and relay outlet.  
With BUS connection, for auxiliary remote sensor.  
For solenoid valves 8540, 8541, 837, 838 and 839 series.  
Supply: 230 V (AC).  
Outlet contact: 8 (2) A.  
Protection class: IP 42.  
Domestic use.



Code

|               |                 |   |   |
|---------------|-----------------|---|---|
| <b>856300</b> | for methane gas | 1 | — |
| <b>856302</b> | for LPG         | 1 | — |



### 855

Gas detector, with built-in sensor and relay outlet.  
Without BUS connection.  
With solenoid valve.  
Normally open.  
Supply: 230 V (AC).  
Protection class: IP 42.



Code

|               |      |                 |   |   |
|---------------|------|-----------------|---|---|
| <b>855400</b> | 1/2" | for methane gas | 1 | — |
| <b>855500</b> | 3/4" | for methane gas | 1 | — |
| <b>855410</b> | 1/2" | for LPG         | 1 | — |
| <b>855510</b> | 3/4" | for LPG         | 1 | — |



### 8563

Auxiliary remote sensor for gas detector 8563 series.  
Supply: 230 V (AC).  
Protection class: IP 42.  
Domestic use.



Code

|               |                 |   |   |
|---------------|-----------------|---|---|
| <b>856310</b> | for methane gas | 1 | — |
| <b>856312</b> | for LPG         | 1 | — |



### 8565

Gas detector, with built-in sensor and relay outlet.  
Without BUS connection.  
Supply: 230 V (AC).  
Outlet contact: 8 (2) A.  
Protection class: IP 42.  
Domestic use.



Code

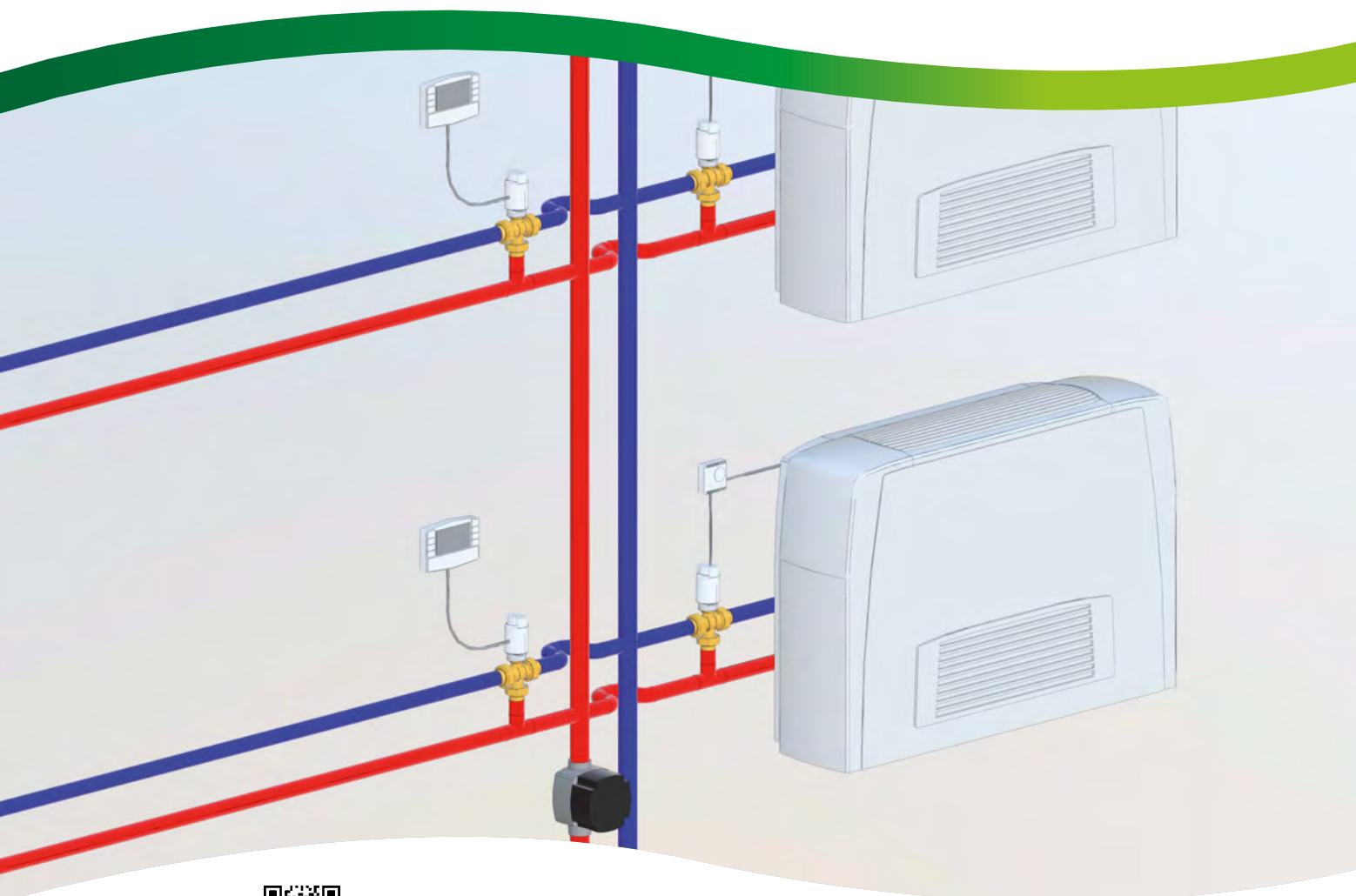
|               |                 |   |   |
|---------------|-----------------|---|---|
| <b>856500</b> | for methane gas | 1 | — |
| <b>856502</b> | for LPG         | 1 | — |







# EXPANSION VESSELS, CHRONO-THERMOSTATS, THERMOSTATS



**BIM**  
bim.caleffi.com

**Expansion vessels**  
**Shut-off cocks for expansion vessels**  
**Pressure switch and float switch**  
**Temperature regulators**  
**Thermostats**  
**Chrono-thermostats**

11



**Domestic Water Sizer**



**DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE**

Available on [www.caleffi.com](http://www.caleffi.com) and app for smartphone.

Download the version for your iOS and Android® mobile phone.

## EXPANSION VESSELS FOR HEATING SYSTEMS





**556**

tech. broch. 01079

Welded expansion vessel,  
for heating systems, EC certification.  
Diaphragm membrane.  
Max. working pressure: 6 bar.  
System working temperature range: -10–120 °C.  
Membrane working temperature range: -10–70 °C.  
Max. percentage of glycol: 50 %.  
Conformity to EN 13831 standard.



| Code   | Litres | Conn. | Precharge<br>(bar) |  |  |
|--------|--------|-------|--------------------|---|---|
| 556008 | 8      | 3/4"  | 1,5                | 1   | –   |
| 556012 | 12     | 3/4"  | 1,5                | 1   | –   |
| 556018 | 18     | 3/4"  | 1,5                | 1   | –   |
| 556025 | 25     | 3/4"  | 1,5                | 1   | –   |





**556**

tech. broch. 01079

Welded expansion vessel,  
for heating systems, EC certification.  
Diaphragm membrane.  
Max. working pressure: 6 bar.  
System working temperature range: -10–120 °C.  
Membrane working temperature range: -10–70 °C.  
Max. percentage of glycol: 50 %.  
Conformity to EN 13831 standard.



| Code   | Litres | Conn. | Precharge<br>(bar) |  |  |
|--------|--------|-------|--------------------|---|---|
| 556035 | 35     | 3/4"  | 1,5                | 1   | –   |
| 556050 | 50     | 3/4"  | 1,5                | 1   | –   |
| 556080 | 80     | 1"    | 1,5                | 1   | –   |
| 556100 | 100    | 1"    | 1,5                | 1   | –   |
| 556140 | 140    | 1"    | 1,5                | 1   | –   |
| 556200 | 200    | 1"    | 1,5                | 1   | –   |
| 556250 | 250    | 1"    | 1,5                | 1   | –   |





**556**

tech. broch. 01079

Welded expansion vessel,  
for heating systems, EC certification.  
Diaphragm membrane.  
Max. working pressure: 6 bar.  
System working temperature range: -10–120 °C.  
Membrane working temperature range: -10–70 °C.  
Max. percentage of glycol: 50 %.  
Conformity to EN 13831 standard.



| Code   | Litres | Conn. | Precharge<br>(bar) |  |  |
|--------|--------|-------|--------------------|---|---|
| 556300 | 300    | 1"    | 1,5                | 1   | –   |
| 556400 | 400    | 1"    | 1,5                | 1   | –   |
| 556500 | 500    | 1"    | 1,5                | 1   | –   |
| 556600 | 600    | 1"    | 1,5                | 1   | –   |

## EXPANSION VESSELS FOR HOT WATER SYSTEMS





**5557**



tech. broch. 01079

Welded expansion vessel,  
for hot water systems, EC certification.  
Bladder membrane.  
Max. working pressure: 10 bar.  
System working temperature range: -10–100 °C.  
Membrane working temperature range: -10–100 °C.  
Conformity to EN 13831 standard.



| Code   | Litres | Conn. | Precharge<br>(bar) |  |  |
|--------|--------|-------|--------------------|---|---|
| 555702 | 2      | 1/2"  | 2,5                | 4   | –   |
| 555705 | 5      | 3/4"  | 2,5                | 1   | –   |
| 555708 | 8      | 3/4"  | 2,5                | 1   | –   |





**568**



tech. broch. 01079

Welded expansion vessel,  
for hot water systems, EC certification.  
Bladder membrane.  
Max. working pressure: 10 bar.  
System working temperature range: -10–70 °C.  
Membrane working temperature range: -10–70 °C.  
Conformity to EN 13831 standard.



| Code    | Litres | Conn. | Precharge<br>(bar) |  |  |
|---------|--------|-------|--------------------|---|---|
| 568008  | 8      | 3/4"  | 2,5                | 1   | –   |
| 568012  | 12     | 3/4"  | 2,5                | 1   | –   |
| 568018  | 18     | 3/4"  | 2,5                | 1   | –   |
| 568025  | 25     | 3/4"  | 2,5                | 1   | –   |
| 568033* | 33     | 3/4"  | 2,5                | 1   | –   |

\* Complete with brackets for wall mounting





**568**



tech. broch. 01079

Welded expansion vessel,  
for hot water systems, EC certification.  
Bladder membrane  
(can be replaced for volumes from 60 to 500 litres).  
Max. working pressure: 10 bar.  
System working temperature range: -10–70 °C.  
Membrane working temperature range: -10–70 °C.  
Conformity to EN 13831 standard.



| Code   | Litres | Conn.  | Precharge<br>(bar) |  |  |
|--------|--------|--------|--------------------|---|---|
| 568050 | 50     | 1"     | 2,5                | 1   | –   |
| 568060 | 60     | 1"     | 2,5                | 1   | –   |
| 568080 | 80     | 1"     | 2,5                | 1   | –   |
| 568100 | 100    | 1"     | 2,5                | 1   | –   |
| 568200 | 200    | 1 1/4" | 2,5                | 1   | –   |
| 568300 | 300    | 1 1/4" | 2,5                | 1   | –   |
| 568400 | 400    | 1 1/4" | 2,5                | 1   | –   |
| 568500 | 500    | 1 1/4" | 2,5                | 1   | –   |

## SHUT-OFF COCK FOR EXPANSION VESSELS



**558**

Automatic shut-off cock, for expansion vessels.

**For domestic water circuit.**

Max. working pressure: 10 bar.

Max. working temperature: 110 °C.

Code

**558500** 3/4"



1

50



**558**

Automatic shut-off cock, for expansion vessel, with drain cock.

**For domestic water circuit.**

Max. working pressure: 6 bar.

Max. working temperature: 85 °C.

Code

**558510** 3/4"



1

50



**5580**

Ball shut-off valve, for expansion vessels, with drain cock.

**For domestic water circuit.**

Max. working pressure: 6 bar.

Max. working temperature: 85 °C.

Code

**558050** 3/4"



1

20

**558060** 1"

1

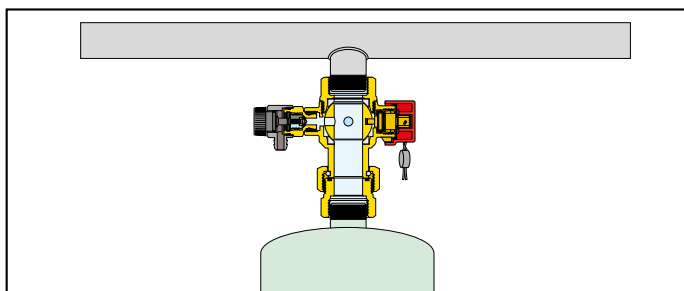
20

**558070** 1 1/4"

1

20

Application diagram of shut-off valve 5580 series



## PRESSURE SWITCH AND FLOAT SWITCH



**625**

Pressure switch for boosting sets and domestic water applications.

Up to 500 V three-pole - 16 (10) A.

Ambient temperature range: 0–55 °C.

Medium temperature range: 0–55 °C.

1/4" female connection.

Protection class: IP 44.

CE

Code

Setting range

Max. pressure



**625005**

1– 5 bar

5 bar

1

10

**625010**

3–12 bar

12 bar

1

10



**613**

Float switch, 250 V - 10 A.

Heavy duty approved.



Code

Cable length



**613030**

3 m

1

5

**613050**

5 m

1

5

## TEMPERATURE REGULATOR



**161**

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probe with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe; see accessories).  
Optional outside compensated probe.  
Temperature adjustment range: 5–95 °C.  
Supply: 230 V - 50/60 Hz.  
Protection class: IP 20 / EN 60529.  
Probe cable length: 1,5 m.

CE

Code

**161010**

1

–



**161**

Outside temperature probe.

Code

**161002**

1

–



**161**

Pressure switch with preconnected pin.  
Working range: 0,5–10 bar.  
Max. working temperature: 100 °C.  
Cable length: 1 m.

Code

**161003** 1/2"

1

–



**161**

Dew point detector.  
Working range: 30–100 RH %.

Code

**161004**

1

–



**161**

Remote regulator.  
Functions:  
- translation of regulation curves,  
- max. temperature,  
- position OFF.

Code

**161005**

1

–

Accessories for regulator code 161010.

Code

**161012** Pt1000 contact probe for pipes Ø 6 mm, cable L 2,5 m

**161013** immersion pocket for Pt1000 probe 1/2" M, 60 mm

**161014** immersion pocket for Pt1000 probe 1/2" M, 100 mm

**161015** Pt1000 probe Ø 6 mm - L 20 mm, cable L 1,5 m

**161006** Pt1000 probe Ø 6 mm - L 45 mm, cable L 2,5 m



**1520**

Digital temperature regulator for heating and cooling.  
Complete with flow probe, outside probe and max. relative humidity probe.  
Supply: 230 V - 50/60 Hz.  
Power consumption: 5,5 VA.  
Protection class: IP 40.

CE

Code

**152021** 1 channel

1

–



**1520**

Digital temperature regulator.  
Complete with flow contact probe and outside probe.  
Adjustment range: 20–90 °C.  
Supply: 230 V - 50/60 Hz.  
Protection class: IP 40.

CE

Code

**152001** 1 channel

1

–

**152002** 2 channels

1

–

**152003** 3 channels

1

–



## THERMOSTATS



### 620

Room thermostat with changeover switch  
10 (2,5) A - 230 V - 50 Hz.

**620000:** without warning lamp.

**620100:** with warning lamp.

**620110:** with warning lamp ON/OFF switch.

**620120:** with warning lamp and  
SUMMER - WINTER switch.

Protection class: IP 30.

**Class:** I [Ecodesign Directive].



| Code          |   |    |
|---------------|---|----|
| <b>620000</b> | 1 | 50 |
| <b>620100</b> | 1 | 50 |
| <b>620110</b> | 1 | 50 |
| <b>620120</b> | 1 | 50 |



### 620

Digital room thermostat with display.  
With changeover contact 5 (3) A.  
ON/OFF function with adjustable differential  
from 0,2 to 2 °C or proportional.  
2 temperature levels + antifreeze.  
SUMMER - WINTER switch.  
Adjustable temperature with 0,1 °C steps.  
Protection class: IP 30.  
**Class:** I [Ecodesign Directive].



| Code          |                       |      |
|---------------|-----------------------|------|
| <b>620300</b> | battery supply        | 1 10 |
| <b>620302</b> | electric supply 230 V | 1 10 |



### 6205

tech. broch. 01186

Control bar.  
Supply: 230 V - 50/60 Hz.  
Power consumption: max. 5,5 VA (8 outputs).  
Changeover contacts: 10 A.  
Protection class: IP 30 (with rubber cable clamps).  
Output command for pump.  
Input for SUMMER - WINTER.  
Input for timer.



| Code          |            |     |
|---------------|------------|-----|
| <b>620542</b> | 4 channels | 1 - |
| <b>620582</b> | 8 channels | 1 - |

## CHRONO-THERMOSTATS



### 618

Digital chrono-thermostat,  
with battery supply.  
Daily or weekly programmable clock.  
2 temperature levels + antifreeze.  
Fitted for phone programmer.  
30-minute minimum programme.  
Output contact: 8 (2) A.  
Protection class: IP 30.  
**Class:** I-IV [Ecodesign Directive].



| Code          |        |     |
|---------------|--------|-----|
| <b>618101</b> | daily  | 1 - |
| <b>618107</b> | weekly | 1 - |



### 739

Digital chrono-thermostat,  
with battery supply.  
Weekly programmable clock.  
Quick programming.  
SUMMER - WINTER changeover.  
Output contact: 5 (2) A.  
Protection class: IP 30.  
**Class:** I-IV [Ecodesign Directive].



| Code          |                  |     |
|---------------|------------------|-----|
| <b>739107</b> | 135 x 90 x 28 mm | 1 - |



### 738

Digital room chrono-thermostat  
with battery electric supply.  
Backlit display and navigation via menu.  
Weekly programmable clock.  
Fitted for phone programmer.  
3 temperature levels + antifreeze.  
30-minute minimum programme.  
ON/OFF function with adjustable  
differential from 0,2 to 2 °C or proportional.  
SUMMER - WINTER changeover.  
Adjustable temperature with 0,1 °C steps.  
Relais output with changeover switch contact:  
5 (3) A / 250 V.  
Protection class: IP 30.  
**Class:** I-IV [Ecodesign Directive].



| Code          |  |     |
|---------------|--|-----|
| <b>738407</b> |  | 1 - |



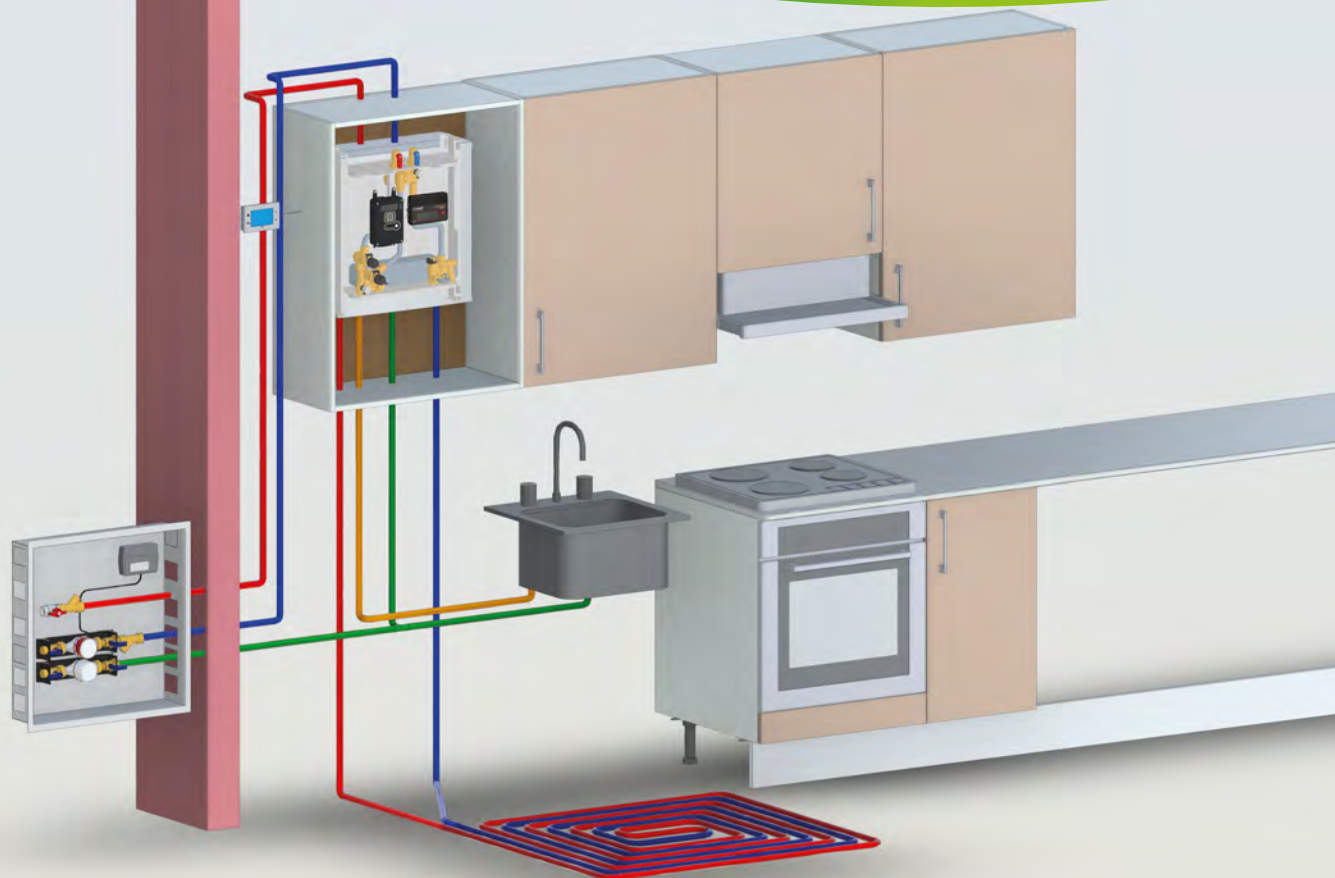
### 738

Digital room chrono-thermostat.  
Electric supply: 230 V.  
Backlit display and navigation via menu.  
Backlit status bar.  
Weekly programmable clock.  
Fitted for phone programmer.  
3 temperature levels + antifreeze.  
30-minute minimum programme.  
ON/OFF function with adjustable  
differential from 0,2 to 2 °C or proportional.  
SUMMER - WINTER changeover.  
Adjustable temperature with 0,1 °C steps.  
Relais output with changeover switch contact:  
5 (3) A / 250 V.  
Protection class: IP 30.  
**Class:** I-IV [Ecodesign Directive].



| Code          |  |     |
|---------------|--|-----|
| <b>738427</b> |  | 1 - |





**BIM**  
bim.caleffi.com

### User modules

Wall mounted HIU - Instantaneous DHW production

Recess mounted HIU - Instantaneous DHW production

## PLURIMOD EASY UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER

### 700205

tech. broch. 01303

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 130 to 160 mm.



Complete with:  
- 2 pairs of 3/4" M ball valves  
- 2 flushing pipes for initial washing of the system. Tmax 55 °C  
- PPE full insulation.  
Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code   | Conn. | Dimension (mm) |
|--------|-------|----------------|
| 700205 | 3/4"  | 480 x 480      |

### 700025 DUPLEX

tech. broch. 01113

Recessed box for double PLURIMOD EASY user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm. Equipped with guides for positioning the brackets code 700205 002. Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code   | Dimension (mm) |
|--------|----------------|
| 700025 | 550 x 1175     |

### 700205 002

tech. broch. 01303

Module bracket for PLURIMOD EASY complete with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- PPE full insulation.



| Code       | 3/4" |
|------------|------|
| 700205 002 |      |

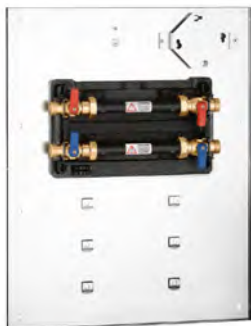
### 700205 003

tech. broch. 01303

Steel plate for fastening vertically to a wall or for inserting in a services duct.

Complete with:  
- 2 pairs of 3/4" M ball valves  
- 2 flushing pipes for initial washing of the system. Tmax 55 °C  
- PPE full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code       | Conn. | Dimension (mm) |
|------------|-------|----------------|
| 700205 003 | 3/4"  | 480 x 610      |

### 700255 ...

Hydraulic module fitted for heat metering.

- Complete with:
- 1 zone valve unit with flow pocket with strainer mesh
  - 1 template for flow meter. Tmax. 55 °C
  - 1 pressure independent control valve.

Fitted for thermo-electric actuators 6565 series.



| Code       | Flow rate range (l/h) |
|------------|-----------------------|
| 700255 H20 | 20-200                |
| 700255 H40 | 80-400                |
| 700255 1H2 | 120-1200              |

### 7002

tech. broch. 01303

Hydraulic module PLURIMOD EASY fitted for heat metering.

- Complete with:
- 2-way zone valve with ON/OFF control by means of thermo-electric actuator 6562 series
  - differential valve with user side control with fixed Δp
  - 2 pockets for temperature probe (flow pocket with stainless steel strainer cartridge)
  - 1 copper template for flow meter.



| Code       |   |
|------------|---|
| 700217 001 | module with 230 V (AC) actuator - Δp 20 kPa |
| 700218 001 | module with 24 V (AC) actuator - Δp 20 kPa  |
| 700219 001 | module with 230 V (AC) actuator - Δp 30 kPa |
| 700220 001 | module with 24 V (AC) actuator - Δp 30 kPa  |

Copper template for flow meter to replace the plastic template.



| Code   |
|--------|
| R79112 |

## PLURIMOD EASY ULTRA 1" UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER

### 7003

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 130 to 160 mm.

For both vertical and horizontal installation, inlet possible on both left and right side of the box.



Complete with:

- 2 pairs of 1" M ball valves
- PPE full insulation, black, density 50 g/l
- technopolymer mounting bracket with thermal break
- PICV DN 25, max. flow rate: 1,8 m³/h
- technopolymer template for system flushing
- inspectable strainer with probe connection.

Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code          | Conn. | Dimension (mm) |
|---------------|-------|----------------|
| <b>700306</b> | 1"    | 480 x 480      |

### 7003

PLURIMOD EASY ULTRA 1" hydraulic module complete with:

- 2 pairs of 1" M ball valves
- PICV DN 25, max. flow rate: 1,8 m³/h
- wall anchors and mounting screws
- PPE full insulation.

**Fitted for thermo-electric actuators 6565 series.**



| Code              | Conn. |
|-------------------|-------|
| <b>700306 002</b> | 1"    |

### 7003

Steel plate for fastening vertically to a wall or for inserting in a services duct. Complete with PPE full insulation and hydraulic module.

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code              | Conn. | Dimension (mm) |
|-------------------|-------|----------------|
| <b>700306 003</b> | 1"    | 480 x 610      |



## PLURIMOD EASY UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER - WITH DISTRIBUTION MANIFOLD

### 70028

Recessed box for PLURIMOD EASY

**with distribution manifold for fan-coil systems.**

Galvanised backplate and RAL 9010 painted door for interior use.



The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds

**662 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code   | Outlets No. | Outlets | Dimension (mm)      |
|--------|-------------|---------|---------------------|
| 70028B | 2           | 3/4"    | 866 x 600 x 140-180 |
| 70028C | 3           | 3/4"    | 866 x 600 x 140-180 |
| 70028D | 4           | 3/4"    | 866 x 600 x 140-180 |
| 70028E | 5           | 3/4"    | 866 x 600 x 140-180 |
| 70028F | 6           | 3/4"    | 866 x 600 x 140-180 |
| 70028G | 7           | 3/4"    | 866 x 600 x 140-180 |
| 70028H | 8           | 3/4"    | 866 x 600 x 140-180 |

### 70029

Recessed box for PLURIMOD EASY

**with distribution manifold.**

Galvanised backplate and RAL 9010 painted door for interior use.



The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 single 3/4" distribution manifolds

**350 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code   | Outlets No. | Outlets  | Dimension (mm)      |
|--------|-------------|----------|---------------------|
| 70029B | 2           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029C | 3           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029D | 4           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029E | 5           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029F | 6           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029G | 7           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70029H | 8           | 23 p.1,5 | 866 x 600 x 140-180 |

### 70026

Recessed box for PLURIMOD EASY

**with distribution manifold for radiant panel systems.**

Galvanised backplate and RAL 9010 painted door for interior use.



The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax. 55 °C
- 2 x 1" distribution manifolds

**664 series**, flow manifold **complete with flow meters and flow rate regulating valve** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code   | Outlets No. | Outlets | Dimension (mm)      |
|--------|-------------|---------|---------------------|
| 70026B | 2           | 3/4"    | 866 x 600 x 140-180 |
| 70026C | 3           | 3/4"    | 866 x 600 x 140-180 |
| 70026D | 4           | 3/4"    | 866 x 600 x 140-180 |
| 70026E | 5           | 3/4"    | 866 x 600 x 140-180 |
| 70026F | 6           | 3/4"    | 866 x 600 x 140-180 |
| 70026G | 7           | 3/4"    | 866 x 600 x 140-180 |
| 70026H | 8           | 3/4"    | 866 x 600 x 140-180 |

### 7002

tech. broch. 01303

Hydraulic module PLURIMOD EASY fitted for heat metering.

Complete with:

- 2-way zone valve with ON/OFF control by means of thermo-electric actuator 6562 series
- differential valve with user side control with fixed  $\Delta p$
- 2 pockets for temperature probe (flow pocket with stainless steel strainer cartridge)
- 1 copper template for flow meter.



Code

|            |   |
|------------|---|
| 700215 001 | module with 230 V (AC) actuator - $\Delta p$ 15 kPa |
| 700216 001 | module with 24 V (AC) actuator - $\Delta p$ 15 kPa  |
| 700217 001 | module with 230 V (AC) actuator - $\Delta p$ 20 kPa |
| 700218 001 | module with 24 V (AC) actuator - $\Delta p$ 20 kPa  |
| 700219 001 | module with 230 V (AC) actuator - $\Delta p$ 30 kPa |
| 700220 001 | module with 24 V (AC) actuator - $\Delta p$ 30 kPa  |

**For HEAT METERS - HYDRAULIC OPTIONS - see pages 303-304**

## PLURIMOD UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER

### 700005

tech. broch. 01203

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 120 to 150 mm.

Complete with:

- 2 pairs of 3/4" M ball valves
  - 2 flushing pipes for initial washing of the system. Tmax 55 °C.
- Fitted for positioning of domestic water functions codes 70005. (see page 304).



### 700025 DUPLEX

tech. broch. 01113

Recessed box for double PLURIMOD user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm. Equipped with guides for positioning the brackets code 700005 002. Fitted for positioning of domestic water functions codes 70005. (see page 304).

| Code          | Dimension (mm) |
|---------------|----------------|
| <b>700025</b> | 550 x 1175     |

| Code          | Conn. | Dimension (mm) |
|---------------|-------|----------------|
| <b>700005</b> | 3/4"  | 550 x 550      |

### 700005 003

Steel plate for fastening vertically to a wall or for inserting in a services duct.

Complete with:

- 2 pairs of 3/4" M ball valves
  - 2 flushing pipes for initial washing of the system. Tmax 55 °C.
- Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code              | Conn. | Dimension (mm) |
|-------------------|-------|----------------|
| <b>700005 003</b> | 3/4"  | 480 x 610      |

### 700005 002

Galvanized sheet metal mounting bracket for PLURIMOD plumbing module.

Complete with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C.



| Code              |
|-------------------|
| <b>700005 002</b> |

### 700075 NEW

Compact automatic flow rate regulator. Brass body. Polymer cartridge. Max. working pressure: 16 bar.

Temperature range: 0-100 °C.  
ΔP range: 15-200 kPa.  
Flow rates: 0.12 - 1.40 m³/h.  
Accuracy: ±10 %.



To complete the code, consult the downloadable table by clicking on the Additional Info button below.  
Example: Maximum required flow rate 600 l/h code 700075 M60.

| m³/h | digit      | m³/h | digit      | m³/h | digit      | m³/h | digit      | m³/h | digit      |
|------|------------|------|------------|------|------------|------|------------|------|------------|
| 0,12 | <b>M12</b> | 0,25 | <b>M25</b> | 0,40 | <b>M40</b> | 0,70 | <b>M70</b> | 1,00 | <b>1M0</b> |
| 0,15 | <b>M15</b> | 0,30 | <b>M30</b> | 0,50 | <b>M50</b> | 0,80 | <b>M80</b> | 1,20 | <b>1M2</b> |
| 0,20 | <b>M20</b> | 0,35 | <b>M35</b> | 0,60 | <b>M60</b> | 0,90 | <b>M90</b> | 1,40 | <b>1M4</b> |

| Code                                      |
|---|
| <b>700075 ...</b> 1" F captive nut x 1" M |

### 7000

tech. broch. 01203

Hydraulic module PLURIMOD fitted for heat metering.

Complete with:

- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.



| Code              |                                  | Max. recommended flow rate l/h |
|-------------------|----------------------------------|--------------------------------|
| <b>700015 001</b> | module with 230 V (AC) actuator  | 1400                           |
| <b>700016 001</b> | module with 24 V (AC) actuator ) | 1400                           |

**For HEAT METERS - HYDRAULIC OPTIONS - see pages 303-304**

## PLURIMOD UNIVERSAL USER MODULE CENTRALISED DOMESTIC WATER - WITH DISTRIBUTION MANIFOLD

### 70008

tech. broch. 01203

Recessed box for PLURIMOD

**with distribution manifold for fan-coil heating systems.**

Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds

**662 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code   | Outlets No. | Outlets | Dimension (mm)      |
|--------|-------------|---------|---------------------|
| 70008B | 2           | 3/4"    | 866 x 600 x 140-180 |
| 70008C | 3           | 3/4"    | 866 x 600 x 140-180 |
| 70008D | 4           | 3/4"    | 866 x 600 x 140-180 |
| 70008E | 5           | 3/4"    | 866 x 600 x 140-180 |
| 70008F | 6           | 3/4"    | 866 x 600 x 140-180 |
| 70008G | 7           | 3/4"    | 866 x 600 x 140-180 |
| 70008H | 8           | 3/4"    | 866 x 600 x 140-180 |

### 70009

tech. broch. 01203

Recessed box for PLURIMOD

**with distribution manifold for radiator heating systems.**

Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 single 3/4" distribution manifolds

**350 series** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code   | Outlets No. | Outlets  | Dimension (mm)      |
|--------|-------------|----------|---------------------|
| 70009B | 2           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009C | 3           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009D | 4           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009E | 5           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009F | 6           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009G | 7           | 23 p.1,5 | 866 x 600 x 140-180 |
| 70009H | 8           | 23 p.1,5 | 866 x 600 x 140-180 |

### 70006

tech. broch. 01203

Recessed box for PLURIMOD

**with distribution manifold for radiant panel systems.**

Galvanised backplate and RAL 9010 painted door for interior use.

The box is supplied with:

- 2 pairs of 3/4" M ball valves
- 2 flushing pipes for initial washing of the system. Tmax 55 °C
- 2 x 1" distribution manifolds

**664 series, flow manifold complete with flow meters and flow rate regulating valve** (max 8 connections).

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code   | Outlets No. | Outlets | Dimension (mm)      |
|--------|-------------|---------|---------------------|
| 70006B | 2           | 3/4"    | 866 x 600 x 140-180 |
| 70006C | 3           | 3/4"    | 866 x 600 x 140-180 |
| 70006D | 4           | 3/4"    | 866 x 600 x 140-180 |
| 70006E | 5           | 3/4"    | 866 x 600 x 140-180 |
| 70006F | 6           | 3/4"    | 866 x 600 x 140-180 |
| 70006G | 7           | 3/4"    | 866 x 600 x 140-180 |
| 70006H | 8           | 3/4"    | 866 x 600 x 140-180 |

### 7000

tech. broch. 01203

Hydraulic module PLURIMOD fitted for heat metering.

Complete with:

- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.



| Code       |                                  | Max. recommended flow rate l/h |
|------------|----------------------------------|--------------------------------|
| 700015 001 | module with 230 V (AC) actuator  | 1400                           |
| 700016 001 | module with 24 V (AC) actuator ) | 1400                           |

**For HEAT METERS - HYDRAULIC OPTIONS - see pages 303-304**

## PLURIMOD CLIMA UNIVERSAL USER MODULE - CENTRALISED DOMESTIC WATER

### 700105

tech. broch. 01210

Recessed box with galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 120 to 150 mm.

- Complete with:
- 2 pairs of 3/4" M ball valves
  - 2 flushing pipes for initial washing of the system. Tmax 55 °C
  - full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 304).



### 700025 DUPLEX

tech. broch. 01113

Recessed box for double PLURIMOD CLIMA user. Galvanised backplate and RAL 9010 painted door for interior use; finishing frame with adjustable depth from 140 to 180 mm.

Equipped with guides for positioning the brackets code 700105 002.

Fitted for positioning of domestic water functions codes 70005. (see page 304).

Code Dimension (mm)

700025 550 x 1175

| Code   | Conn. | Dimension (mm) |
|--------|-------|----------------|
| 700105 | 3/4"  | 550 x 550      |

### 700105 002

Galvanized sheet metal mounting bracket for PLURIMOD CLIMA plumbing module.

- Complete with:
- 2 pairs of 3/4" M ball valves
  - 2 flushing pipes for initial washing of the system. Tmax. 55 °C
  - full insulation.



Code

700105 002

### 700105 003

Steel plate for fastening vertically to a wall or for inserting in a services duct.

- Complete with:
- 2 pairs of 3/4" M ball valves
  - 2 flushing pipes for initial washing of the system. Tmax. 55 °C
  - full insulation.

Fitted for positioning of domestic water functions codes 70005. (see page 304).



| Code       | Conn. | Dimension (mm) |
|------------|-------|----------------|
| 700105 003 | 3/4"  | 480 x 610      |

### 700075 NEW

Compact automatic flow rate regulator. Brass body. Polymer cartridge.

Max. working pressure: 16 bar.

Temperature range: 0-100 °C.

ΔP range: 15-200 kPa.

Flow rates: 0.12 - 1.40 m³/h.

Accuracy: ±10 %.



To complete the code, consult the downloadable table by clicking on the Additional Info button below.

Example: Maximum required flow rate 600 l/h code 700075 M60.

| m³/h | digit      | m³/h | digit      | m³/h | digit      | m³/h | digit      | m³/h | digit      |
|------|------------|------|------------|------|------------|------|------------|------|------------|
| 0,12 | <b>M12</b> | 0,25 | <b>M25</b> | 0,40 | <b>M40</b> | 0,70 | <b>M70</b> | 1,00 | <b>1M0</b> |
| 0,15 | <b>M15</b> | 0,30 | <b>M30</b> | 0,50 | <b>M50</b> | 0,80 | <b>M80</b> | 1,20 | <b>1M2</b> |
| 0,20 | <b>M20</b> | 0,35 | <b>M35</b> | 0,60 | <b>M60</b> | 0,90 | <b>M90</b> | 1,40 | <b>1M4</b> |

Code

700075 ... 1" F captive nut x 1" M



### 7001

Hydraulic module PLURIMOD CLIMA fitted for heat metering.

- Complete with:
- 1 zone valve unit with probe pocket
  - 1 servomotor 6450 series, IP 65
  - 1 copper template for AUTOFLOW®
  - 1 copper template for flow meter
  - by-pass adjustment knob.



| Code |  | Max. recommended flow rate l/h |
|------|--|--------------------------------|
|------|--|--------------------------------|

700115 001 with actuator 230 V (AC) 1400

700116 001 with actuator 24 V (AC) 1400

**For HEAT METERS - HYDRAULIC OPTIONS - see pages 303-304**



## PRE-ASSEMBLED UNITS FOR PLURIMOD VAN - CENTRALISED DOMESTIC WATER

### 7000

Pre-assembled unit for positioning in the services duct. It can accommodate 3 complete user systems.

tech. broch. 01113



Unit with 3 outlets for heating and cooling circuits.

Complete with:

- 1 dual 1 1/4" distribution manifold - 3 x 3/4" connections for heating/cooling circuit
- telescopic shut-off valves
- flushing pipes, Tmax. 55 °C
- end plugs
- manifolds insulation (700036)
- full insulation (700136)

**Dimension (w x h x d): 840 x 650 x 160 mm.**

Code

|               |   |
|---------------|---|
| <b>700036</b> | heating circuit template unit x PLURIMOD 7000 series                    |
| <b>700136</b> | heating and cooling circuits template unit x PLURIMOD CLIMA 7001 series |



Unit with 3 outlets for domestic water circuit.

Complete with:

- 1 simple 1 1/4" distribution manifold - 3 x 3/4" connections, for DHW
- 1 simple 1 1/4" distribution manifold - 3 x 3/4" connections, for DCW
- telescopic shut-off valves
- flushing pipes, Tmax. 55 °C
- end plugs
- manifolds insulation.

**Dimension (w x h x d): 870 x 500 x 240 mm.**

Code

|               |                                      |
|---------------|--------------------------------------|
| <b>700037</b> | domestic water circuit template unit |
|---------------|--------------------------------------|

### 7000

tech. broch. 01203



Hydraulic module PLURIMOD fitted for heat metering.

Complete with:

- 1 motorised zone valve
- 2 pockets for temperature probe
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- insulation.

| Code              |                                 | Max. recommended flow rate l/h |
|-------------------|---------------------------------|--------------------------------|
| <b>700015 001</b> | module with 230 V (AC) actuator | 1400                           |
| <b>700016 001</b> | module with 24 V (AC) actuator  | 1400                           |

### 7001

Hydraulic module PLURIMOD CLIMA fitted for heat metering. Complete with:

- 1 zone valve unit with probe pocket
- 1 servomotor 6450 series, IP 65
- 1 copper template for AUTOFLOW®
- 1 copper template for flow meter
- by-pass adjustment knob.



| Code              |                          | Max. recommended flow rate l/h |
|-------------------|--------------------------|--------------------------------|
| <b>700115 001</b> | with 230 V (AC) actuator | 1400                           |
| <b>700116 001</b> | with 24 V (AC) actuator  | 1400                           |

**For HEAT METERS - HYDRAULIC OPTIONS - see pages 303-304**



## DIRECT SUPPLY UNITS



**765**

tech. broch. 01215

Direct supply unit for heating systems.  
**With pre-formed insulation.**  
Template for flow meter.  
Connections for direct immersion probes.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.  
Electric supply: 230 V - 50 Hz.  
System syde conection: 1" F.  
Boiler side connection: 1 1/2" M.  
Centre distance: 125 mm.



Reversible RH-LH

| Code            | Pump             | Flow rate with residual prevalence<br>4 m w.g. |
|-----------------|------------------|--|
| <b>765600HE</b> | UPM3S Auto 25-60 | 1,6 m³/h                                       |

## MOTORISED REGULATING UNITS



**767**

**NEW**

tech. broch. 01215

Motorised regulating unit for heating systems.  
**With pre-formed insulation.**  
Template for flow meter.  
Connections for direct immersion probes.  
Regulation with sector three-way valve and 3-point actuator.  
With auxiliary microswitch.  
Can be connected to digital regulators code 161010.  
Max. working pressure: 10 bar.  
Max. working temperature: 100 °C.  
Electric supply: 230 V - 50 Hz.  
System side connection: 1" F.  
Boiler side connection: 1 1/2" M.  
Centre distance: 125 mm.



Reversible RH-LH

### Actuator with 3-point control signal

| Code             | Pump             | Flow rate with residual prevalence<br>4 m w.g. |
|------------------|------------------|--|
| <b>767600HE</b>  | UPM3S Auto 25-60 | 1,4 m³/h                                       |
| <b>767662HE2</b> | PARA 25/9        | 2,2 m³/h                                       |

### Actuator with 0(2)-10 V control signal

| Code             | Pump      | Flow rate with residual prevalence<br>4 m w.g. |
|------------------|-----------|--|
| <b>767664HE2</b> | PARA 25/9 | 2,2 m³/h                                       |

## THERMOSTATIC REGULATING UNITS



**766**

tech. broch. 01215

Thermostatic regulating unit for heating systems.  
**With pre-formed insulation.**  
Template for flow meter.  
Connections for direct immersion probes.  
Max. working pressure: 10 bar.  
Temperature adjustment range: 25-50 °C.  
Primary inlet temperature: 100 °C.  
Electric supply: 230 V - 50 Hz.  
System syde conection: 1" F.  
Boiler side connection: 1 1/2" M.  
Centre distance: 125 mm.



Reversible RH-LH

| Code            | Pump             | Flow rate with residual prevalence<br>4 m w.g. |
|-----------------|------------------|--|
| <b>766600HE</b> | UPM3S Auto 25-60 | 1,4 m³/h                                       |

## REGULATOR



**161**

Digital regulator with synoptic diagram for heating and cooling complete with immersion flow probe with pocket and Pt1000 Ø 6 mm return probe (pocket to be chosen according to the pipe; see accessories).  
Optional outside compensated probe.  
Temperature adjustment range: 5-95 °C.  
Supply: 230 V - 50/60 Hz.  
Control signal: 3 points, 0-10 V.  
Protection class: IP 20 / EN 60529.  
Probe cable length: 1,5 m.



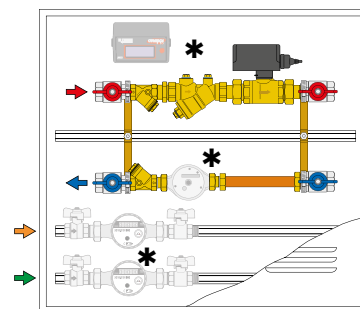
| Code          |
|---------------|
| <b>161010</b> |

## 2-WAY USER MODULE - WITH AUTOFLOW® - CENTRALISED DOMESTIC WATER

### 799 series

tech. broch. 01103

### 2-way user module with AUTOFLOW®



#### Zone outlet module complete with:

- Recessed box with galvanised backplate and RAL 9010 painted door for interior use, h = 650 mm, depth = 110 (140) mm
- pair of ball shut-off
- two-way ball zone valve 6470 series and servomotor 6460 series
- air vent 5021 series
- AUTOFLOW®
- 3/4" and 1" simple manifold 350 series, 1 1/4" manifold 650 series
- template for heat meter
- probe holder pocket (flow pocket with strainer mesh)
- connections for domestic water function 794. series.

#### AUTOFLOW® flow rate table

... To complete the code, please consult the table below:

7995. series  
79005. series  
(3/4")

| with Δp range 15–200 kPa |       |      |       |
|--------------------------|-------|------|-------|
| m³/h                     | ...   | m³/h | ...   |
|                          | digit |      | digit |
| 0,30                     | M30   | 0,90 | M90   |
| 0,40                     | M40   | 1,00 | 1M0   |
| 0,50                     | M50   | 1,20 | 1M2   |
| 0,60                     | M60   | 1,40 | 1M4   |
| 0,70                     | M70   |      |       |
| 0,80                     | M80   |      |       |

7996. series  
79006. series  
(1")

| with Δp range 15–200 kPa |       |      |       |
|--------------------------|-------|------|-------|
| m³/h                     | ...   | m³/h | ...   |
|                          | digit |      | digit |
| 0,60                     | M60   | 1,40 | 1M4   |
| 0,70                     | M70   | 1,60 | 1M6   |
| 0,80                     | M80   | 1,80 | 1M8   |
| 0,90                     | M90   | 2,00 | 2M0   |
| 1,00                     | 1M0   | 2,25 | 2M2   |
| 1,20                     | 1M2   |      |       |

7997. series  
79007. series  
(1 1/4")

| with Δp range 15–200 kPa |       |      |       |
|--------------------------|-------|------|-------|
| m³/h                     | ...   | m³/h | ...   |
|                          | digit |      | digit |
| 1,00                     | 1M0   | 2,25 | 2M2   |
| 1,20                     | 1M2   | 2,50 | 2M5   |
| 1,40                     | 1M4   | 2,75 | 2M7   |
| 1,60                     | 1M6   | 3,00 | 3M0   |
| 1,80                     | 1M8   | 3,25 | 3M2   |
| 2,00                     | 2M0   | 3,50 | 3M5   |

| Code        | Outlets           | End conn. | Outlets conn. | Width (mm) |
|-------------|-------------------|-----------|---------------|------------|
| 799560 ...  | without manifolds | 3/4"      | -             | 600        |
| 79956B ...  | 2                 | 3/4"      | 23 p.1,5      | 800        |
| 79956C ...  | 3                 | 3/4"      | 23 p.1,5      | 800        |
| 79958D ...  | 4                 | 3/4"      | 23 p.1,5      | 800        |
| 79958E ...  | 5                 | 3/4"      | 23 p.1,5      | 800        |
| 79958F ...  | 6                 | 3/4"      | 23 p.1,5      | 1.000      |
| 79958G ...  | 7                 | 3/4"      | 23 p.1,5      | 1.000      |
| 79951H ...  | 8                 | 3/4"      | 23 p.1,5      | 1.000      |
| 799660 ...  | without manifolds | 1"        | -             | 600        |
| 79968C ...  | 3                 | 1"        | 23 p.1,5      | 800        |
| 79968D ...  | 4                 | 1"        | 23 p.1,5      | 800        |
| 79968E ...  | 5                 | 1"        | 23 p.1,5      | 800        |
| 79961F ...  | 6                 | 1"        | 23 p.1,5      | 1.000      |
| 79961G ...  | 7                 | 1"        | 23 p.1,5      | 1.000      |
| 79961H ...  | 8                 | 1"        | 23 p.1,5      | 1.000      |
| 79961 I ... | 9                 | 1"        | 23 p.1,5      | 1.000      |
| 79962L ...  | 10                | 1"        | 23 p.1,5      | 1.200      |
| 799780 ...  | without manifolds | 1 1/4"    | -             | 800        |
| 79978C ...  | 3                 | 1 1/4"    | 3/4"          | 800        |
| 79978D ...  | 4                 | 1 1/4"    | 3/4"          | 800        |
| 79971E ...  | 5                 | 1 1/4"    | 3/4"          | 1.000      |
| 79971F ...  | 6                 | 1 1/4"    | 3/4"          | 1.000      |
| 79971G ...  | 7                 | 1 1/4"    | 3/4"          | 1.000      |
| 79972H ...  | 8                 | 1 1/4"    | 3/4"          | 1.200      |
| 79972 I ... | 9                 | 1 1/4"    | 3/4"          | 1.200      |
| 79972L ...  | 10                | 1 1/4"    | 3/4"          | 1.200      |

\* For HEAT METERS - HYDRAULIC OPTIONS - INSULATION see pages 303-304-305  
The colours that identify the connection diameter are a guide to help find the corresponding heat meter, see page 303

## 3-WAY USER MODULE - CENTRALISED DOMESTIC WATER

### 796 series

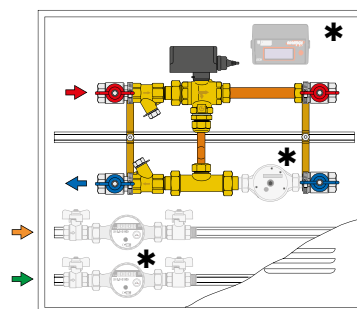
tech. broch. 01101

### 3-way user module



#### Zone outlet module complete with:

- Recessed box with galvanised backplate and RAL 9010 painted door for interior use, h = 650 mm, depth = 110 (140) mm
- pair of ball shut-off
- three-way ball zone valve 6480 series with by-pass tee 6490 series and servomotor 6460 series
- air vent 5021 series
- 3/4" and 1" simple manifold 350 series, 1 1/4" manifold 650 series
- template for heat meter
- probe holder pocket (flow pocket with strainer mesh)
- connections for domestic water function 794. series.



| Code          | Outlets           | End conn. | Outlets conn. | Width (mm) |
|---------------|-------------------|-----------|---------------|------------|
| <b>796560</b> | without manifolds | 3/4"      | -             | 600        |
| <b>79658B</b> | 2                 | 3/4"      | 23 p.1,5      | 800        |
| <b>79658C</b> | 3                 | 3/4"      | 23 p.1,5      | 800        |
| <b>79658D</b> | 4                 | 3/4"      | 23 p.1,5      | 800        |
| <b>79658E</b> | 5                 | 3/4"      | 23 p.1,5      | 800        |
| <b>79658F</b> | 6                 | 3/4"      | 23 p.1,5      | 1.000      |
| <b>79651G</b> | 7                 | 3/4"      | 23 p.1,5      | 1.000      |
| <b>79651H</b> | 8                 | 3/4"      | 23 p.1,5      | 1.000      |

|               |                   |    |          |       |
|---------------|-------------------|----|----------|-------|
| <b>796680</b> | without manifolds | 1" | -        | 800   |
| <b>79661C</b> | 3                 | 1" | 23 p.1,5 | 1.000 |
| <b>79661D</b> | 4                 | 1" | 23 p.1,5 | 1.000 |
| <b>79661E</b> | 5                 | 1" | 23 p.1,5 | 1.000 |
| <b>79661F</b> | 6                 | 1" | 23 p.1,5 | 1.000 |
| <b>79662G</b> | 7                 | 1" | 23 p.1,5 | 1.200 |
| <b>79662H</b> | 8                 | 1" | 23 p.1,5 | 1.200 |
| <b>79662I</b> | 9                 | 1" | 23 p.1,5 | 1.200 |
| <b>79662L</b> | 10                | 1" | 23 p.1,5 | 1.200 |

|               |                   |        |      |       |
|---------------|-------------------|--------|------|-------|
| <b>796780</b> | without manifolds | 1 1/4" | -    | 800   |
| <b>79671C</b> | 3                 | 1 1/4" | 3/4" | 1.000 |
| <b>79671D</b> | 4                 | 1 1/4" | 3/4" | 1.000 |
| <b>79672E</b> | 5                 | 1 1/4" | 3/4" | 1.200 |
| <b>79672F</b> | 6                 | 1 1/4" | 3/4" | 1.200 |
| <b>79672G</b> | 7                 | 1 1/4" | 3/4" | 1.200 |
| <b>79672H</b> | 8                 | 1 1/4" | 3/4" | 1.200 |

#### Spare wall box

|               |                         |
|---------------|-------------------------|
| <b>R79674</b> | 600 x 650 x 110/140 mm  |
| <b>R79675</b> | 800 x 650 x 110/140 mm  |
| <b>R79676</b> | 1000 x 650 x 110/140 mm |
| <b>R79677</b> | 1200 x 650 x 110/140 mm |
| <b>R79088</b> | 800 x 650 x 150/175 mm  |

**\* For HEAT METERS - HYDRAULIC OPTIONS - INSULATION see pages 303-304-305**

The colours that identify the connection diameter are a guide to help find the corresponding heat meter, see page 303

## COMPACT WALL MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK20 - SATK22 SERIES

### LOW TEMPERATURE



#### SATK201 tech. broch. 01209

LOW temperature HIU.  
Heating temperature range: 25–45 °C.  
Max. 18 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary Δp: 0,9 bar.  
**Dimensions (w x h x d):**  
450 x 550 x 265 mm.



Code

**SATK20103HE** heat exchanger 40 kW

### MEDIUM TEMPERATURE



#### SATK202 tech. broch. 01209

MEDIUM temperature HIU.  
Heating temperature range: 45–75 °C.  
Max. 18 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary Δp: 0,9 bar.  
**Dimensions (w x h x d):**  
450 x 550 x 265 mm.



Code

**SATK20203HE** heat exchanger 40 kW



#### SATK221 tech. broch. 01309

LOW temperature HIU.  
Heating temperature range: 25–45 °C.  
Max. 24 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary Δp: 6 bar.  
User interface with chrono-thermostat function.  
Programmable DHW pre-heating.  
Remote control via MODBUS-RTU.  
**Dimensions (w x h x d):**  
490 x 500 x 245 mm.



Code

**SATK22103** heat exchanger 50 kW

**SATK22105** heat exchanger 60 kW

**SATK22107** for systems with low primary temperature



#### SATK222 tech. broch. 01309

MEDIUM temperature HIU.  
Heating temperature range: 45–75 °C.  
Max. 24 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary Δp: 6 bar.  
User interface with chrono-thermostat function.  
Programmable DHW pre-heating.  
Remote control via MODBUS-RTU.  
**Dimensions (w x h x d):**  
490 x 500 x 245 mm.



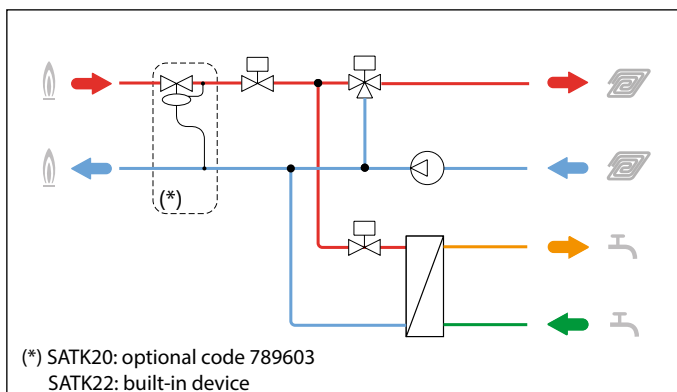
Code

**SATK22203** heat exchanger 50 kW

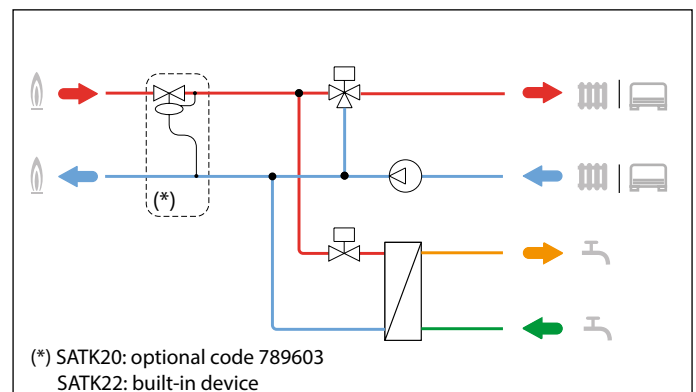
**SATK22205** heat exchanger 60 kW

**SATK22207** for systems with low primary temperature

#### Hydraulic diagram SATK201/SATK221



#### Hydraulic diagram SATK202/SATK222





## COMPACT WALL MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK20 - SATK22 SERIES

### HIGH TEMPERATURE

#### SATK203 tech. broch. 01209

HIGH temperature HIU.  
Max. heating temperature: 85 °C.  
Max. 18 l/min DHW (SATK20303).  
Max. 27 l/min DHW (SATK20305).  
Max. operating pressure: 10 bar.  
Max. primary  $\Delta p$ : 0,9 bar.  
**Dimensions (w x h x d):**  
450 x 550 x 265 mm.



Code

|                  |                      |
|------------------|----------------------|
| <b>SATK20303</b> | heat exchanger 40 kW |
| <b>SATK20305</b> | heat exchanger 65 kW |

### HIGH TEMPERATURE-WITH PRIMARY PUMP

#### SATK204 tech. broch. 01209

HIGH temperature HIU.  
Max. heating temperature: 85 °C.  
Max. 18 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary  $\Delta p$ : 0,9 bar.  
With primary pump.  
**Dimensions (w x h x d):**  
450 x 550 x 265 mm.



Code

|                    |                      |
|--------------------|----------------------|
| <b>SATK20403HE</b> | heat exchanger 40 kW |
|--------------------|----------------------|

#### SATK223 tech. broch. 01309

HIGH temperature HIU.  
Max. heating temperature: 85 °C.  
Max. 24 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary  $\Delta p$ : 6 bar.  
User interface with chrono-thermostat function.  
Programmable DHW pre-heating.  
Remote control via MODBUS-RTU.  
**Dimensions (w x h x d):**  
490 x 500 x 245 mm.



Code

|                  |  |
|------------------|--|
| <b>SATK22303</b> | heat exchanger 50 kW                     |
| <b>SATK22305</b> | heat exchanger 60 kW                     |
| <b>SATK22307</b> | for systems with low primary temperature |

#### SATK224 tech. broch. 01309

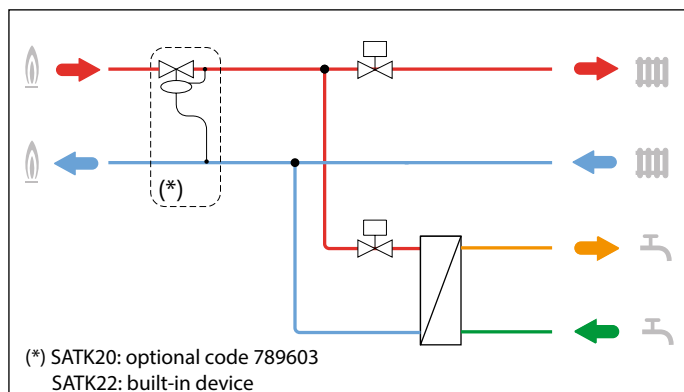
HIGH temperature HIU.  
Max. heating temperature: 85 °C.  
Max. 24 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary  $\Delta p$ : 6 bar.  
With primary pump.  
User interface with chrono-thermostat function.  
Programmable DHW pre-heating.  
Remote control via MODBUS-RTU.  
**Dimensions (w x h x d):**  
490 x 500 x 245 mm.



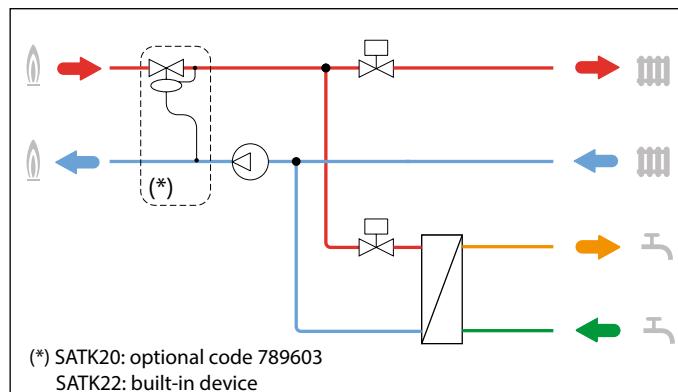
Code

|                  |  |
|------------------|--|
| <b>SATK22403</b> | heat exchanger 50 kW                     |
| <b>SATK22405</b> | heat exchanger 60 kW                     |
| <b>SATK22407</b> | for systems with low primary temperature |

Hydraulic diagram SATK203/SATK223



Hydraulic diagram SATK204/SATK224





## COMPACT WALL MOUNTED INDIRECT HEAT INTERFACE UNIT SATK30 - SATK32 - SATK40 SERIES

### LOW/MEDIUM/HIGH TEMPERATURE



#### SATK30

tech. broch. 01209

LOW temperature range: 25–45 °C.  
Medium/high temperature range:  
45–75 °C.  
Max. 18 l/min DHW (SATK30103HE).  
Max. 27 l/min DHW (SATK30105HE).  
Max. opening pressure: 16 bar.  
Max. primary  $\Delta p$ : 1,65 bar.  
**Dimensions (w x h x d):**  
**550 x 630 x 265 mm.**



Code

**SATK30103HE** heat exchanger 40 kW

**SATK30105HE** heat exchanger 65 kW

### LOW/MEDIUM/HIGH TEMPERATURE STORAGE DHW PRODUCTION



#### SATK40

tech. broch. 01216

LOW temperature range: 25–45 °C.  
Medium/high temperature range:  
45–75 °C.  
Max. opening pressure: 16 bar.  
Max. primary  $\Delta p$ : 1,5 bar.  
DHW production in storage cylinder  
(not supplied).  
**Dimensions (w x h x d):**  
**550 x 630 x 265 mm.**



Code

**SATK40103HE**

#### SATK32

tech. broch. 01301



LOW temperature range: 25–45 °C.  
Medium/high temperature range:  
45–75 °C.  
Max. 24 l/min DHW.  
Max. opening pressure: 16 bar.  
Max. primary  $\Delta p$ : 6 bar.  
User interface with chrono-thermostat  
function.  
Programmable DHW pre-heating.  
Remote control via MODBUS-RTU.  
**Dimensions (w x h x d):**  
**490 x 630 x 245 mm.**



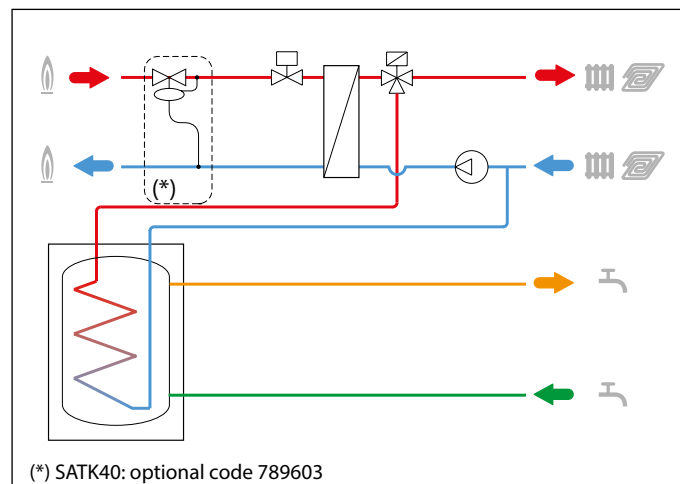
Code

**SATK32103** heat exchanger 50 kW

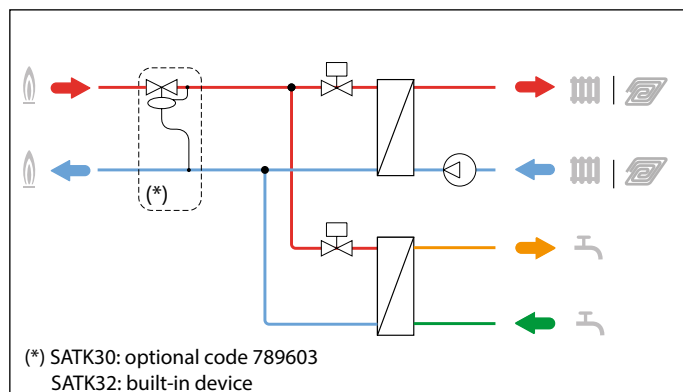
**SATK32105** heat exchanger 60 kW

**SATK32107** for systems with low primary temperature

#### Hydraulic diagram SATK40



#### Hydraulic diagram SATK301/SATK321



## COMPLETION CODES FOR SATK SERIES



### 789100

Manual flushing by-pass for SATK20, SATK30 and SATK40.  
System side connection: 3/4" M.  
User side connection: 3/4" M.

Code

789100



### 789

Differential pressure control valve. For SATK20 and SATK30.  
Brass body.  
Max working pressure: 16 bar.  
Max. upstream  $\Delta p$ : 6 bar.  
Fixed setting: 40 kPa.

Code

789603



### 789110

Manual flushing by-pass for SATK32.  
System side connection: 3/4" F.  
User side connection: 3/4" M.

Code

789110



### 572120

Filling loop with CB type backflow preventer for SATK32.

Code

572120



### 789023

Mounting template with shut-off valve for SATK32.

Code

789023

## DHW ONLY HEAT INTERFACE UNIT - SATK10 SERIES

### SATK102 tech. broch. 01308

Domestic hot water production only.  
Max. 27 l/min DHW.  
Max. opening pressure: 10 bar.  
Max. primary  $\Delta p$ : 0,9 bar.  
**Dimensions (w x h x d):**  
476 x 350 x 188 mm.



Code

Max. flow rate

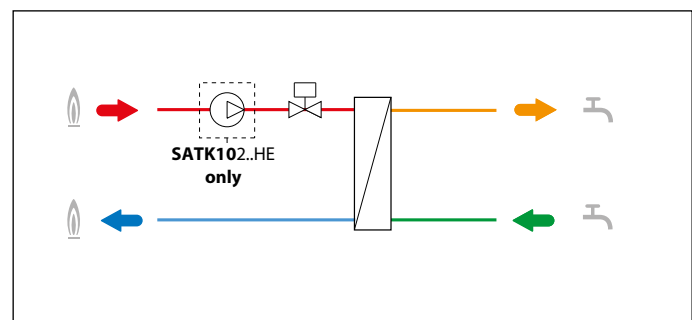
|                    |                      |            |
|--------------------|----------------------|------------|
| <b>SATK10203HE</b> | heat exchanger 40 kW | 18 (l/min) |
| <b>SATK10204HE</b> | heat exchanger 65 kW | 25 (l/min) |
| <b>SATK10205HE</b> | heat exchanger 75 kW | 27 (l/min) |

#### Without primary pump

Code

Max. flow rate

|                  |                      |            |
|------------------|----------------------|------------|
| <b>SATK10253</b> | heat exchanger 40 kW | 18 (l/min) |
| <b>SATK10254</b> | heat exchanger 65 kW | 25 (l/min) |
| <b>SATK10255</b> | heat exchanger 75 kW | 27 (l/min) |



## COMPACT WALL MOUNTED INDIRECT HEAT INTERFACE UNIT - MECHANICAL VERSIONS INSTANTANEOUS DHW PRODUCTION - SATK15 - SATK16 SERIES

### SATK15303 DPCV

tech. broch. 01214

Heating and DHW production. Modulating primary control.  
With DPCV on the primary side, fixed setting 30 kPa.  
Max. opening pressure: 10 bar.  
Max. primary  $\Delta p$ : 2 bar.  
Connections: 3/4" M.  
**Dimensions (w x h x d): 420 x 250 x 130 mm.**



Code

**SATK15303 DPCV** heat exchanger 40 kW

### SATK16

Heating and DHW production. Modulating primary control.  
With DPCV on the primary side, fixed setting 30 kPa.  
With heating zone valve and thermostatic mixing valve on DHW outlet.  
Max. opening pressure: 10 bar.  
Max. primary  $\Delta p$ : 2 bar.  
Connections: 3/4" M.  
**Dimensions (w x h x d): 420 x 450 x 200 mm.**



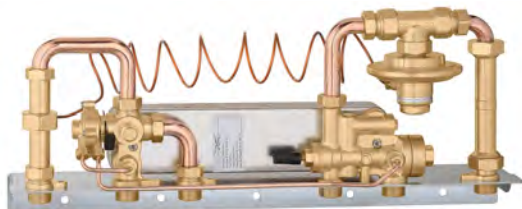
Code

**SATK16315** heat exchanger 50 kW

### SATK15313 ABC

tech. broch. 01219

Heating and DHW production. Modulating primary control.  
With DPCV on the primary side, fixed setting 30 kPa.  
Max. opening pressure: 10 bar.  
Max. primary  $\Delta p$ : 2 bar.  
Connections: 3/4" M.  
**Dimensions (w x h x d): 570 x 260 x 150 mm.**

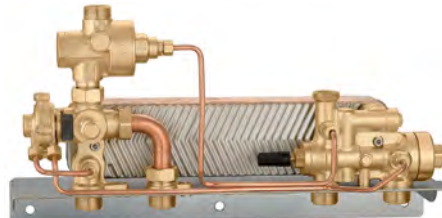


Code

**SATK15313 ABC** heat exchanger 40 kW

### SATK1532 DPCV NEW

Heating and DHW production. Modulating primary control.  
With DPCV on the primary side, fixed setting 30 kPa.  
Max. opening pressure: 10 bar.  
Max. primary  $\Delta p$ : 2 bar.  
Connections: 3/4" M.  
**Dimensions (w x h x d): 570 x 260 x 150 mm.**



Code

**SATK15323 DPCV** heat exchanger 35 kW  
**SATK15324 DPCV** heat exchanger 40 kW  
**SATK15325 DPCV** for systems with low primary temperature

## COOLING INTERFACE UNIT



### 797

tech. broch. 01368

Cooling interface unit.  
Max. primary circuit pressure: 16 bar.  
Primary circuit nominal flow rate:  
360 l/h (797601)  
1080 l/h (797603)  
1800 l/h (797605)  
Max. primary  $\Delta p$ : 4 bar.  
Connections: 1".  
**Dimensions (w x h x d): 480 x 780 x 220 mm.**

Code Nominal power

**797601** 3 kW\*  
**797603** 8 kW\*  
**797605** 15 kW\*

(\*) primary 6–12 °C, secondary 14–8 °C

## COMPACT RECESS MOUNTED DIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK50 SERIES

### LOW TEMPERATURE

#### SATK501

tech. broch. 01212

LOW temperature HIU.

Heating temperature range: 25–45 °C.

Max. 18 l/min DHW.

Max. operating pressure: 10 bar

Max. primary  $\Delta p$ : 0,9 bar.

**Dimensions (w x h x d):**  
570 x 410 x 110 mm.



Code

**SATK50103HE** heat exchanger 40 kW

#### LOW temperature recessed module (for installation without box code 794950)

with features identical to SATK50103HE.

Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat.

Ball shut-off valves not included.

**Valve kit F0001495 must be used.**

Code

**SATK50193HE** heat exchanger 40 kW

**SATK50193HE 001** heat exchanger 40 kW with insulation cover

### MEDIUM TEMPERATURE

#### SATK502

tech. broch. 01212

MEDIUM temperature HIU.

Heating temperature range: 45–75 °C.

Max. 18 l/min DHW.

Max. operating pressure: 10 bar.

Max. primary  $\Delta p$ : 0,9 bar.

**Dimensions (w x h x d):**  
570 x 410 x 110 mm.



Code

**SATK50203HE** heat exchanger 40 kW

#### MEDIUM temperature recessed module (for installation without box code 794950)

with features identical to SATK50203HE.

Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat.

Ball shut-off valves not included.

**Valve kit F0001495 must be used.**

Code

**SATK50293HE** heat exchanger 40 kW

### HIGH TEMPERATURE

#### SATK503

tech. broch. 01212

HIGH temperature HIU.

Max. heating temperature: 85 °C.

Max. 18 l/min DHW.

Max. operating pressure: 10 bar.

Max. primary  $\Delta p$ : 0,9 bar.

**Dimensions (w x h x d):**  
570 x 410 x 110 mm.



Code

**SATK50303** heat exchanger 40 kW

#### HIGH temperature recessed module (for installation without box code 794950)

with features identical to SATK50303.

Ideal for on-site solutions, to give functional continuity to user modules with similar connections and features. 1" M connection with flat seat. Ball shut-off valves not included.

**Valve kit F0001495 must be used.**

Code

**SATK50393** heat exchanger 40 kW

**SATK50393 001** heat exchanger 40 kW with insulation cover

### ACCESSORIES

#### 7949

tech. broch. 01212

Recessed mounting box for SATK50.03HE, complete with shut-off valves for preliminary connections to the system.



Code

Dimensions (w x h x d)

**794950** 600 x 700 x 120 mm

**794950 004** 600 X 700 mm backplate with valves

**Modules SATK50193HE, SATK50293HE and SATK50393 can be installed without box code 794950 as they have a specific locking template. Shut-off valves are required for every periodic or non-periodic maintenance operation and for system safety in general. Product code F00001495 may be used; this includes 6 x 3/4" M–1" F ball valves with with captive nut connection and relevant seals.**

Code

**F0001495** valve kit for SATK50.93HE/SATK60193HE



## COMPACT RECESS INDIRECT HEAT INTERFACE UNIT INSTANTANEOUS DHW PRODUCTION - SATK60 SERIES

### LOW/MEDIUM/HIGH TEMPERATURE



#### SATK601 01212

LOW heating  
temperature range: 25–45 °C.  
MEDIUM/HIGH heating  
temperature range: 45–75 °C.  
Max. 18 l/min DHW.  
Max. operating pressure: 10 bar.  
Max. primary  $\Delta p$ : 0,9 bar.  
**Dimensions (w x h x d):**  
**570 x 410 x 110 mm.**



#### 7949 tech. broch. 01212

Recessed mounting box for SATK60,  
complete with shut-off valves  
for preliminary connections  
to the system.

**Note**  
Box code 794960 is compulsory  
for the installation of product  
code SATK60103HE..

Code

|                    |                                       |
|--------------------|---------------------------------------|
| <b>SATK60103HE</b> | heat exchanger 40 kW                  |
| <b>SATK60193HE</b> | with locking template                 |
| <b>F0001495</b>    | valve kit for SATK50.93HE/SATK60193HE |

Code

Dimensions (w x h x d)

|               |                    |
|---------------|--------------------|
| <b>794960</b> | 625 x 890 x 120 mm |
|---------------|--------------------|

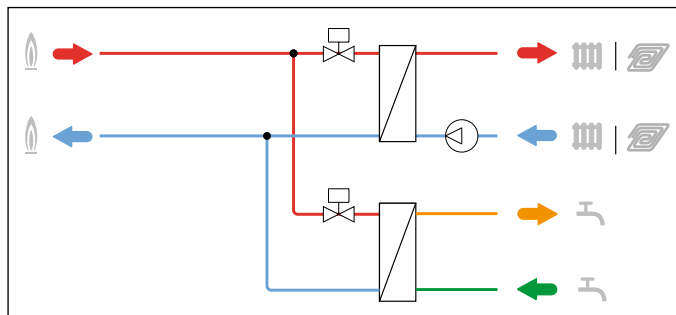
SATK60103HE

794960

**Note**  
Box code 794960 is compulsory  
for the installation of product  
code SATK60103HE.



#### Schema per SATK60



Module code SATK60193HE can be installed without box code 794960 as it has a specific locking template. Shut-off valves are required for every periodic or non-periodic maintenance operation and for system safety in general. Product code F00001495 may be used; this includes 6 x 3/4" M–1" F ball valves with connection with captive nut and the relevant seals.



## DIRECT HEAT METER - CENTRALISED TRANSMISSION - BUS RS-485

### CONTECA EASY 7504 series

tech. broch. 01306

Direct heat metering with local reading by means of LCD or centralised reading by means of Bus transmission.

The heat meter is supplied with:

- Pair of immersion temperature probe (L= 1,9 m).
- Turbine flow meter with pulse output (Tmax 90 °C).
- Electronic integrator with LCD.
- Accuracy class: 3.
- **Electric supply 24 V (AC) 50 Hz - 1 W.**

**Fitted for Bus RS-485 transmission in M-Bus protocol.**

Optional MODBUS-RTU.

#### 7504

Direct heat meter  
for user modules 796, 799, 7900 series.

Flow meter with union connections.

Pair of Y-pockets (with strainer on the flow one) included.



| Code   | Conn.  | Meas. type | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h |
|--------|--------|------------|-------------------------------------|-----------------------|
| 750405 | 3/4"   | single jet | 2,5                                 | 50                    |
| 750406 | 1"     | multi jet  | 3,5                                 | 70                    |
| 750407 | 1 1/4" | multi jet  | 6                                   | 120                   |

#### 7504

Direct heat meter for modules 7000, 7001, 7002 series and for distribution and regulating units 765, 766, 767 series.



| Code    | Conn. | Type       | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h | Max. recommended<br>flow rate l/h |
|---------|-------|------------|-------------------------------------|-----------------------|-----------------------------------|
| 750405G | 3/4"  | single jet | 2,5                                 | 50                    | 1600                              |

#### 7504

Direct heat meter for HIU  
SATK20, SATK30, SATK40, SATK50 series.



| Code    | Conn. | Type       | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h | Max. recommended<br>flow rate l/h |
|---------|-------|------------|-------------------------------------|-----------------------|-----------------------------------|
| 750405K | 3/4"  | single jet | 2,5                                 | 50                    | 1600                              |

Q<sub>p</sub> = permanent flow rate    Q<sub>i</sub> = minimum flow rate

### CONTECA EASY ULTRA 7507 series

tech. broch. 01307

Direct heat metering with local reading by means of LCD or centralised reading by means of Bus transmission.

The heat meter is supplied with:

- Pair of immersion temperature probe (L= 1,9 m).
- Ultrasonic heat meter (Tmax 90 °C).
- Electronic integrator with LCD.
- Accuracy class: 2.
- **Electric supply 24 V (AC) 50 Hz - 1 W**

**Fitted for Bus RS-485 transmission in M-Bus protocol.**

Optional MODBUS-RTU.

#### 7507

Ultrasonic direct heat meter  
for user modules 796, 799, 7900 series.

Flow meter with union connections.

Pair of Y-pockets (with strainer on the flow one) included.



| Code   | Conn.  | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h |
|--------|--------|-------------------------------------|-----------------------|
| 750705 | 3/4"   | 2,5                                 | 10                    |
| 750706 | 1"     | 3,5                                 | 35                    |
| 750707 | 1 1/4" | 6                                   | 24                    |

#### 7507

Ultrasonic direct heat meter for  
modules 7000, 7001, 7002 series.



| Code    | Conn. | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h |
|---------|-------|-------------------------------------|-----------------------|
| 750705G | 3/4"  | 2,5                                 | 10                    |

#### 7507

Ultrasonic direct heat meter for HIU  
SATK20, SATK30, SATK40, SATK50 series.



| Code    | Conn. | Q <sub>p</sub><br>m <sup>3</sup> /h | Q <sub>i</sub><br>l/h |
|---------|-------|-------------------------------------|-----------------------|
| 750705K | 3/4"  | 2,5                                 | 10                    |

Q<sub>p</sub> = permanent flow rate    Q<sub>i</sub> = minimum flow rate

## HYDRAULIC OPTIONS

### 70005

Domestic water meter kit.

**For user module 7000, 7001, 7002 (except codes 700036 and 700136).**

- Consisting of:
- ball shut-off valve with built-in check valve BALLSTOP
  - flow meter (MI001)
  - shut-off ball valve with male terminal
  - flushing pipe
  - mounting bracket.



Conforms to directive 2014/32/UE (MI001)

Code

|               |   |
|---------------|---|
| <b>700050</b> | domestic hot water 3/4" with local reading  |
| <b>700051</b> | domestic hot water 3/4" with pulse output   |
| <b>700052</b> | domestic cold water 3/4" with local reading |
| <b>700053</b> | domestic cold water 3/4" with pulse output  |

### 700009

Template with 3/4" valves for domestic water meter.

**For user module 7000, 7001, 7002 (except codes 700036 and 700136).**

Tmax. 55 °C.



Code

|               |
|---------------|
| <b>700009</b> |
|---------------|

### 7942

Water meter for domestic hot / cold water (MI001).

With pulse output.

1/2": for template code 794540,

3/4": for unit codes 700036 and 700136.



Conforms to directive 2014/32/UE (MI001)

Code

|                 |  |
|-----------------|--|
| <b>794204</b>   | 1/2" - domestic cold water (Tmax. 30 °C) - L= 110 mm |
| <b>794205</b>   | 3/4" - domestic cold water (Tmax. 30 °C) - L= 130 mm |
| <b>794205/C</b> | 3/4" - domestic hot water (30-90 °C) - L= 130 mm     |

### 7941

Domestic water meter kit.

**For user module 796, 799, 7900 series.**

Consisting of:

- ball shut-off valve with built-in check valve BALLSTOP
- flow meter (MI001), with pulse output
- shut-off ball valve with male terminal.



Conforms to directive 2014/32/UE (MI001)

Code

|               |                          |
|---------------|--------------------------|
| <b>794140</b> | domestic cold water 1/2" |
| <b>794141</b> | domestic hot water 1/2"  |
| <b>794150</b> | domestic cold water 3/4" |
| <b>794151</b> | domestic hot water 3/4"  |

### 7940

Domestic water meter kit.

**For user module 796, 799, 7900 series.**

Consisting of:

- ball shut-off valve with built-in check valve BALLSTOP
- flow meter (MI001), with local reading
- shut-off ball valve with male terminal.



Conforms to directive 2014/32/UE (MI001)

Code

|               |                          |
|---------------|--------------------------|
| <b>794040</b> | domestic cold water 1/2" |
| <b>794041</b> | domestic hot water 1/2"  |
| <b>794050</b> | domestic cold water 3/4" |
| <b>794051</b> | domestic hot water 3/4"  |

## PRE-FORMED INSULATION



### 798

Pre-formed insulation  
for user module **799, 7900 series**  
without distribution.

Code

|               |        |                |
|---------------|--------|----------------|
| <b>798205</b> | 3/4"   | - 2-way module |
| <b>798206</b> | 1"     | - 2-way module |
| <b>798207</b> | 1 1/4" | - 2-way module |



### 789

Pre-formed insulation for  
SATK15 and SATK12 series.  
Material: expanded closed cell PE-X.  
Minimum thickness: 10 mm.  
Reaction to fire (DIN 4102): class B2.

Code

Use

|               |                |
|---------------|----------------|
| <b>789303</b> | SATK15303 DPCV |
| <b>789313</b> | SATK15313 ABC  |
| <b>789312</b> | SATK12313      |



### 798

Pre-formed insulation  
for user module **796, 7900 series**  
without distribution.

Code

|               |        |                |
|---------------|--------|----------------|
| <b>798305</b> | 3/4"   | - 3-way module |
| <b>798306</b> | 1"     | - 3-way module |
| <b>798307</b> | 1 1/4" | - 3-way module |



### 798

Insulation for pair of manifolds.  
For user module **796, 799 series**.  
Max. 8 outlets.

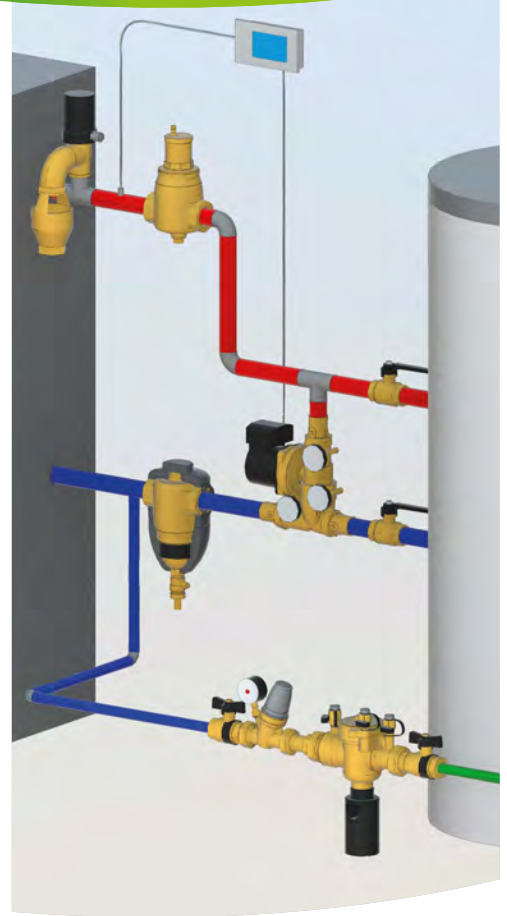
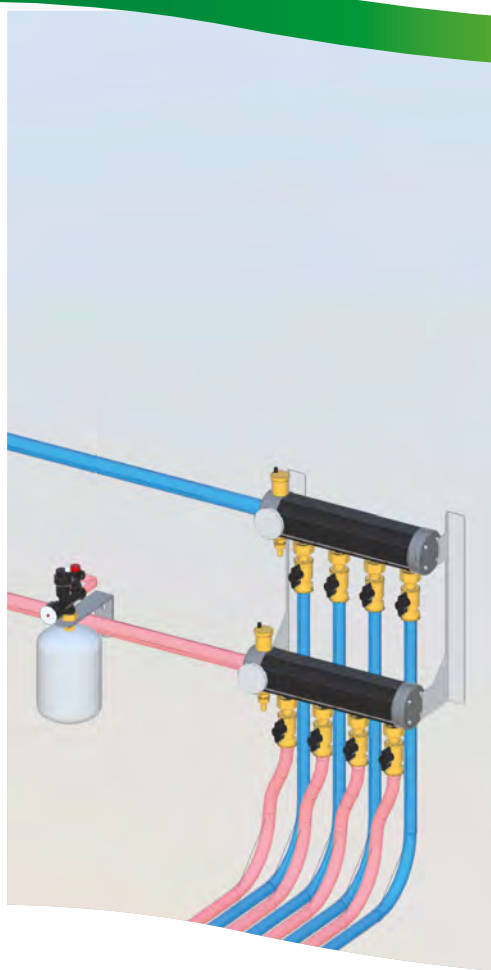
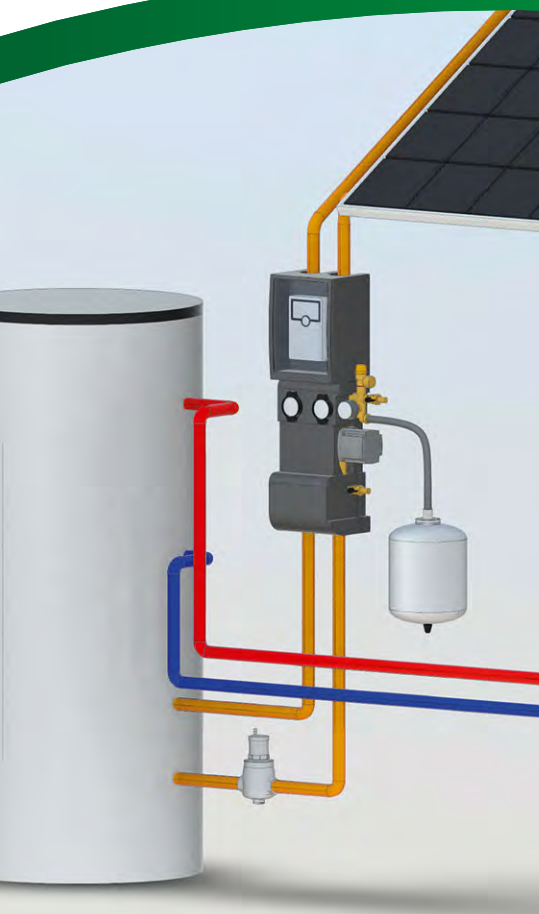
Code

|               |        |
|---------------|--------|
| <b>798015</b> | 3/4"   |
| <b>798016</b> | 1"     |
| <b>798017</b> | 1 1/4" |

**N.B.: Carry out the order for the insulation together with the module.  
It is not possible to apply it later.**



## COMPONENTS FOR RENEWABLE ENERGY SYSTEMS



**BIM**  
bim.caleffi.com

Components for solar thermal systems  
Components for geothermal systems  
Components for biomass systems

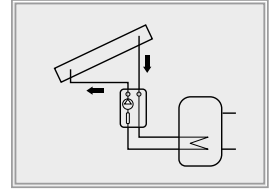


## COMPONENTS FOR SOLAR THERMAL SYSTEMS

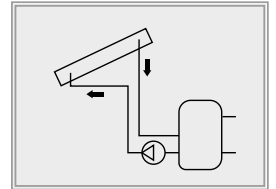
The CALEFFI SOLAR product range has been specifically developed for use in solar thermal systems, where high temperatures can normally be reached and where, depending on the kind of system, there can be glycol. Materials and performance of the components must necessarily take into account these particular operating conditions.

### - Components for closed systems

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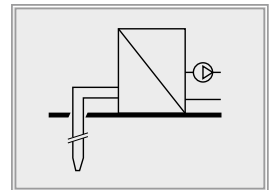
### - Components for opened systems



## COMPONENTS FOR GEOTHERMAL SYSTEMS

The products in the CALEFFI GEO series have been specifically designed for use in heat pump systems. In ground source heat pumps a mixture of water and antifreeze fluid is generally used to protect against freezing temperatures. The components are made with high-performance materials for this type of applications.

### - Components for water-water heat pumps

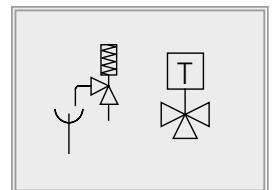


## COMPONENTS FOR BIOMASS SYSTEMS

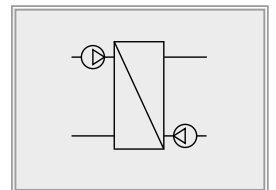
The CALEFFI BIOMASS® product series has been created specifically to be used in circuits of systems with wood solid fuel generators, operating at high temperature with water or glycol solutions as thermal medium. The materials of the components and their performance take account of the specific system needs in terms of efficiency and safety of the generators and systems.

### - Safety and protection components

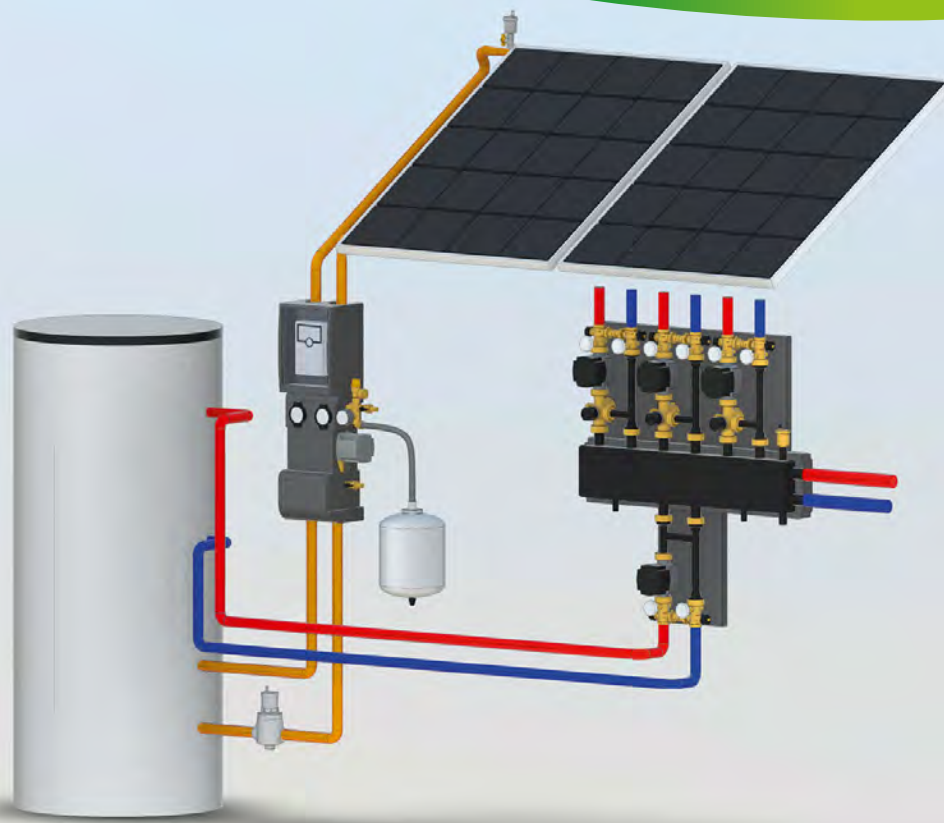
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### - Control units



# COMPONENTS FOR SOLAR THERMAL SYSTEMS



**BIM**  
bim.caleffi.com

**CALEFFI  
SOLAR**

**Safety relief valve - Automatic air vents**  
**Deaerators, DISCAL® - Manual air separator**  
**Pump stations**  
**Components for pump stations**  
**Ball valve**  
**Mechanical fittings with O-Ring seal - Three piece union fitting**  
**Digital regulator**  
**Heat meter CONTECA SOLAR®**  
**Balancing valve with flow meter**  
**Temperature and pressure relief valve**  
**Antifreeze safety device**  
**Motorised ball diverter valve**  
**Thermostatic diverter valve**  
**Thermostatic mixing valves**  
**Solar storage-to-boiler connection kit**



**Domestic Water Sizer**



DOMESTIC WATER SYSTEM SIZER ALSO FOR SMARTPHONE

Available on [www.caleffi.com](http://www.caleffi.com) and app for smartphone.

Download the version for your iOS and Android® mobile phone.

## SAFETY RELIEF VALVE - AUTOMATIC AIR VENTS



### 253

tech. broch. 01089

Safety relief valve for solar thermal systems.  
Brass body. Chrome plated.  
Female connections. PN 10.

**Temperature range: -30–160 °C.**

**Max. percentage of glycol: 50 %.**

Oversized discharge outlet.

Discharge rating: 1/2" - 50 kW;

3/4" - 100 kW.

TÜV certified to TRD 721 - SV 100 § 7.7.

Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.



www.tuv.com  
ID 0000013604



Code

|        |                 |         |   |    |
|--------|-----------------|---------|---|----|
| 253042 | 1/2" F x 3/4" F | 2,5 bar | 1 | 50 |
| 253043 | 1/2" F x 3/4" F | 3 bar   | 1 | 50 |
| 253044 | 1/2" F x 3/4" F | 4 bar   | 1 | 50 |
| 253046 | 1/2" F x 3/4" F | 6 bar   | 1 | 50 |
| 253048 | 1/2" F x 3/4" F | 8 bar   | 1 | 50 |
| 253040 | 1/2" F x 3/4" F | 10 bar  | 1 | 50 |
| 253052 | 3/4" F x 1" F   | 2,5 bar | 1 | 25 |
| 253053 | 3/4" F x 1" F   | 3 bar   | 1 | 25 |
| 253054 | 3/4" F x 1" F   | 4 bar   | 1 | 25 |
| 253056 | 3/4" F x 1" F   | 6 bar   | 1 | 25 |
| 253058 | 3/4" F x 1" F   | 8 bar   | 1 | 25 |
| 253050 | 3/4" F x 1" F   | 10 bar  | 1 | 25 |



### 250

tech. broch. 01133

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.

Max. working pressure: 10 bar.

Max. discharge pressure: 5 bar.

**Temperature range: -30–180 °C.**

**Max. percentage of glycol: 50 %.**

- Shut-off cock complete with seal.

Brass body. Chrome plated.

Max. working pressure: 10 bar.

**Temperature range: -30–200 °C.**

**Max. percentage of glycol: 50 %.**



Code

|        |                     |   |    |
|--------|---------------------|---|----|
| 250031 | 3/8" M without cock | 1 | 25 |
| 250131 | 3/8" M              | 1 | 25 |
| 250041 | 1/2" M without cock | 1 | 25 |



### 250

Consisting of:

- Automatic air vent for solar thermal systems.

Brass body. Chrome plated.

Max. working pressure: 10 bar.

Max. discharge pressure: 2,5 bar.

**Temperature range: -30–180 °C.**

**Max. percentage of glycol: 50 %.**

- Shut-off cock complete with seal.

Brass body. Chrome plated.

Max. working pressure: 10 bar.

**Temperature range: -30–200 °C.**

**Max. percentage of glycol: 50 %.**

Code

|        |                     |   |    |
|--------|---------------------|---|----|
| 250831 | 3/8" M without cock | 1 | 50 |
| 250931 | 3/8" M              | 1 | 50 |



### 251

**DISCALAIR®**

tech. broch. 01135

High-performance automatic air vent  
for solar thermal systems.

Brass body. Chrome plated.

Female connections.

Max. working pressure: 10 bar.

Max. discharge pressure: 10 bar.

**Temperature range: -30–160 °C.**

**Max. percentage of glycol: 50 %.**

Code

|        |        |   |    |
|--------|--------|---|----|
| 251004 | 1/2" F | 1 | 10 |
|--------|--------|---|----|



### 250

tech. broch. 01133

Shut-off cock complete with seal.

Brass body. Chrome plated.

Max. working pressure: 10 bar.

**Temperature range: -30–200 °C.**

**Max. percentage of glycol: 50 %.**



Code

|        |                                    |   |    |
|--------|------------------------------------|---|----|
| 250300 | 3/8" M x 3/8" F - butterfly handle | 1 | 10 |
| 250400 | 1/2" M x 1/2" F - lever handle     | 1 | 10 |



**The automatic air vent must be shut off  
after the system has been filled.**



## DEAERATORS - MANUAL AIR SEPARATOR



### 251 DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.  
Brass body. Chrome plated.  
Female connections.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**

Code

251003 3/4" F



1

10



### 251 DISCAL®

tech. broch. 01134

Deaerator for solar thermal systems.  
Brass body. Chrome plated.  
Female connections.  
With drain.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**

Code

251006 1" F

1

–

251007 1 1/4" F

1

–



### 251 DISCAL®

tech. broch. 01134

Deaerator for vertical pipes,  
for solar thermal systems.  
Brass body. Chrome plated.  
Female connections.  
Max. working pressure: 10 bar.  
Max. discharge pressure: 10 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**

Code

251905 3/4" F



1

–

251906 1" F

1

–



### 251

tech. broch. 01197

Manual air separator  
for solar thermal systems.  
Brass body.  
Female connections.  
Max. working pressure: 10 bar.  
**Temperature range: -30–200 °C.**  
**Max. percentage of glycol: 50 %.**

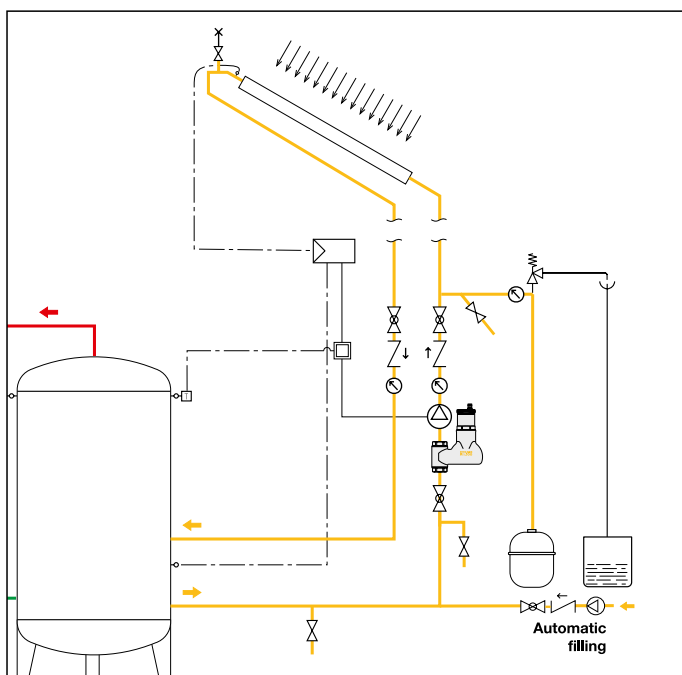
Code

251093 3/4" F

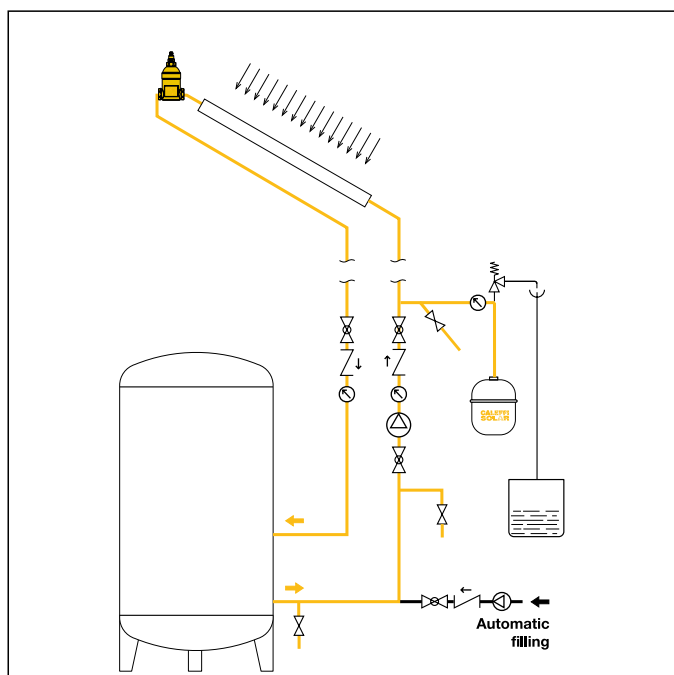
1

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Application diagram of DISCAL® 251 series for vertical pipes



Application diagram 251 series



## PUMP STATIONS

### 278

Pump station for solar thermal systems,  
return connection.

Electric supply: 230 V (AC).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160 °C.**

Safety relief valve setting: 6 bar (for other setting,  
see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110 °C.**

**Max. percentage of glycol: 50 %.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.



### 278

Pump station for solar thermal systems,  
return connection.

Electric supply: 230 V (AC).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160 °C.**

Safety relief valve setting: 6 bar (for other setting,  
see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110 °C.**



**Max. percentage of glycol: 50 %.**

Consisting of:



- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- fill/drain cock;
- instrument holder fitting with pressure gauge;
- flow meter;
- return temperature gauge;
- shut-off valve with check valve;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for coupling with digital regulator DeltaSol® SLL.



| Code            | Flow meter scale<br>(l/min) |      | Pump        |  |  |
|-----------------|-----------------------------|------|-------------|---|---|
| <b>278050HE</b> | 3/4" F                      | 1–13 | UPM3 15-75* | 1   | –   |
| <b>278052HE</b> | 3/4" F                      | 8–30 | UPM3 15-75* | 1   | –   |

\* With PWM control

| Code            | Flow meter scale<br>(l/min) |      | Pump        |  |  |
|-----------------|-----------------------------|------|-------------|---|---|
| <b>278750HE</b> | 3/4" F                      | 1–13 | UPM3 15-75* | 1   | –   |
| <b>278752HE</b> | 3/4" F                      | 8–30 | UPM3 15-75* | 1   | –   |

\* With PWM control



## PUMP STATIONS

### 279

Pump station for solar thermal systems, flow and return connection.

Electric supply: 230 V (AC).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160 °C.**

Safety relief valve setting: 6 bar (for other setting, see 253 series using the adapter code F21224).

**Flow meter temperature range: -10–110 °C.**

**Max. percentage of glycol: 50 %.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks;
- instrument holder fitting with pressure gauge;
- flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- 2 hose connections;
- pre-formed shell **insulation**.

Fitted for coupling with digital regulator DeltaSol® SLL



## DIGITAL REGULATOR

### 278

Digital regulator DeltaSol® SLL with PWM control.

Electric supply: 230 V (AC).

Complete with pre-formed shell **insulation** for coupling with pump stations 278...HE, 279...HE and 255...HE series.

Complete with 3 Pt1000 probes, with fourth probe as optional.

**Functions:** differential temperature regulator with supplementary and optional functions.

**Inputs** for 4 Pt1000 probes.

**Outputs:** 3 semiconductor relays  
2 PWM.



Code

**278005**

**F29883**

PWM cable



1

–

1

–

| Code            | Flow meter scale<br>(l/min) |      | Pump        |   |   |
|-----------------|-----------------------------|------|-------------|---|---|
| <b>279050HE</b> | 3/4" F                      | 1–13 | UPM3 15-75* | 1 | – |
| <b>279052HE</b> | 3/4" F                      | 8–30 | UPM3 15-75* | 1 | – |

\* With PWM control

## PUMP STATIONS

### 255

Pump station for solar thermal systems, flow and return connection.

Electric supply: 230 V (AC).

Max. working pressure: 10 bar.

**Safety relief valve temperature range: -30–160 °C.**

Safety relief valve setting: 6 bar (for other setting see 253 series).

**Max. flow meter temperature: 120 °C.**

**Max. percentage of glycol: 50 %.**

Consisting of:

- Solar circulation pump;
- safety relief valve for solar thermal systems 253 series;
- 2 fill/drain cocks with hose connections;
- instrument holder fitting with pressure gauge;
- flow regulator with flow meter;
- deaerator device;
- flow temperature gauge;
- return temperature gauge;
- 2 shut-off valves with check valves;
- pre-formed shell **insulation**.



| Code     | Flow meter scale (l/min) | Pump        |   |   |
|----------|--------------------------|-------------|---|---|
| 255266HE | 1" F 5–40                | PML 25-145* | 1 | – |

\* With PWM control

## ACCESSORIES FOR PUMP STATIONS

### 161



Pocket for Pt1000 probe.  
Stainless steel body.  
Length: 100 mm.

| Code   |      |   |   |  |
|--------|------|---|---|--|
| 161014 | 1/2" | 1 | – |  |

### 255



System filling pump  
for pump stations 279, 278 and 255 series.

| Code   |  |   |   |  |
|--------|--|---|---|--|
| 255010 |  | 1 | – |  |

## ACCESSORIES FOR PUMP STATIONS

### 259

tech. broch. 01246



| Code   | Litres | Conn. | Precharge (bar) |   |   |
|--------|--------|-------|-----------------|---|---|
| 259008 | 8      | 3/4"  | 2,5             | 1 | – |
| 259012 | 12     | 3/4"  | 2,5             | 1 | – |
| 259018 | 18     | 3/4"  | 2,5             | 1 | – |
| 259025 | 25     | 3/4"  | 2,5             | 1 | – |
| 259033 | 33     | 3/4"  | 2,5             | 1 | – |

### 259

tech. broch. 01246



| Code   | Litres | Conn. | Precharge (bar) |   |   |
|--------|--------|-------|-----------------|---|---|
| 259050 | 50     | 3/4"  | 2,5             | 1 | – |
| 259080 | 80     | 1"    | 2,5             | 1 | – |

### 255

tech. broch. 01136



Expansion vessel connection kit.

Consisting of:

- stainless steel flexible hose (L=610 mm);
- automatic shut-off cock;
- wall mounting bracket (for vessels up to 24 litres).

Max. working pressure: 10 bar.

**Shut-off cock max. working temperature: 110 °C.**

**Max. percentage of glycol: 50 %.**

| Code   |      |   |   |  |
|--------|------|---|---|--|
| 255007 | 3/4" | 1 | – |  |

### 5580

NEW



Ball shut-off valve,  
for expansion vessels, with drain cock.

**For solar thermal systems.**

Max. working pressure: 6 bar.

**Max. working temperature: 120 °C.**

**Max. percentage of glycol: 30 %.**

| Code   |      |   |    |  |
|--------|------|---|----|--|
| 558052 | 3/4" | 1 | 20 |  |
| 558062 | 1"   | 1 | 20 |  |



Adapter for pump stations 278 and 279 series.  
To be used for the installation  
of the 1/2" safety relief valve 253 series.

| Code   |  |  |  |  |
|--------|--|--|--|--|
| F21224 |  |  |  |  |

## MECHANICAL FITTINGS WITH O-RING SEAL



### 2540

Female fitting, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.

| Code   |               |   |    |
|--------|---------------|---|----|
| 254055 | 3/4" F - Ø 15 | 1 | 25 |
| 254058 | 3/4" F - Ø 18 | 1 | 25 |
| 254052 | 3/4" F - Ø 22 | 1 | 25 |
| 254062 | 1" F - Ø 22   | 1 | 25 |
| 254068 | 1" F - Ø 28   | 1 | 10 |

### 2543

Coupling sleeve, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |      |   |    |
|--------|------|---|----|
| 254305 | Ø 15 | 1 | 25 |
| 254308 | Ø 18 | 1 | 25 |
| 254302 | Ø 22 | 1 | 25 |

### 2544

Male fitting, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |               |   |    |
|--------|---------------|---|----|
| 254455 | 3/4" M - Ø 15 | 1 | 25 |
| 254458 | 3/4" M - Ø 18 | 1 | 25 |
| 254452 | 3/4" M - Ø 22 | 1 | 25 |
| 254465 | 1" M - Ø 15   | 1 | 25 |
| 254462 | 1" M - Ø 22   | 1 | 25 |

### 2545

Elbow coupling sleeve, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |      |   |    |
|--------|------|---|----|
| 254505 | Ø 15 | 1 | 25 |
| 254508 | Ø 18 | 1 | 25 |
| 254502 | Ø 22 | 1 | 25 |



### 2546

Tee fitting, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.

| Code   |      |   |    |
|--------|------|---|----|
| 254602 | Ø 22 | 1 | 20 |

### 2547

Male elbow fitting, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |               |   |    |
|--------|---------------|---|----|
| 254755 | 3/4" M - Ø 15 | 1 | 25 |
| 254758 | 3/4" M - Ø 18 | 1 | 25 |
| 254752 | 3/4" M - Ø 22 | 1 | 25 |

### 2548

Female elbow fitting, mechanical O-Ring seal for solar thermal systems.  
For annealed copper, hard copper, brass, mild and stainless steel pipes.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |               |   |    |
|--------|---------------|---|----|
| 254855 | 3/4" F - Ø 15 | 1 | 25 |
| 254858 | 3/4" F - Ø 18 | 1 | 25 |
| 254852 | 3/4" F - Ø 22 | 1 | 25 |

### 2540

Plug for Ø 22 copper pipe.



| Code   |      |   |    |
|--------|------|---|----|
| 254002 | Ø 22 | 1 | 25 |

## THREE-PIECE UNION FITTING

### 588

Three-piece straight union fitting for solar thermal systems.  
Max. working pressure: 16 bar.  
**Temperature range: -30–160 °C.**  
**Max. percentage of glycol: 50 %.**  
Black nickel plated nut.



| Code   |                       |   |    |
|--------|-----------------------|---|----|
| 588052 | 3/4" F x M with union | 1 | 25 |
| 588062 | 1" F x M with union   | 1 | 20 |

## HEAT METER

### 75025 CONTECA EASY SOLAR

tech. broch. 01311

Direct heat metering **with local reading via LCD display/centralised reading via BUS transmission.**

Max. working pressure: 10 bar.  
Temperature range: 5–120 °C.  
Max. percentage of glycol: 50 %.

The CONTECA EASY SOLAR heat meter is supplied complete with:

- a pair of temperature probes,
- a pair of Y pockets for immersion probes,
- flow meter with pulse output (Tmax 120 °C),
- electronic calculator with LCD display.

**Electric supply 24 V (AC) (+10 % -5 %) / 50/60 Hz - 1 W.**  
**Fitted for transmission on Bus RS-485.**



| Code   | Conn.  | Meas. type | Q <sub>nom</sub> m³/h |   |   |
|--------|--------|------------|-----------------------|---|---|
| 750254 | 1/2"   | single jet | 1,5                   | 1 | – |
| 750255 | 3/4"   | single jet | 2,5                   | 1 | – |
| 750256 | 1"     | multi jet  | 3,5                   | 1 | – |
| 750257 | 1 1/4" | multi jet  | 6                     | 1 | – |
| 750258 | 1 1/2" | multi jet  | 10                    | 1 | – |
| 750259 | 2"     | multi jet  | 15                    | 1 | – |

## BALANCING VALVE WITH FLOW METER

### 258

tech. broch. 01148



Balancing valve with flow meter, for solar thermal systems.  
Direct reading of flow rate.  
Brass valve body and flow meter.  
Chrome plated.  
Ball valve for flow rate adjustment.  
Graduated scale flow meter with magnetic movement flow rate indicator.

**With insulation.**

Max. working pressure: 10 bar.  
**Temperature range: -30–130 °C.**  
**Max. percentage of glycol: 50 %.**  
**PATENT.**

| Code   | Flow rate range (l/min) |   |   |
|--------|-------------------------|---|---|
| 258503 | 3/4" 2–7                | 1 | 5 |
| 258533 | 3/4" 3–10               | 1 | 5 |
| 258523 | 3/4" 7–28               | 1 | 5 |
| 258603 | 1" 10–40                | 1 | 5 |

## BALL VALVE

### 240

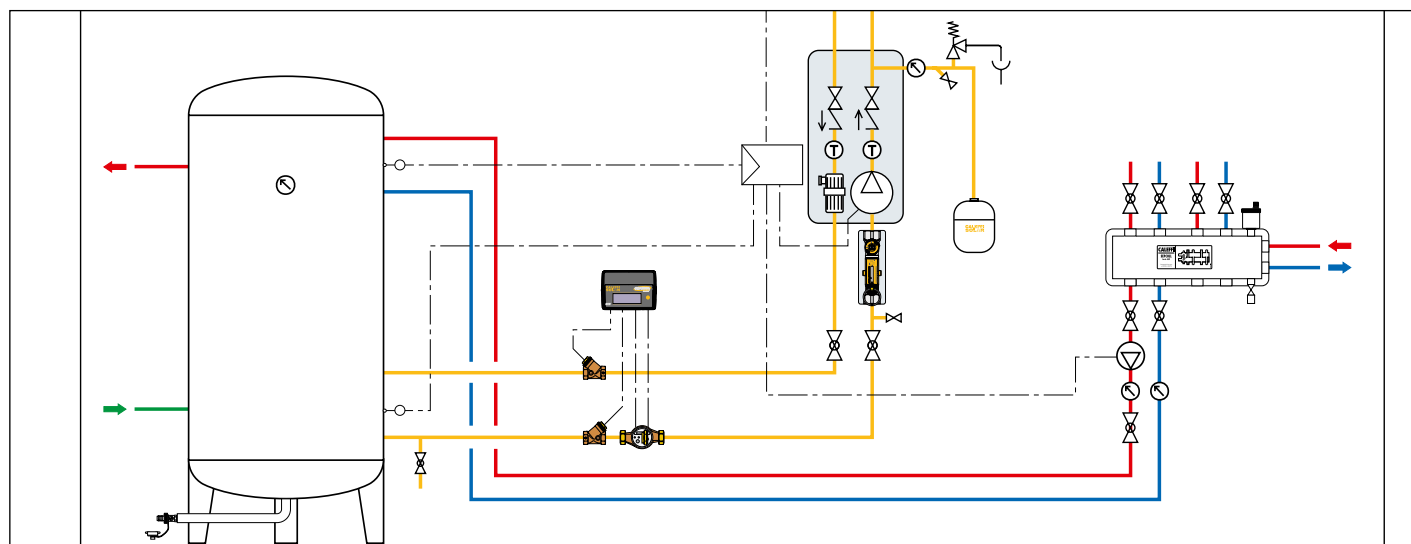
tech. broch. 01185



Ball valve for solar thermal systems.  
**Body and ball in stainless steel AISI 316.**  
PN 63.  
Female connections.  
Handle in stainless steel AISI 304.  
**Temperature range: -30–200 °C.**  
**Max. percentage of glycol: 50 %.**

| Code   |      |     |
|--------|------|-----|
| 240400 | 1/2" | 1 5 |
| 240500 | 3/4" | 1 5 |
| 240600 | 1"   | 1 5 |

Application diagram of heat meter 75025 series and balancing valve 258 series



## MOTORISED BALL DIVERTER VALVE



**6443**

tech. broch. 01132

Motorised three-way ball diverter valve.  
Max. working pressure: 10 bar.  
Max.  $\Delta p$ : 10 bar.  
Temperature range: -5–110 °C.

**Complete with actuator with 3-contact control.**

**With auxiliary microswitch.**

Supply: 230 V (AC) or 24 V (AC).

Power consumption: 8 VA.

Auxiliary microswitch contact rating: 0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

**Operating time: 10 s (90° rotation).**

Cable length: 100 cm.



| Code          |      | Supply voltage<br>V | Kv (m <sup>3</sup> /h) |   |   |
|---------------|------|---------------------|------------------------|---|---|
| <b>644346</b> | 1/2" | 230                 | 3,9                    | 1 | 5 |
| <b>644356</b> | 3/4" | 230                 | 3,9                    | 1 | 5 |
| <b>644357</b> | 3/4" | 230                 | 8,6                    | 1 | 5 |
| <b>644366</b> | 1"   | 230                 | 9                      | 1 | 5 |
| <b>644348</b> | 1/2" | 24                  | 3,9                    | 1 | 5 |
| <b>644358</b> | 3/4" | 24                  | 3,9                    | 1 | 5 |
| <b>644359</b> | 3/4" | 24                  | 8,6                    | 1 | 5 |
| <b>644368</b> | 1"   | 24                  | 9                      | 1 | 5 |

## THERMOSTATIC DIVERTER VALVES



**2620**

tech. broch. 01335

Thermostatic diverter valve for solar thermal systems.  
**CR** dezincification resistant alloy body.  
Chrome plated.

Max. working pressure: 10 bar.

Factory setting: 45 °C.

**Max. inlet temperature: 100 °C.**



**2620**

tech. broch. 01335

Thermostatic diverter valve for solar thermal systems.  
**CR** dezincification resistant alloy body.  
Chrome plated.

Max. working pressure: 10 bar.

Factory setting: 45 °C.

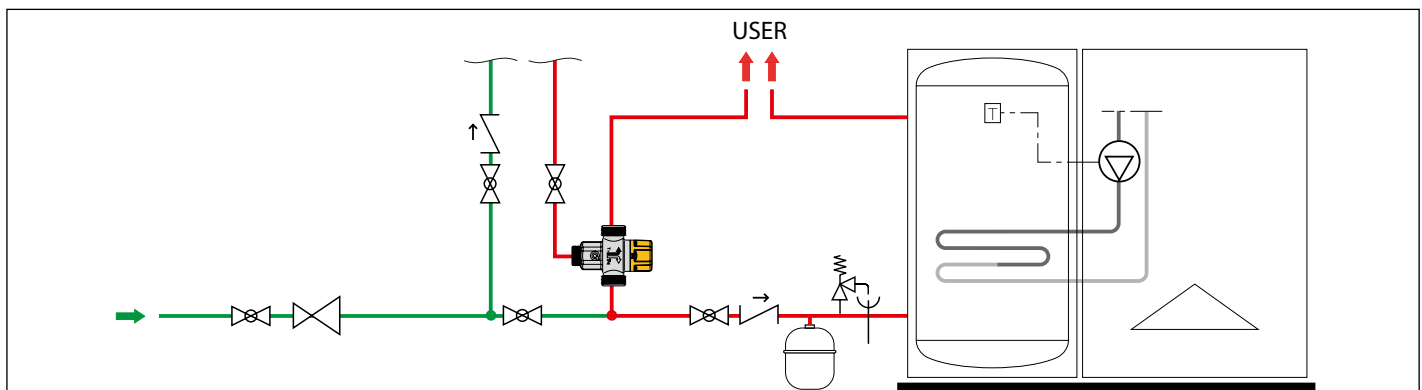
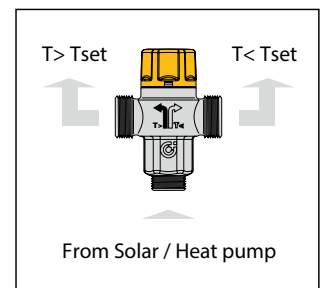
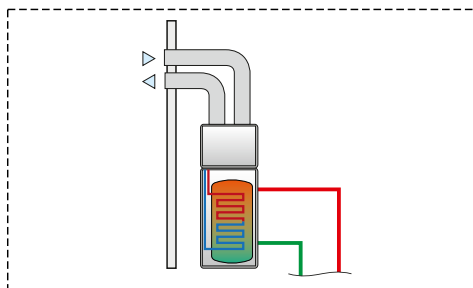
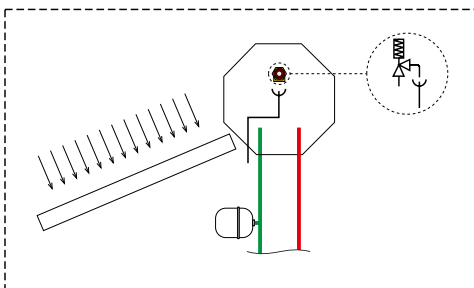
**Max. inlet temperature: 100 °C.**



| Code          |      | Temperature<br>adjustment | Kv (m <sup>3</sup> /h) |   |    |
|---------------|------|---------------------------|------------------------|---|----|
| <b>262040</b> | 1/2" | 35–55 °C                  | 1,5                    | 1 | 10 |
| <b>262050</b> | 3/4" | 35–55 °C                  | 1,7                    | 1 | 10 |

| Code          |    | Temperature<br>adjustment | Kv (m <sup>3</sup> /h) |   |    |
|---------------|----|---------------------------|------------------------|---|----|
| <b>262060</b> | 1" | 38–52 °C                  | 2,6                    | 1 | 10 |

Application diagram of thermostatic diverter valve 2620 series





## THERMOSTATIC MIXING VALVES



**2521**



tech. broch. 01127

Adjustable thermostatic mixing valve for solar thermal systems.  
**CR** dezincification resistant alloy body  
**"LOW LEAD"**. Chrome plated.  
 Male union connections.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 100 °C.**



| Code          | Temperature adjustment | Kv (m³/h) |     |      |
|---------------|------------------------|-----------|-----|------|
| <b>252140</b> | 1/2"                   | 30–65 °C  | 2,6 | 1 10 |
| <b>252150</b> | 3/4"                   | 30–65 °C  | 2,6 | 1 10 |

**2521**



tech. broch. 01257



Thermostatic mixing valve for centralised solar thermal systems.  
**CR** dezincification resistant alloy body.

Male union connections.  
 Antiscale inner regulator in technopolymer.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 100 °C.**



| Code          | Temperature adjustment | Kv (m³/h) |      |      |
|---------------|------------------------|-----------|------|------|
| <b>252151</b> | 3/4"                   | 35–65 °C  | 4,5  | 1 10 |
| <b>252160</b> | 1"                     | 35–65 °C  | 5,5  | 1 –  |
| <b>252170</b> | 1 1/4"                 | 35–65 °C  | 7,6  | 1 –  |
| <b>252180</b> | 1 1/2"                 | 35–65 °C  | 11,0 | 1 –  |
| <b>252190</b> | 2"                     | 35–65 °C  | 13,3 | 1 –  |



**2521**



tech. broch. 01127

Adjustable thermostatic mixing valve, **with check valves**, for solar thermal systems.  
**CR** dezincification resistant alloy body  
**"LOW LEAD"**. Chrome plated.  
 Male union connections.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 100 °C.**



| Code          | Temperature adjustment | Kv (m³/h) |     |      |
|---------------|------------------------|-----------|-----|------|
| <b>252153</b> | 3/4"                   | 30–65 °C  | 2,6 | 1 10 |

**2523**



tech. broch. 01129



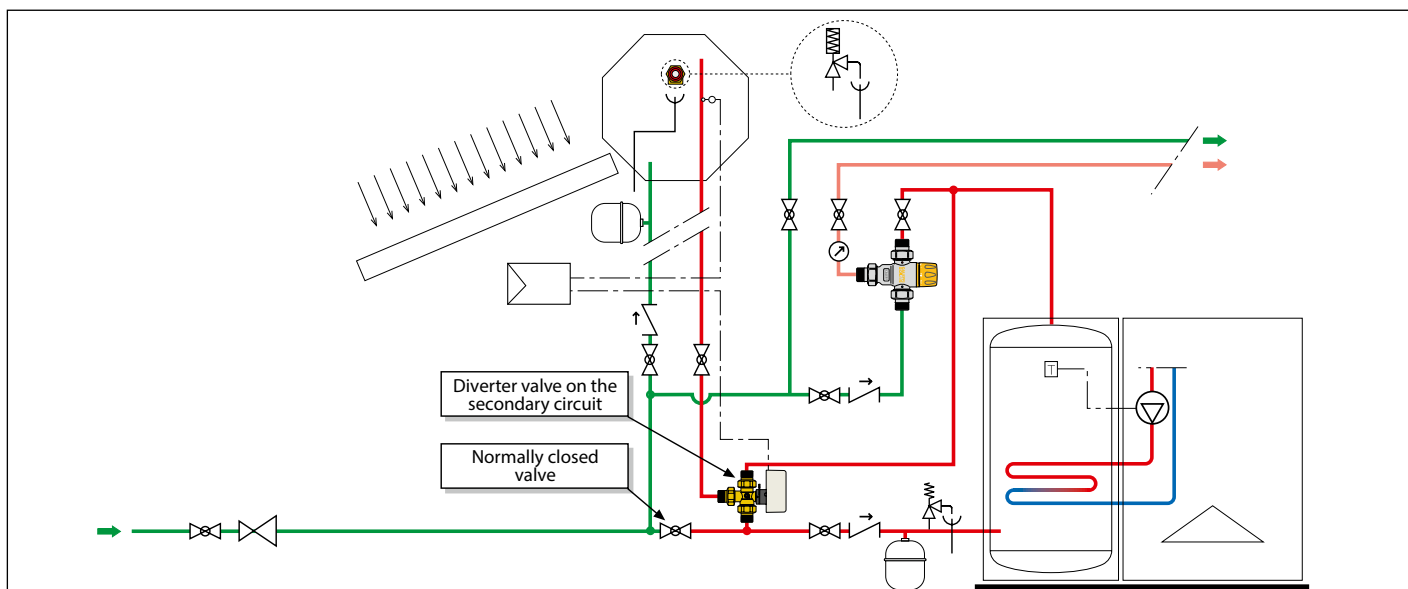
Thermostatic mixing valve with interchangeable cartridge for solar thermal systems.

Brass body.  
 Male union connections.  
 Max. working pressure: 14 bar.  
**Max. inlet temperature: 110 °C.**



| Code          | Temperature adjustment | Kv (m³/h) |      |     |
|---------------|------------------------|-----------|------|-----|
| <b>252340</b> | 1/2"                   | 30–65 °C  | 4,0  | 1 – |
| <b>252350</b> | 3/4"                   | 30–65 °C  | 4,5  | 1 – |
| <b>252360</b> | 1"                     | 30–65 °C  | 6,9  | 1 – |
| <b>252370</b> | 1 1/4"                 | 30–65 °C  | 9,1  | 1 – |
| <b>252380</b> | 1 1/2"                 | 35–65 °C  | 14,5 | 1 – |
| <b>252390</b> | 2"                     | 35–65 °C  | 19,0 | 1 – |

### Application diagram of thermostatic mixing valve 2521 series



## ANTI-SCALD THERMOSTATIC AND TEMPERING MIXING VALVES

### 2527



tech. broch. 01165



Adjustable anti-scald thermostatic mixing valve, **with check valves and strainers**, for solar thermal systems. High thermal performance device **with anti-scald safety function**. Brass body.

Chrome plated.  
Male union connections.  
Performance to standards  
NF 079 doc. 8, EN 15092,  
EN 1111, EN 1287.  
Max. working pressure: 10 bar.  
**Max. inlet temperature: 100 °C.**



| Code   | Temperature adjustment | Kv (m³/h)    |   |    |
|--------|------------------------|--------------|---|----|
| 252714 | 1/2"                   | 35–55 °C 1,5 | 1 | 10 |
| 252713 | 3/4"                   | 35–55 °C 1,7 | 1 | 10 |

### 2522



Adjustable thermostatic mixing valve **with check valves and strainers**, for solar thermal systems. Enhanced thermal performance device **with anti-scald safety function**. **With override function for thermal disinfection**. CR dezincification resistant alloy body.

Chrome plated.  
Male union connections.  
Max. working pressure: 1400 kPa.  
**Max. inlet temperature: 100 °C.**  
**Certified to AS 4032.1.**



| Code           | Temperature adjustment | Kv (m³/h)    |   |    |
|----------------|------------------------|--------------|---|----|
| 252212TMF AUS* | DN 15                  | 30–50 °C 1,5 | 1 | 10 |
| 252219TMF AUS  | DN 20                  | 30–50 °C 1,7 | 1 | 6  |

\* Without union

### 2522



High performance adjustable anti-scald tempering valve **with check valves and strainers** at the inlets. Suitable for solar and instantaneous hot water systems.

CR dezincification resistant alloy body.

Chrome plated.  
Male union connections.  
Max. working pressure: 1400 kPa.  
**Max. inlet temperature: 100 °C.**  
**Certified to AS 4032.2.**



| Code         | Temperature adjustment | Kv (m³/h)    |   |    |
|--------------|------------------------|--------------|---|----|
| 252212HP AUS | DN 15                  | 35–55 °C 1,5 | 1 | 10 |
| 252219HP AUS | DN 20                  | 35–55 °C 1,7 | 1 | 5  |

### 2522



Adjustable thermostatic mixing valve **with check valves and strainers**, for solar thermal systems. Enhanced thermal performance device **with anti-scald safety function**. CR dezincification resistant alloy body.

Chrome plated.  
Male union connections.  
Max. working pressure: 1400 kPa.  
**Max. inlet temperature: 100 °C.**  
**Certified to AS 4032.1.**



| Code         | Temperature adjustment | Kv (m³/h)    |   |   |
|--------------|------------------------|--------------|---|---|
| 252225TM AUS | DN 25                  | 30–50 °C 3,0 | 1 | 5 |

## SOLAR STORAGE-TO-BOILER CONNECTION KIT

### 264 SOLARNOCAL

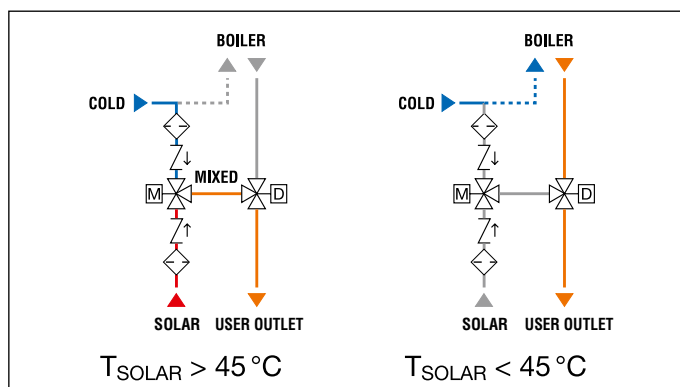
tech. broch. 01163



#### Function

A thermostatic anti-scald mixing valve, at the kit inlet, controls the temperature of the water coming from the solar hot water storage. The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit outlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or activates the boiler circuit, **without thermal integration**.

#### Hydraulic diagrams



Solar storage-to-boiler connection kit, **without thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

**Diverter-to-mixing valve coupling with adjustable position** of the inlet and outlet connections.

#### Mixing valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Adjustment temperature range: 35–55 °C.

**Max. inlet temperature: 100°C.**

#### Diverter valve

Brass body.

Max. working pressure: 10 bar.

Temperature range: -5–110 °C.

#### Actuator

Three-contact type.

Supply: 230 V (AC).

Power consumption: 8 VA.

Auxiliary microswitch contact rating: 0,8 A (230 V).

Ambient temperature range: 0–55 °C.

Protection class: IP 44 (vertical stem).

IP 40 (horizontal stem).

Operating time: 10 s.

Cable length: 1 m.

#### Thermostat with probe

Supply: 230 V (AC).

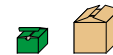
Adjustable temperature range: 25–50 °C.

Factory setting: 45 °C.

Box protection class: IP 54.

Code

**264352** 3/4"



1

Spare parts for connection kit 264 and 265 series.

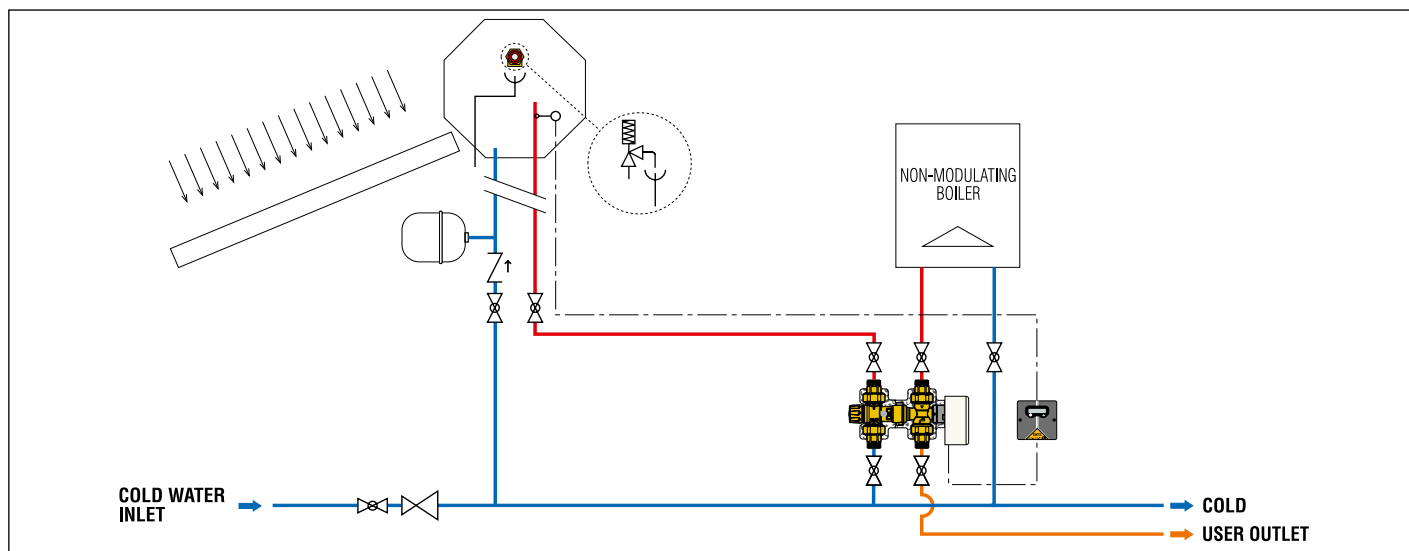
Code

**F29399** actuator

**F29488** Ø 6 mm probe

**161014** stainless steel pocket for Pt1000 probe

#### Application diagram of SOLARNOCAL kit 264 series



## SOLAR STORAGE-TO-BOILER CONNECTION KIT

### 265 SOLARINCAL

tech. broch. 01163



#### Function

The thermostat, by means of the probe positioned on the hot water flow from the solar hot water storage, controls the diverter valve at the kit inlet. Depending on the temperature setting, the valve diverts the water towards the user circuit or the boiler circuit, **with thermal integration**. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

Solar storage-to-boiler connection kit, **with thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- diverter valve with three-contact actuator, with auxiliary microswitch;
- thermostat with probe for solar thermal system, for operating diverter valve. Display showing temperature.
- pre-formed **shell protective cover**.

**Diverter-to-mixing valve coupling with adjustable position** of the inlet and outlet connections.

#### Mixing valve

For technical details see 264 series.

#### Diverter valve

For technical details see 264 series.

#### Actuator

For technical details see 264 series.

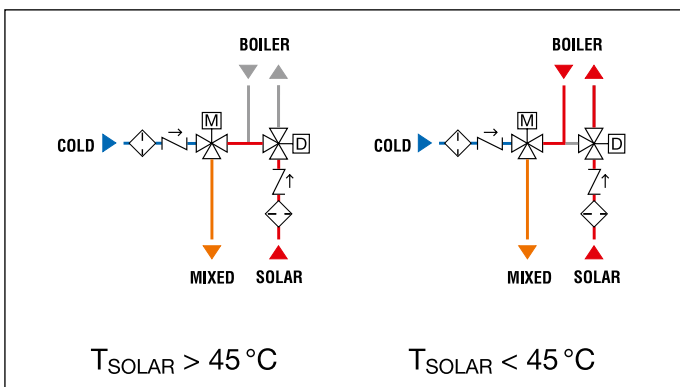
#### Thermostat with probe

For technical details see 264 series.

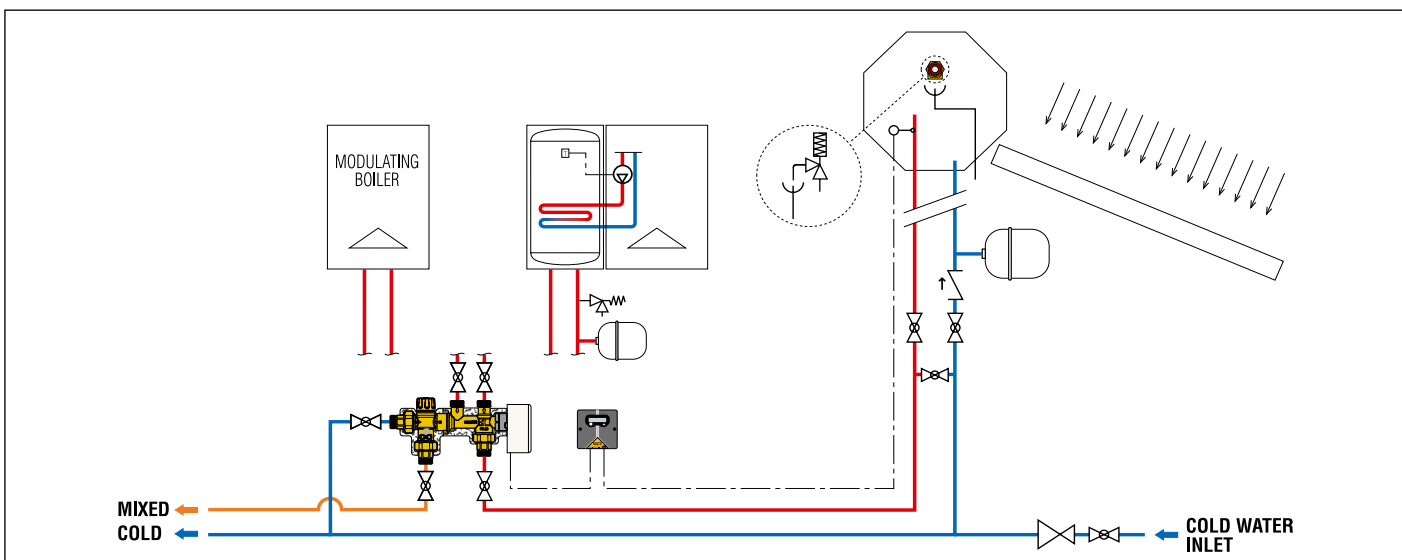
Code

|               |   |   |   |
|---------------|---|---|---|
| <b>265352</b> | 3/4"                                      | 1 | - |
| <b>F29384</b> | mixing valve spare for 262 and 265 series | 1 | - |

#### Hydraulic diagrams



Application diagram of SOLARINCAL kit 265 series



### 265

Thermostat with display showing storage temperature. For devices 264 and 265 series.

Supply: 230 V (AC).

Adjustable temperature range: 25–50 °C.

Factory setting: 45 °C.

Box protection class: IP 54.

CE

Code

|               |   |   |
|---------------|---|---|
| <b>265001</b> | 1 | - |
|---------------|---|---|

Accessories for connection kit 264 and 265 series.

Code

|               |   |
|---------------|---|
| <b>264359</b> | kit 264 series without thermostat and probe |
| <b>265359</b> | kit 265 series without thermostat and probe |
| <b>F29525</b> | box with switching 3 contact relay          |
| <b>F29466</b> | Ø 15 mm contact probe                       |
| <b>F29467</b> | pocket for Ø 15 mm probe                    |

## SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

### 262 SOLARINCAL-T

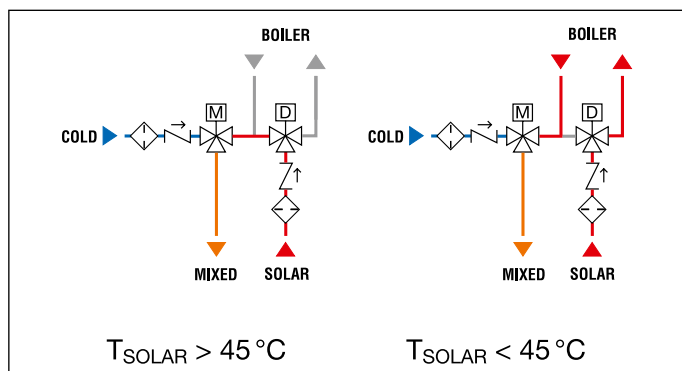
tech. broch. 01164



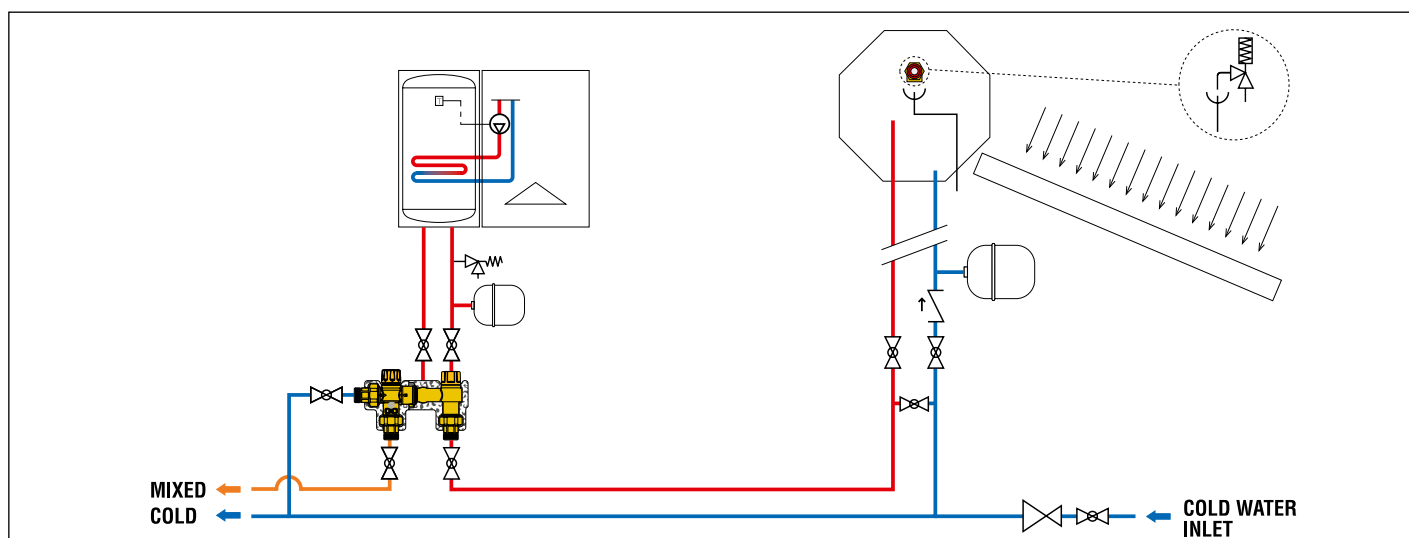
#### Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and in a proportional manner towards the user circuit or the **boiler with storage circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum. A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls and limits the temperature of the water sent to the user.

#### Hydraulic diagrams



#### Application diagram of SOLARINCAL-T kit 262 series



Solar storage-to-boiler connection kit, **with thermal integration**. Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets.
- thermostatic diverter valve;
- pre-formed **shell protective cover**.

**Diverter-to-mixing valve coupling with adjustable position** of the inlet and outlet connections.

#### Mixing valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Adjustment temperature range: 35–55 °C.

**Max. inlet temperature: 100 °C.**

Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

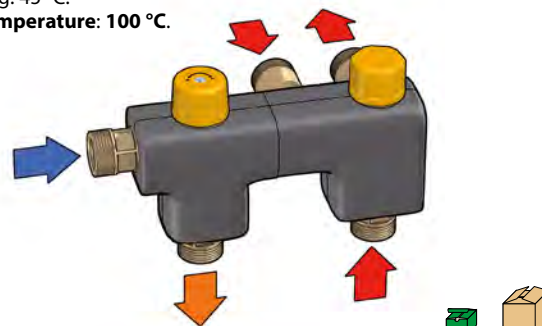
#### Diverter valve

Brass body.

Max. working pressure: 10 bar.

Factory setting: 45 °C.

**Max. inlet temperature: 100 °C.**



Code

|               |   |   |   |
|---------------|---|---|---|
| <b>262350</b> | 3/4"                                      | 1 | – |
| <b>F29384</b> | mixing valve spare for 262 and 265 series | 1 | – |



### 262 SOLARINCAL-T

tech. broch. 01164

Solar storage-to-boiler connection kit, **with thermal integration**. Without shell protective cover.

Code

|               |      |   |   |
|---------------|------|---|---|
| <b>262342</b> | 1/2" | 1 | – |
|---------------|------|---|---|



## SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

### 263 SOLARINCAL-T PLUS

tech. broch. 01164



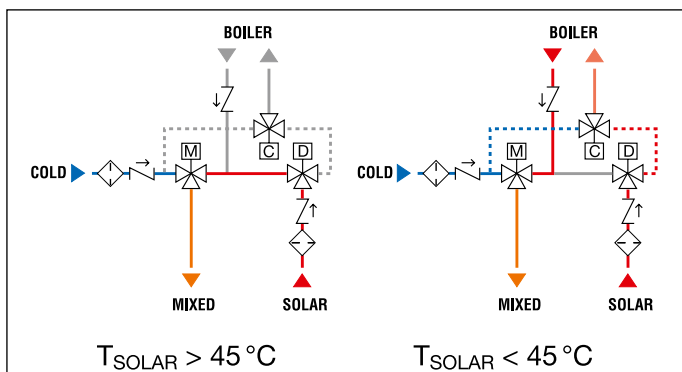
#### Function

A thermostatic diverter valve, at the kit inlet, receives hot water coming from the solar water storage. Depending on the temperature setting, the valve diverts the water automatically and proportionally towards the user circuit or the **instantaneous boiler circuit, with thermal integration**. The valve modulates the flow rates to optimise the energy contained in the solar storage and reduces boiler operation times to a minimum.

A specific thermostatic control device limits the boiler inlet temperature to prevent it being switched on and off too often, which leads to hunting and irregular operation.

A thermostatic anti-scald mixing valve, at the kit outlet, constantly controls the temperature of the water sent to the user.

#### Hydraulic diagrams



Solar storage-to-boiler connection kit, **with thermal integration**.

Consisting of:

- thermostatic anti-scald mixing valve, adjustable with knob, for solar thermal systems. Complete with strainers and check valves at the inlets;
- thermostatic diverter valve;
- thermostatic control device;
- pre-formed **shell protective cover**.

#### Mixing valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Adjustment temperature range: 35–55 °C.

**Max. inlet temperature: 100 °C.**

Performance to standards NF 079 doc. 8, EN 15092, EN 1111, EN 1287.

#### Diverter valve

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Factory setting: 45 °C.

**Max. inlet temperature: 100 °C.**

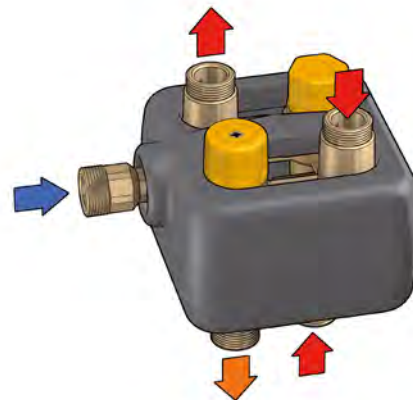
#### Control device

CR dezincification resistant alloy body.

Factory setting: 30 °C.

Max. inlet temperature: 85 °C.

PATENT.



Code

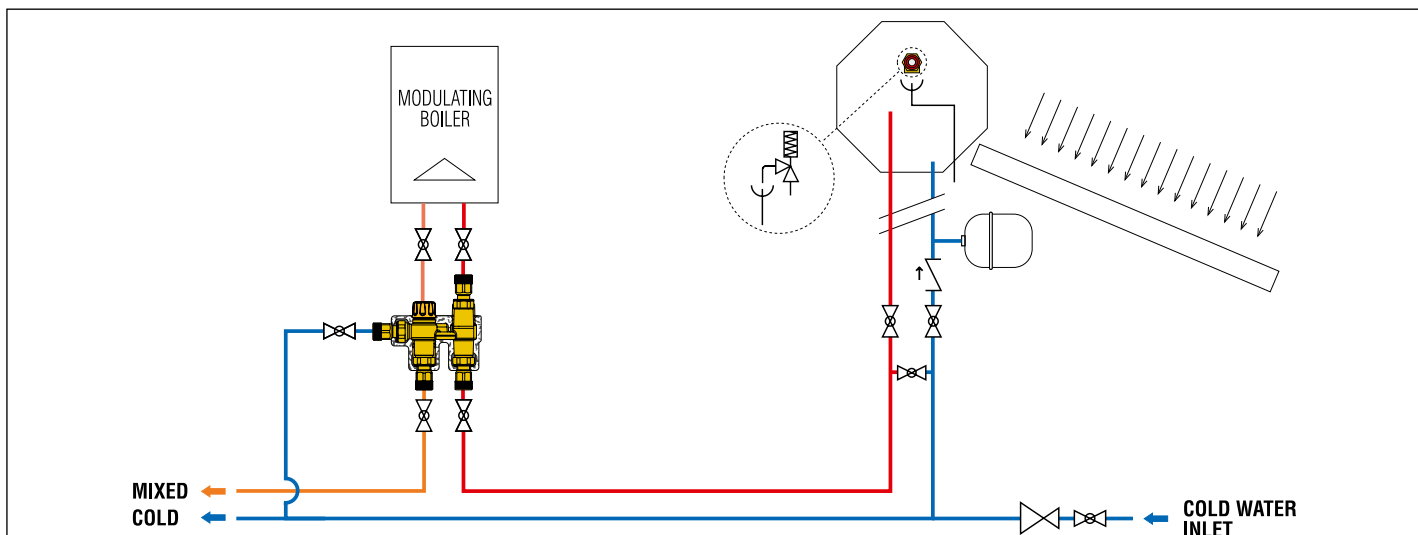
**263350** 3/4"



1

–

#### Application diagram of SOLARINCAL-T Plus kit 263 series



## TEMPERATURE AND PRESSURE RELIEF VALVE



### 309

tech. broch. 01147

Temperature and pressure relief valve.  
**For solar thermal systems,  
to protect the hot water storage.**

CR dezincification resistant alloy body.

Chrome plated.

Setting temperature: 90 °C.

Discharge rating:

1/2" x Ø 15: 10 kW.

3/4" x Ø 22: 25 kW.

Settings: 6 - 7 - 10 bar.

**Settings certified to EN 1490: 7 - 10 bar.**



Code

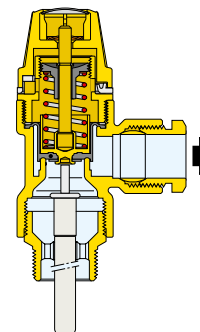
|        |               |        |   |    |
|--------|---------------|--------|---|----|
| 309461 | 1/2" M x Ø 15 | 6 bar  | 1 | 20 |
| 309471 | 1/2" M x Ø 15 | 7 bar  | 1 | 20 |
| 309401 | 1/2" M x Ø 15 | 10 bar | 1 | 20 |
| 309561 | 3/4" M x Ø 22 | 6 bar  | 1 | 20 |
| 309571 | 3/4" M x Ø 22 | 7 bar  | 1 | 20 |
| 309501 | 3/4" M x Ø 22 | 10 bar | 1 | 20 |

### Function

The temperature and pressure relief valve controls and limits the temperature and pressure of the hot water contained in a solar domestic water storage heater and prevents it to reach temperatures over 100°C, with the formation of steam.

On reaching the settings, the valve discharges a sufficient amount of water into the atmosphere so that the temperature and pressure return within the system's operating limits.

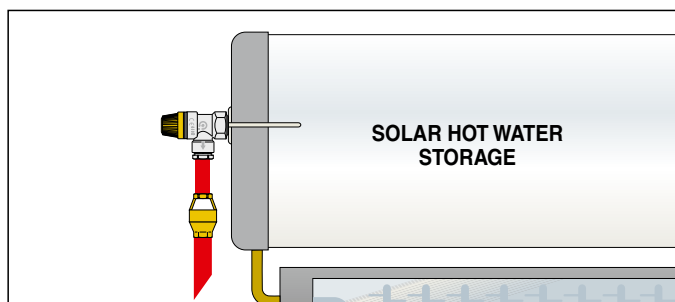
As the temperature and pressure decrease, the opposite action occurs with the valve subsequently reclosing within the set tolerances.



### Product certification in accordance with European Standard EN 1490

European Standard EN 1490: 2000, entitled "Building valves - Combined temperature and pressure relief valves - Tests and requirements", describes the constructional and performance specifications that TP relief valves must have. Caleffi 309 series TP relief valves for solar systems are certified by Buildcert (UK) to comply with the requirements of the European Standard EN 1490.

### Application diagram of valve 309 series on a solar hot water storage



## ANTIFREEZE SAFETY DEVICE



### 603

ICECAL®

Antifreeze safety device.

**For solar thermal systems,  
to protect the hot water storage.**

CR dezincification resistant alloy body.

Max. working pressure: 10 bar.

Ambient temperature range: -30-90 °C.

Opening temperature: 3 °C.

Closing temperature: 4 °C.

Code

|        |                 |   |    |
|--------|-----------------|---|----|
| 603040 | 1/2" F with nut | 1 | 50 |
|--------|-----------------|---|----|

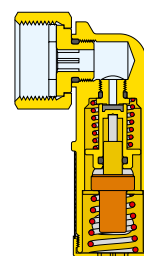
### Function

The antifreeze safety device prevents ice build-up in domestic water circuits, thereby avoiding potential damage to storage tanks and pipes.

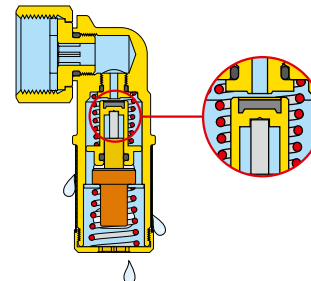
When the minimum ambient intervention temperature is reached, it automatically opens a minimum passage of water toward the drain, enabling a small continuous flow of water at the inlet; this prevents any risk of freezing.

When the ambient temperature increases or in the event of contact with warmer water, the opposite action occurs, causing the device to shut off and circuit normal operating conditions to be restored.

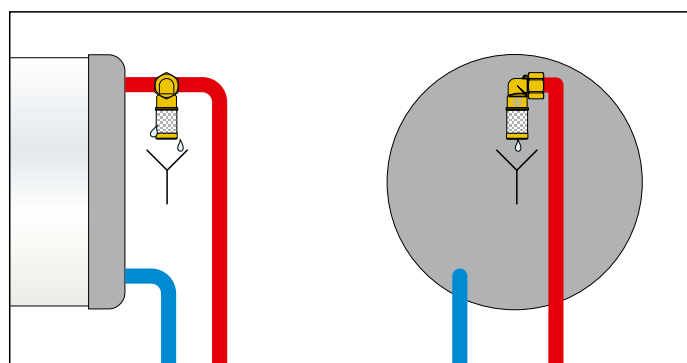
### Closed position



### Open position



### Application diagram of device 603 series on a domestic water circuit



## SPARE PARTS FOR CIRCULATION UNITS FOR 278/279 SERIES



Pump UPM3 15-75 for 278HE and 279HE series, with cable



Code

**F29885** UPM3 15-75 pump



Spare flow meters for 278 and 279 series circulation units.

| Code          | Flow meter scale (l/min) |
|---------------|--------------------------|
| <b>278003</b> | 1–13                     |
| <b>278004</b> | 8–30                     |



Safety relief valve 6 bar

Code

**F0000602**

Code

**161006** Pt1000 probe - temperature: -5–80 °C

**257006** Pt1000 probe - temperature: -50–180 °C

**161014** pocket for Pt1000 probe

**257007** flow temperature gauge for 267, 269 and 279 series

**257008** return temperature gauge for 266, 267, 268, 269, 278 and 279 series

**R29435** pressure gauge for 278, 279 series

## SPARE PARTS FOR CIRCULATION UNITS FOR 255/256 SERIES



Flow meter 1" 5–40 for unit code 255266HE

Code

**255003** flow temperature gauge 0–160 °C

**255004** return temperature gauge 0–160 °C

**255005** pressure gauge Ø 40, 0–6 bar

Code

**255018**



Pump PML Solar 25-145 for unit 255266



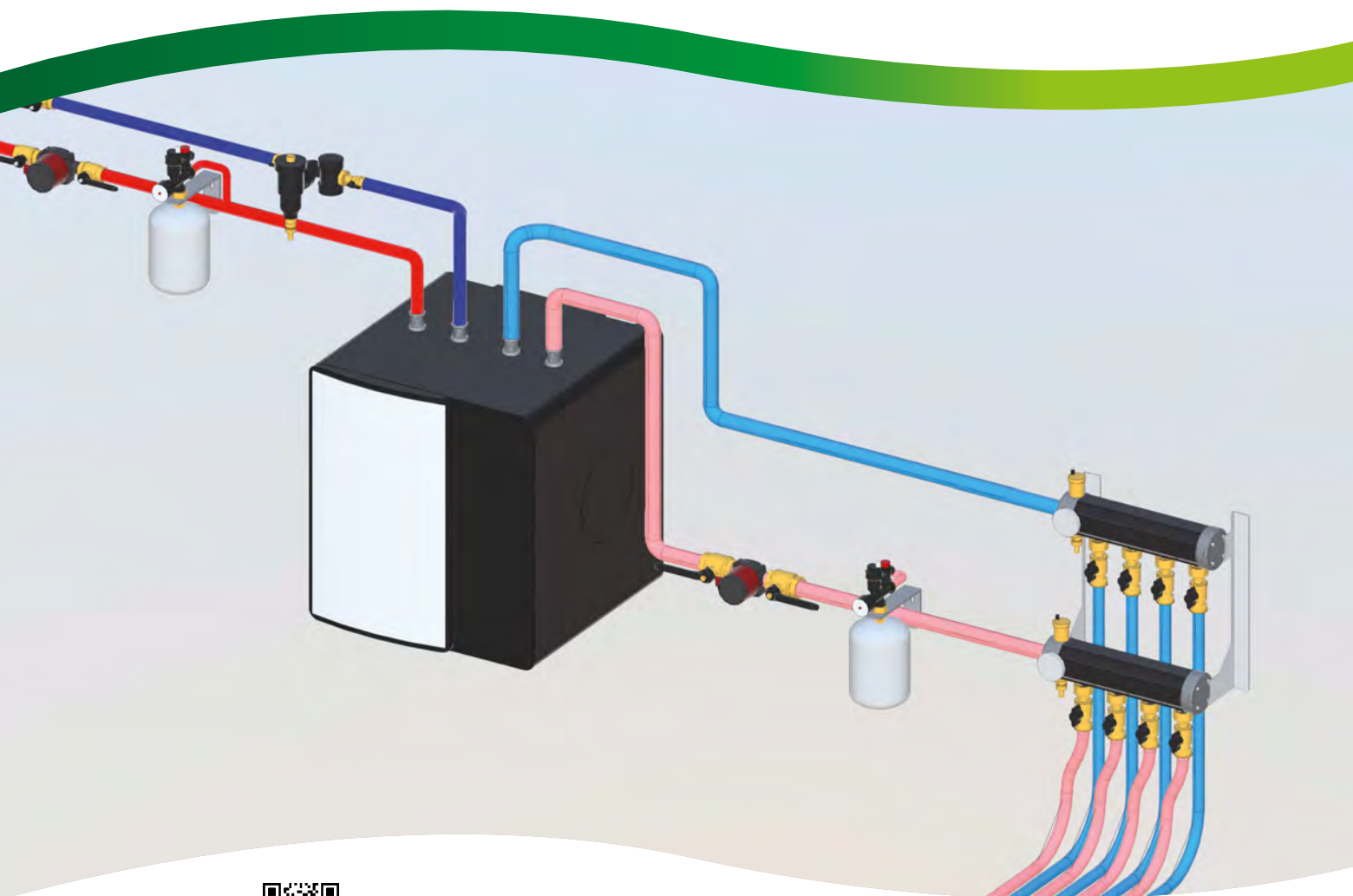
Code

**F0000565\*** PML 25-145 pump

*\* May only be used in conjunction with controller featuring PWM control*



## COMPONENTS FOR GEOTHERMAL SYSTEMS



**G BIM**  
bim.caleffi.com

**Preassembled geothermal manifold**

**Modular geothermal manifold**

**Shut-off and balancing devices for geothermal manifold**



## PREASSEMBLED GEOTHERMAL MANIFOLD

### 110



Preassembled geothermal manifold.  
Complete with:

- automatic air vents;
- temperature gauges Ø 80 mm;
- fill/drain cocks;
- flow and return manifolds in polymer;
- blind end plugs with insulation;
- stainless steel wall brackets;
- set of labels for direction of flow and circuit identification;
- wall fixing anchors.

tech. broch. 01221



Max. working pressure: 6 bar.  
Max. hydraulic test pressure: 10 bar.  
Temperature range: -10–60 °C.  
Ambient temperature range: -20–60 °C.  
Medium: water, glycol solutions, saline solutions.  
Max. percentage of glycol: 50 %.  
Manifold DN 50.  
Max. flow rate: 7 m³/h.  
Outlet centre distance: 100 mm.  
Outlet connections with mechanical seal for shut-off valves  
111 series, balancing valves 112 series and flow meters 113 series.

| Code          | Outlet connection |        |             |  |  |
|---------------|-------------------|--------|-------------|---|---|
| <b>1107B5</b> | 2 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107C5</b> | 3 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107D5</b> | 4 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107E5</b> | 5 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107F5</b> | 6 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107G5</b> | 7 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |
| <b>1107H5</b> | 8 circuits        | 1 1/4" | 42 p,2,5 TR | 1   | –   |

**For more than 8 outlet circuits, see the modular manifold**

## MODULAR GEOTHERMAL MANIFOLD

### 110

tech. broch. 01221



Modular manifold single module in polymer.  
Max. working pressure: 6 bar.  
Max. hydraulic test pressure: 10 bar.  
Working temperature range: -10–60 °C.  
Ambient temperature range: -20–60 °C.  
Medium: water, glycol solutions, saline solutions.  
Max. percentage of glycol: 50 %.  
Manifold DN 50.  
Outlet connection: 42 p,2,5 TR.  
Outlet connections with mechanical seal  
for shut-off valves 111 series, balancing valves  
112 series and flow meters 113 series.

Code

|               |   |   |
|---------------|---|---|
| <b>110700</b> | 1 | – |
|---------------|---|---|



### 110

tech. broch. 01221



Stainless steel tie-rods  
for assembling modular manifolds.  
M8 threaded stainless steel bar.

Code

|               |                               |   |   |
|---------------|-------------------------------|---|---|
| <b>110012</b> | for manifold with 2 circuits  | 1 | – |
| <b>110013</b> | for manifold with 3 circuits  | 1 | – |
| <b>110014</b> | for manifold with 4 circuits  | 1 | – |
| <b>110015</b> | for manifold with 5 circuits  | 1 | – |
| <b>110016</b> | for manifold with 6 circuits  | 1 | – |
| <b>110017</b> | for manifold with 7 circuits  | 1 | – |
| <b>110018</b> | for manifold with 8 circuits  | 1 | – |
| <b>110019</b> | for manifold with 9 circuits  | 1 | – |
| <b>110020</b> | for manifold with 10 circuits | 1 | – |
| <b>110021</b> | for manifold with 11 circuits | 1 | – |
| <b>110022</b> | for manifold with 12 circuits | 1 | – |



### 110

tech. broch. 01221

Assembly kit for modular manifolds. Complete with:

- brass end fitting with automatic air vent, fill/drain cock;
- brass blind end plug;
- pre-formed shell insulation;
- screws and bolts for tie-rods and brackets;
- set of labels for direction of flow and circuit identification;
- temperature gauge with pocket (-30–50 °C);
- No. 2 seal gaskets.

Max. working pressure: 6 bar.  
System test max. pressure: 10 bar.  
Temperature range: -10–60 °C.  
Ambient temperature range: -20–60 °C.  
Medium: water, glycol solutions, saline solutions.  
Max. percentage of glycol: 50 %.  
Connections: 1 1/4" F.



Code

|               |   |   |
|---------------|---|---|
| <b>110750</b> | 1 | – |
|---------------|---|---|



### 110

tech. broch. 01221

Pair of stainless steel brackets to secure modular manifolds.  
Rapid wall coupling system. System for rapidly coupling  
the manifold on the brackets.  
With screws and plugs.



Code

|               |   |   |
|---------------|---|---|
| <b>110001</b> | 1 | – |
|---------------|---|---|



## SHUT-OFF AND BALANCING DEVICES FOR GEOTHERMAL MANIFOLD 110 SERIES



**112**

tech. broch. 01235

Balancing valve with flow meter.  
Complete with fitting for polyethylene pipe.  
Direct reading of flow rate.  
Ball valve for flow rate setting.  
Graduated scale flow meter with magnetic movement flow rate indicator.  
Brass valve body and flow meter.  
Connection to manifold:  
female connections with captive nut 42 p.2,5 TR.  
Max. working pressure: 10 bar.  
Temperature range: -10–40 °C.  
Ambient temperature range: -20–60 °C.  
Medium: water, glycol solutions, saline solutions.  
Max. percentage of glycol: 50 %.  
Accuracy:  $\pm 10\%$ .

| Code          | Scale (m <sup>3</sup> /h) |         |     |
|---------------|---------------------------|---------|-----|
| <b>112621</b> | 42 p.2,5 TR x Ø 25        | 0,3–1,2 | 1 – |
| <b>112631</b> | 42 p.2,5 TR x Ø 32        | 0,3–1,2 | 1 – |
| <b>112641</b> | 42 p.2,5 TR x Ø 40        | 0,3–1,2 | 1 – |



**112**

tech. broch. 01235

Insulation for balancing valves.  
Material: closed cell expanded PE-X.  
Thickness: 10 mm.  
Density: inner part 30 kg/m<sup>3</sup>, outer part 80 kg/m<sup>3</sup>.  
Thermal conductivity (DIN 52612):  
at 0 °C: 0,038 W/(m·K); at 40 °C: 0,045 W/(m·K).  
Coefficient of resistance to water vapour (DIN 52615): > 1.300.  
Working temperature range: 0–100 °C.  
Reaction to fire (DIN 4102): class B2.

| Code          | Use         |   |   |
|---------------|-------------|---|---|
| <b>112001</b> | Ø 25 - Ø 32 | 1 | – |
| <b>112003</b> | Ø 40        | 1 | – |



**871**

Ball valve complete with fitting for polyethylene pipe.  
Brass body.  
Connection to manifold:  
female connection with captive nut 42 p.2,5 TR.  
Max. working pressure: 16 bar.  
Working temperature range: -10–40 °C.  
Ambient temperature range: -20–60 °C.  
Medium: water, glycol solutions, saline solutions.  
Max. percentage of glycol: 50 %.  
Fitted for 111 series insulation.

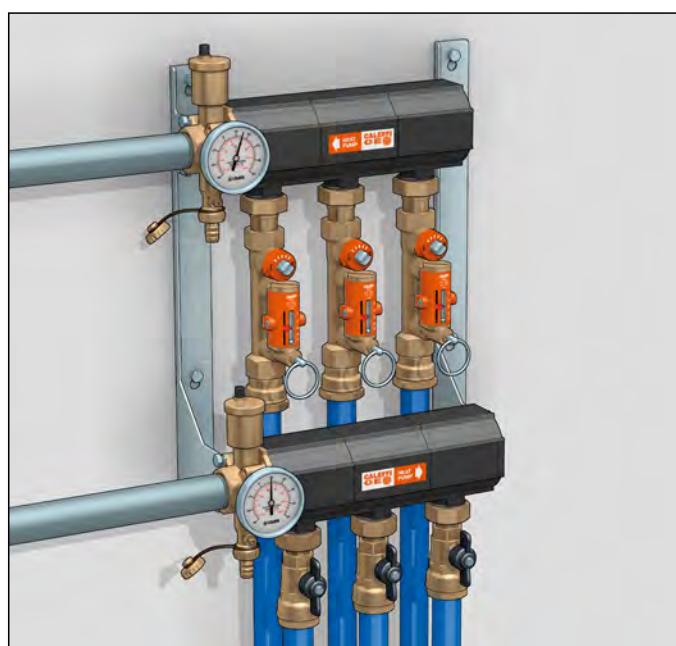
| Code          |                    |   |   |
|---------------|--------------------|---|---|
| <b>871025</b> | 42 p.2,5 TR x Ø 25 | 1 | – |
| <b>871032</b> | 42 p.2,5 TR x Ø 32 | 1 | – |
| <b>871040</b> | 42 p.2,5 TR x Ø 40 | 1 | – |



**110**

Union with gasket.  
Max. working pressure: 16 bar.  
Max. working temperature: 40 °C.

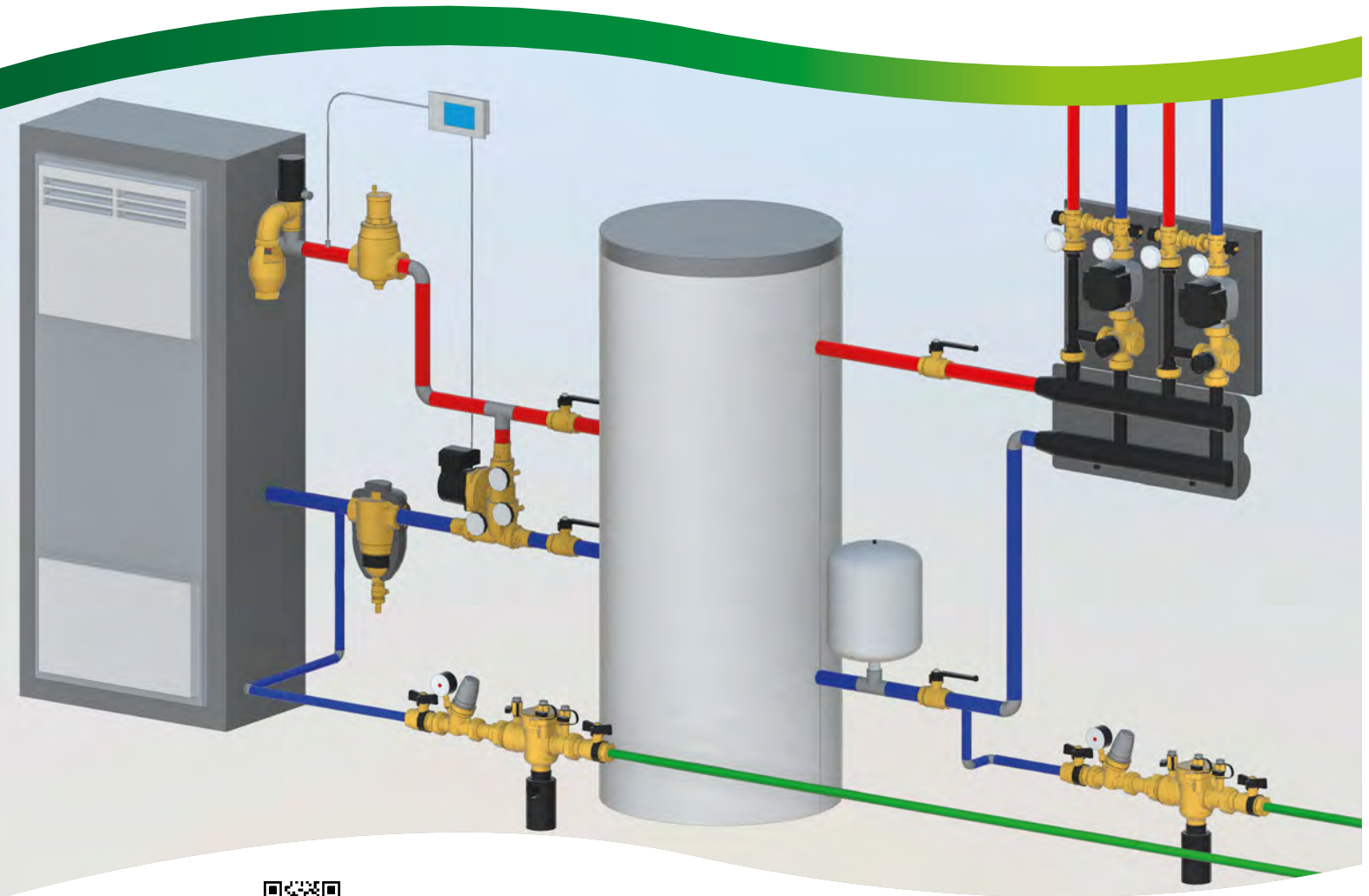
| Code          |                    |   |   |
|---------------|--------------------|---|---|
| <b>110050</b> | 42 p.2,5 TR x 3/4" | 1 | – |
| <b>110060</b> | 42 p.2,5 TR x 1"   | 1 | – |



The use of a flow meter greatly simplifies the process of system balancing, since the flow rate can be measured and controlled at any time and there is no need for differential pressure gauges or reference charts.



## COMPONENTS FOR BIOMASS SYSTEMS



**BIM**  
bim.caleffi.com

**CALEFFI**  
**BIO**  **MASS**

**Safety devices**

**Anti-condensation valve**

**Anti-condensation circulation unit**

**Anti-condensation recirculation and distribution unit**

**Connection and energy management unit (heating version)**

**Connection and energy management compact unit (heating version)**

**Digital regulator for systems with solid fuel generator**

## SAFETY DEVICES



### 542

tech. broch. 01001

Temperature relief valve, with fail-safe action. Manual reset for burner switch off or alarm activation. Working pressure:  $0,3 \text{ bar} \leq P \leq 10 \text{ bar}$ . Temperature range:  $5-100^\circ\text{C}$ . Settings temperature:  $98^\circ\text{C}$ ,  $99^\circ\text{C}$ . Certified and calibrated to INAIL. Discharge rating:  $1\frac{1}{2}'' \times 1\frac{1}{4}'' - 136 \text{ kW}$ .  $1\frac{1}{2}'' \times 1\frac{1}{2}'' - 419 \text{ kW}$ .



| Code   | Setting                   |   |    |
|--------|---------------------------|---|----|
| 542870 | 1 1/2" M x 1 1/4" F 98 °C | 1 | 10 |
| 542880 | 1 1/2" M x 1 1/2" F 99 °C | 1 | 10 |



### 543

tech. broch. 01057

Temperature safety relief valve, with double safety sensor, for solid fuel generators. Brass body. Chrome plated. Max. working pressure: 10 bar. Temperature range:  $5-110^\circ\text{C}$ . Setting temperature:  $98^\circ\text{C}$  ( $0/-4^\circ\text{C}$ ). Discharge flow rate with  $\Delta p$  of 1 bar and  $T=110^\circ\text{C}$ : 3000 l/h. Capillary length: 1300 mm. Certified to EN 14597.



| Code   | Setting                        |   |    |
|--------|--------------------------------|---|----|
| 543513 | 3/4" F 98 °C                   | 1 | 10 |
| 543503 | 3/4" F 98 °C yellow brass body | 1 | 10 |

#### Function

The temperature relief valve discharges the system water on reaching the setting temperature. Equipped with positive action. It can be used with non-pulverized solid fuel generators with open or closed vessel in accordance with current regulations.

#### INAIL - Ex ISPESL reference standards

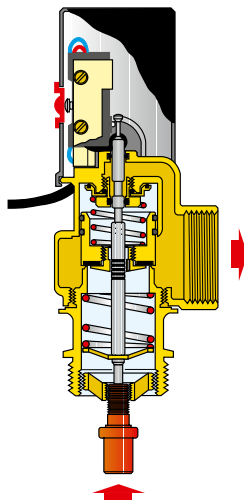
According to the provisions of Collection R Ed. 2009, concerning "central heating systems using hot water with temperatures no greater than  $110^\circ\text{C}$  and a maximum nominal heat output greater than 35 kW", the use of the temperature relief valve is contemplated in the following cases:

#### Open vessel systems

- Systems with generators stoked with non-pulverized solid fuel, in place of the consumption water heater or emergency exchanger (chap. R.3.C., point 2.1, letter i2).

#### Closed vessel systems

- Thermal systems with generators stoked with non-pulverized solid fuels up to a nominal heat output of 100 kW with partial cut-off in place of the residual power dissipation device (chap. R.3.C., point 3.2).



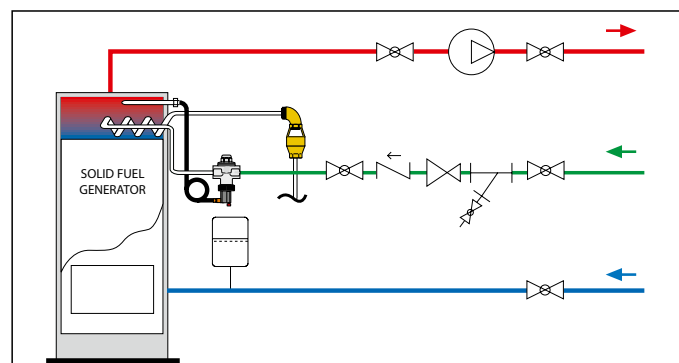
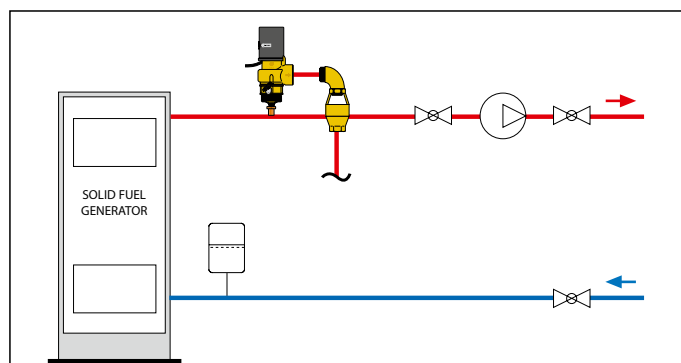
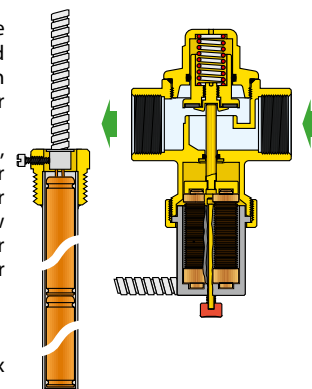
#### Function

The temperature safety relief valve limits the water temperature in solid fuel generators equipped with a built-in storage or emergency exchanger (for immediate cooling).

On reaching the setting temperature, the valve opens the flow of mains water through the emergency exchanger or built-in storage unit, so as to draw off the excess heat and thereby lower the temperature of the system water contained in the boiler jacket.

#### Reference standards

Its use is contemplated in the INAIL - Ex ISPESL standards, Collection R - ed. 2009, chapter R.3.C., point 2.1, letter i2; point 3.1, letter i; point 3.3. The valve complies with EN 14597, it can be combined with solid fuel generators with a heat output of less than 100 kW, used according to the system provisions of the standards EN 12828, UNI 10412-2 and EN 303-5.





## SAFETY DEVICES

**544**

tech. broch. 01058



Temperature relief valve, with positive action with automatic filling. For solid fuel generators. Max working pressure: 6 bar. Max. working temperature: 110 °C. Temperature range: 5–110 °C. Ambient temperature range: 1–50° C. Setting temperature: 100 °C (0/-5 °C). Discharge flow rate with  $\Delta p$  of 1 bar and  $T=110$  °C: 1600 l/h. Capillary length: 1300 mm.

| Code   | Setting |        |      |
|--------|---------|--------|------|
| 544400 | 1/2"    | 100 °C | 1 10 |

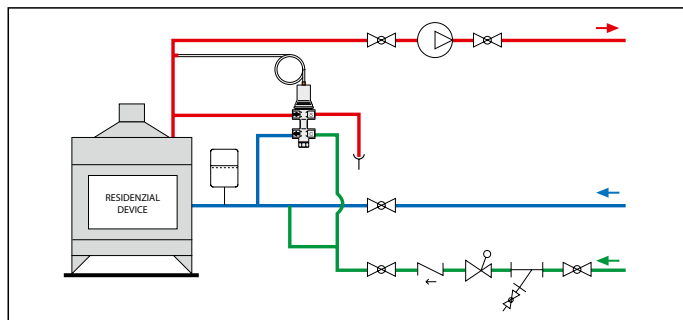
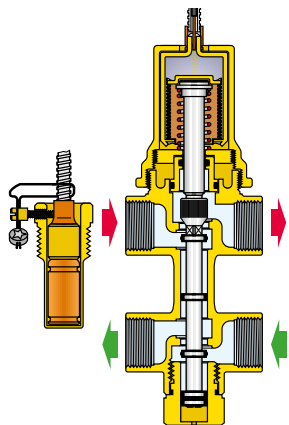
### Function

On reaching the setting temperature, the temperature relief valve discharges the water of the system with a solid fuel generator.

The device integrates in a single group a temperature relief valve with a positive safety remote sensor and a filling valve. The discharge of water enables limiting the system water temperature, while the filling inlet enables the replacement of the discharged flow rate.

### Reference standards

Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).



**544**

Temperature relief valve with automatic filling for solid fuel generators, with knob for manual discharge. Max. working pressure: 6 bar. Max. working temperature: 120 °C. Setting temperature: 100 °C (0/-5 °C). Discharge flow rate with  $\Delta p$  of 1 bar and  $T=110$  °C: 1800 l/h.



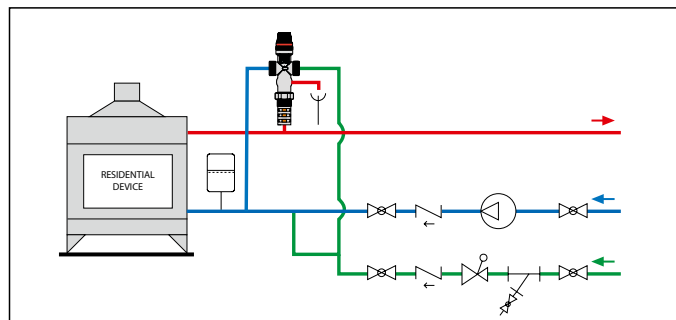
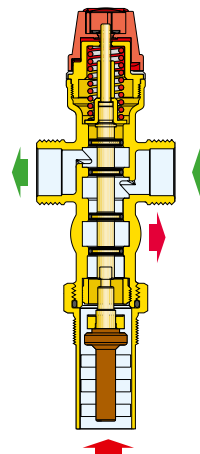
| Code   | Setting |        |     |
|--------|---------|--------|-----|
| 544501 | 3/4"    | 100 °C | 1 - |

### Function

The device integrates in a single group a temperature relief valve and a filling valve that operate simultaneously by means of a sensor integrated in the valve body. On reaching the setting value, the valve opens the discharge outlet to eliminate the excess heat and, at the same time, the filling inlet to replace the discharged flow rate of the system water.

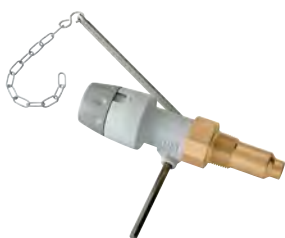
### Reference standards

Used when there is no emergency exchanger and for heat outputs < 35 kW (Italy).



**529**

tech. broch. 01226



Draught regulating valve. Male threaded connection. Adjustment temperature range: 30–90 °C. Certified to EN 14597.



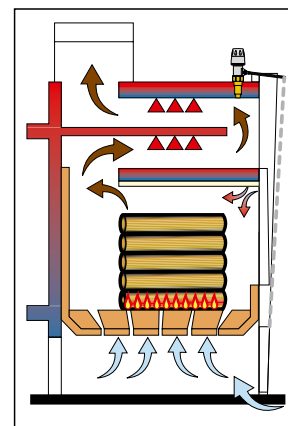
| Code   | Pocket length (mm) |    |      |
|--------|--------------------|----|------|
| 529050 | 3/4" M ISO 7/1     | 58 | 1 10 |
| 529151 | 3/4" M ISO 7/1     | 78 | 1 10 |

| Code    | Pocket length (mm) |    |      |
|---------|--------------------|----|------|
| 529150* | 3/4" M ISO 7/1     | 58 | 1 10 |

(\*) See page .14

### Function

The draught regulating valve, installed on the generator with the thermostatic element immersed in the medium, automatically adjusts the flow rate of the comburent air to provide a more regular and complete combustion.



## ANTI-CONDENSATION VALVE

280

tech. broch. 01223



Anti-condensation valve with thermostatic control of the return temperature to solid fuel generators. Brass body. Male union connections. Max. percentage of glycol: 50 %. Max. working pressure: 10 bar. Temperature range: 5–100 °C. Settings: 45 °C, 55 °C, 60 °C, 70 °C. Setting accuracy:  $\pm 2$  °C. By-pass complete closing temperature:  $T_{mix} = T_{set} + 10$  °C = Tr.



| Code   | DN | Connection | Kv (m³/h) | Max. recommended power |   |    |
|--------|----|------------|-----------|------------------------|---|----|
| 28005. | 20 | 3/4"       | 3,2       | 10 kW                  | 1 | 10 |
| 28026. | 20 | 1"         | 3,2       | 10 kW                  | 1 | 10 |
| 28006. | 25 | 1"         | 9         | 35 kW                  | 1 | 5  |
| 28007. | 32 | 1 1/4"     | 12        | 45 kW                  | 1 | 5  |

### Valve selection

The valve selection should be made according to the Kv value (corresponding to a specific DN body size) and not only according to the threaded connections. Given the system flow rate, the corresponding head losses on the valve should be calculated by using the Kv value. The sum of the head losses on the valve and the head losses of the rest of the system should be compatible with the available head of the generator pump.

### Code completion

| Setting | 45 °C | 55 °C | 60 °C | 70 °C |
|---------|-------|-------|-------|-------|
| •       | 4     | 5     | 6     | 7     |



Spare thermostats for anti-condensation valve.

| Code    | Setting | Use                  |   |   |
|---------|---------|----------------------|---|---|
| F29629  | 45 °C   | code 28005. / 28026. | 1 | – |
| F29630  | 55 °C   | code 28005. / 28026. | 1 | – |
| F29631  | 60 °C   | code 28005. / 28026. | 1 | – |
| F29632  | 70 °C   | code 28005. / 28026. | 1 | – |
| F29633* | 45 °C   | code 28006. / 28007. | 1 | – |
| F29634* | 55 °C   | code 28006. / 28007. | 1 | – |
| F29635* | 60 °C   | code 28006. / 28007. | 1 | – |
| F29636* | 70 °C   | code 28006. / 28007. | 1 | – |

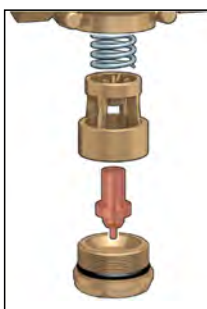
\* Also use for 281, 282, 2850, 2851, 2853, 2855 series

### Thermostat replacement to modify setting

The adjustment sensor can easily be removed for maintenance or to change the set, with no need to remove the valve body from the piping.

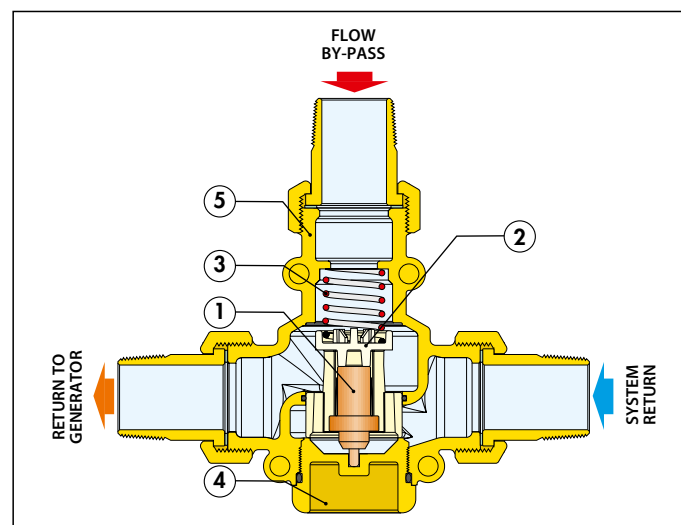
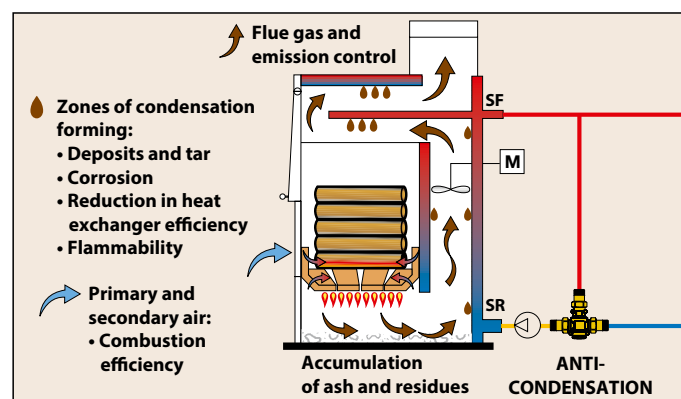
### Installation

The valve can be fitted on both sides of the generator in any position, vertical or horizontal. **Installation is recommended on the return to the generator in mixing mode;** it is also allowed on the flow from the generator in diverter mode according to the needs of system control.



### Function

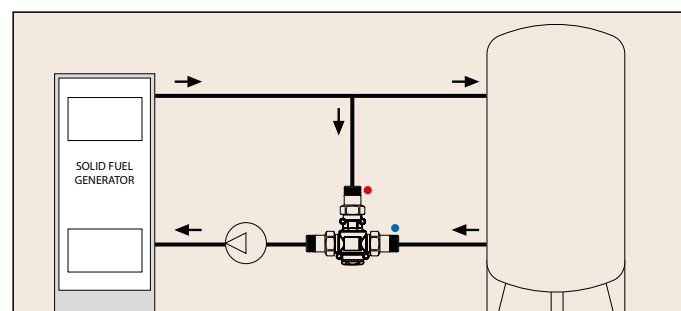
The anti-condensation valve, used in heating systems with a solid fuel generator, automatically regulates at the set value the temperature of the water returning to the generator. Keeping the boiler at a high temperature **prevents condensation of the water vapour contained in the flue gas.** Condensation produces tarry deposits that, accumulating on the metal surfaces of the flue gas-system water exchanger, cause corrosion, reduce the thermal efficiency of the flue gas-system water exchanger and are a source of danger for the flue gas chimney as they are flammable. The anti-condensation valve gives the generator a longer life and ensures greater efficiency.



### Characteristics components

- 1) Thermostatic sensor
- 2) Obturator
- 3) Spring
- 4) Plug
- 5) Valve body

### Installation in mixing mode (anti-condensation)



## ANTI-CONDENSATION RECIRCULATION AND DISTRIBUTION UNIT

281

tech. broch. 01224

Anti-condensation recirculation and distribution unit, with thermostatic control of the return temperature to solid fuel generators. Brass body.

**With insulation.**

Female union connections.

Medium: water, glycol solutions.

Max. percentage of glycol: 50 %.

Temperature range: 5–100 °C.

Max. working pressure: 10 bar.

Max. recommended flow rate: 2 m³/h.

Temperature gauge scale: 0–120 °C.

**Anti-condensation valve**

Temperature range: 5–100 °C.

Settings: 45 °C, 55 °C, 60 °C, 70 °C.

Setting accuracy: ± 2 °C.

By-pass complete closing temperature:  $T_{mix} = T_{set} + 10 °C = T_r$ .

**Pump**

High-efficiency pump: WILO PARA MS/7.



| Code      | DN | Connection                        |   |   |
|-----------|----|-----------------------------------|---|---|
| 28106.WYP | 25 | 1" F with pump WILO PARA MS/7     | 1 | – |
| 28107.WYP | 25 | 1 1/4" F with pump WILO PARA MS/7 | 1 | – |

**Unit sizing**

The unit should be selected according to the head available at the unit connections, depending on the DN, and not only according to the threaded connections. Given the system head losses, the available head of the unit pump should be evaluated.

| Code   |                                 |     |
|--------|---------------------------------|-----|
| F29806 | spare rotor for unit 281 series | 1 – |

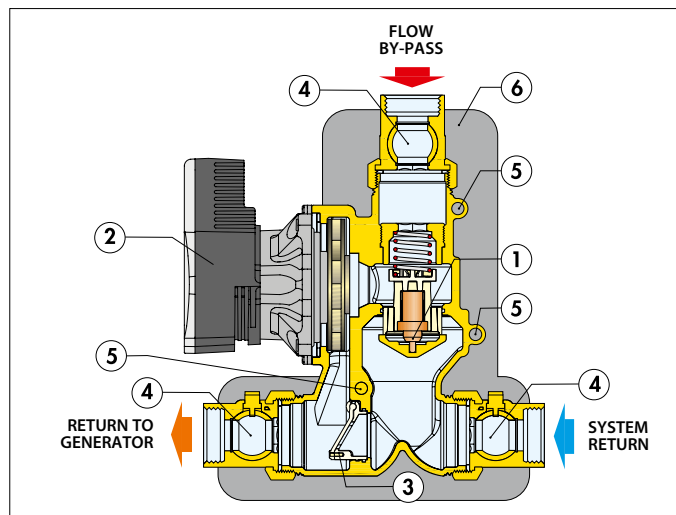
**• Code completion**

| Setting | 45 °C | 55 °C | 60 °C | 70 °C |
|---------|-------|-------|-------|-------|
| •       | 4     | 5     | 6     | 7     |

**For spare thermostats  
see page 334**

**Function**

The anti-condensation recirculation and distribution unit enables the connection of the solid fuel generator to the user system (direct or with inertial storage). It controls the return temperature to the generator to avoid condensation, by means of the built-in thermostatic device.



**Characteristics components**

- 1) Anti-condensation thermostatic device
- 2) High-efficiency pump
- 3) Natural circulation clapet valve
- 4) Union with built-in ball valve
- 5) Temperature gauge housing
- 6) Insulation

**Construction details**

**Single casting and reversibility**

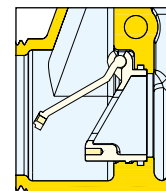
The compact brass single casting, that houses the pump and functional components, enables immediate installation of the device, either on the right or left of the solid fuel generator, respecting the flow directions as shown. The temperature gauges can be extracted from the housings and re-inserted in the same position on the back side of the unit.

**Anti-condensation valve**

This device incorporates a thermostatic sensor to control the temperature of the water returning to the solid fuel generator so as to prevent condensation. The sensor has been specifically realised to be removed from the valve body for maintenance or replacement if necessary.

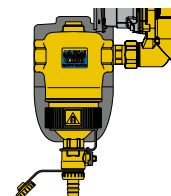
**Natural circulation clapet valve**

The function of this clapet device is to ensure natural circulation of the medium in the event of pump stop due to an electric supply failure. When the pump is active, the thrust of medium keeps the valve closed, forcing the water to flow through the anti-condensation thermostatic valve. If the event of pump stop, when the water within the generator is at high temperature, a natural circulation of the water begins, by-passing the anti-condensation valve, thus preventing the temperature in the generator from reaching dangerous high levels. The unit is provided with natural circulation valve locked. To activate its function, remove the locking screw.



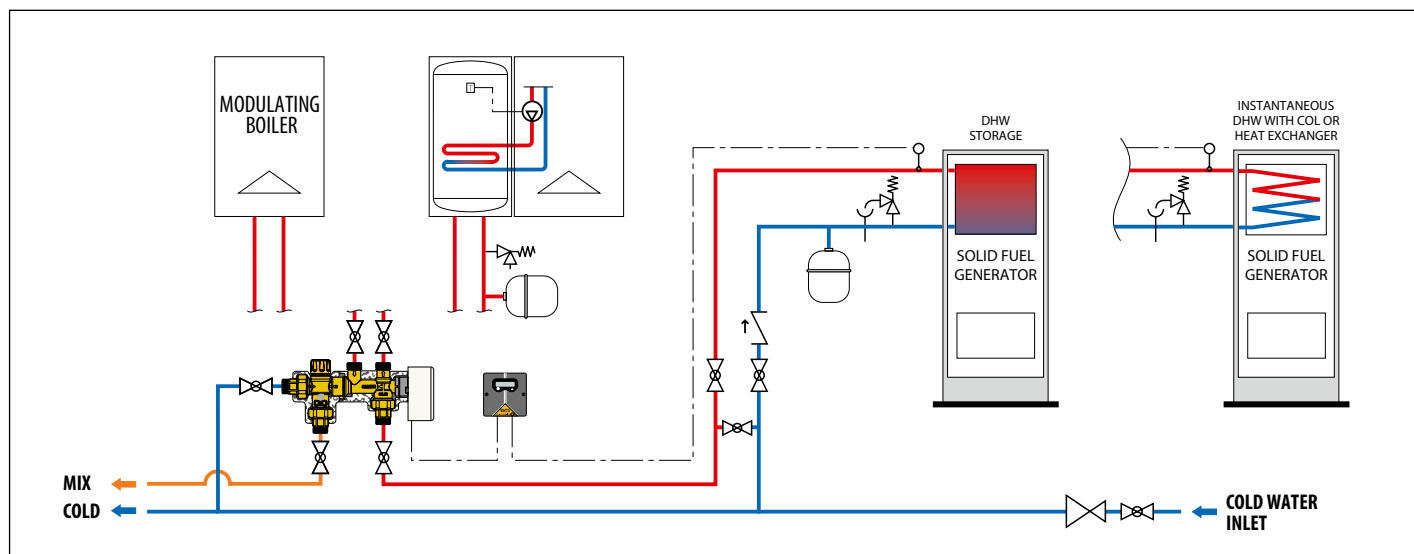
**Dirt separator**

In order to carry out continuous dirt separation in the system it is available the 5463 series DIRTMAG® dirt separator as accessory.

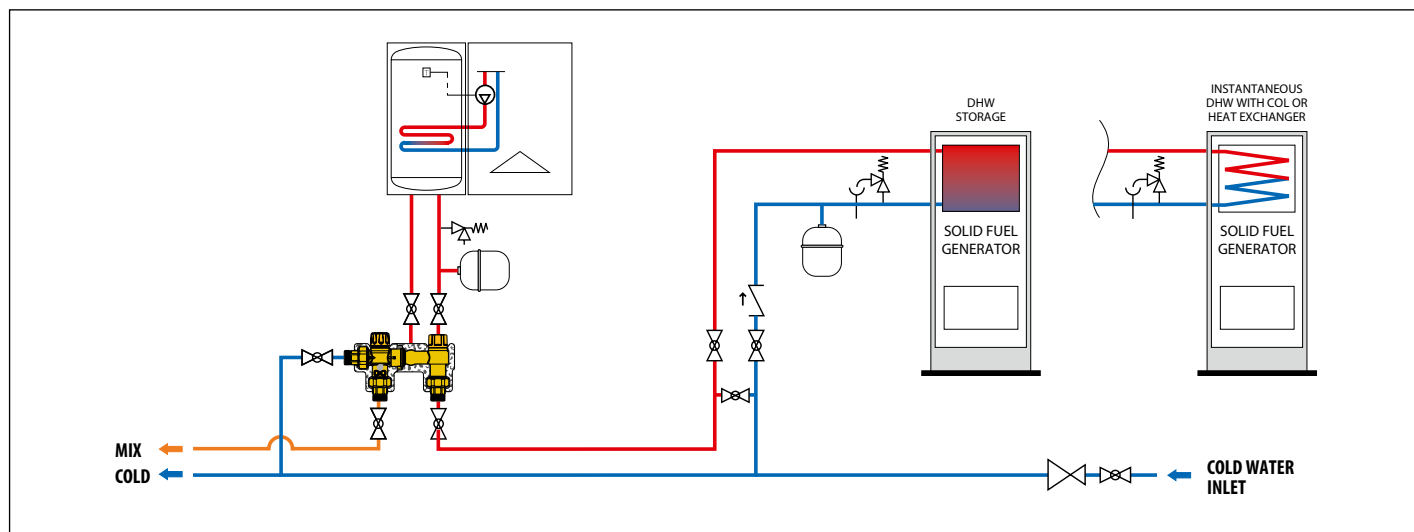


## SOLID FUEL GENERATOR-TO-GAS BOILER CONNECTION KIT

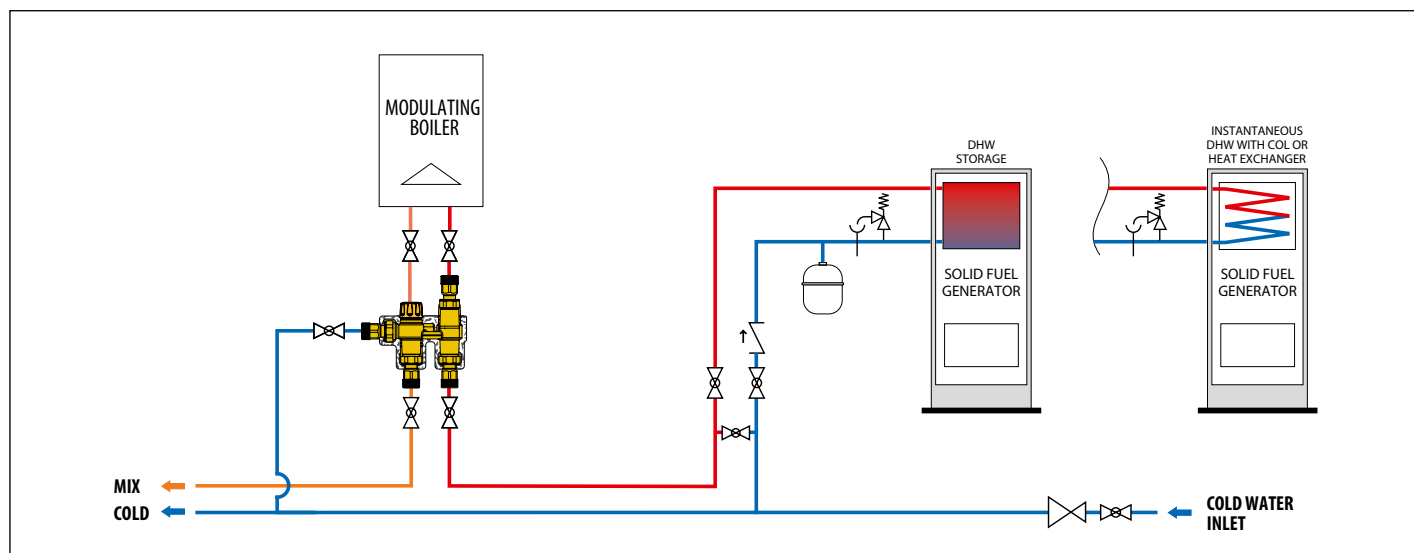
Application diagram of kit SOLARINCAL 265 series with solid fuel generator



Application diagram of kit SOLARINCAL-T 262 series with solid fuel generator



Application diagram of kit SOLARINCAL-T PLUS 263 series with solid fuel generator



## SPARE PARTS

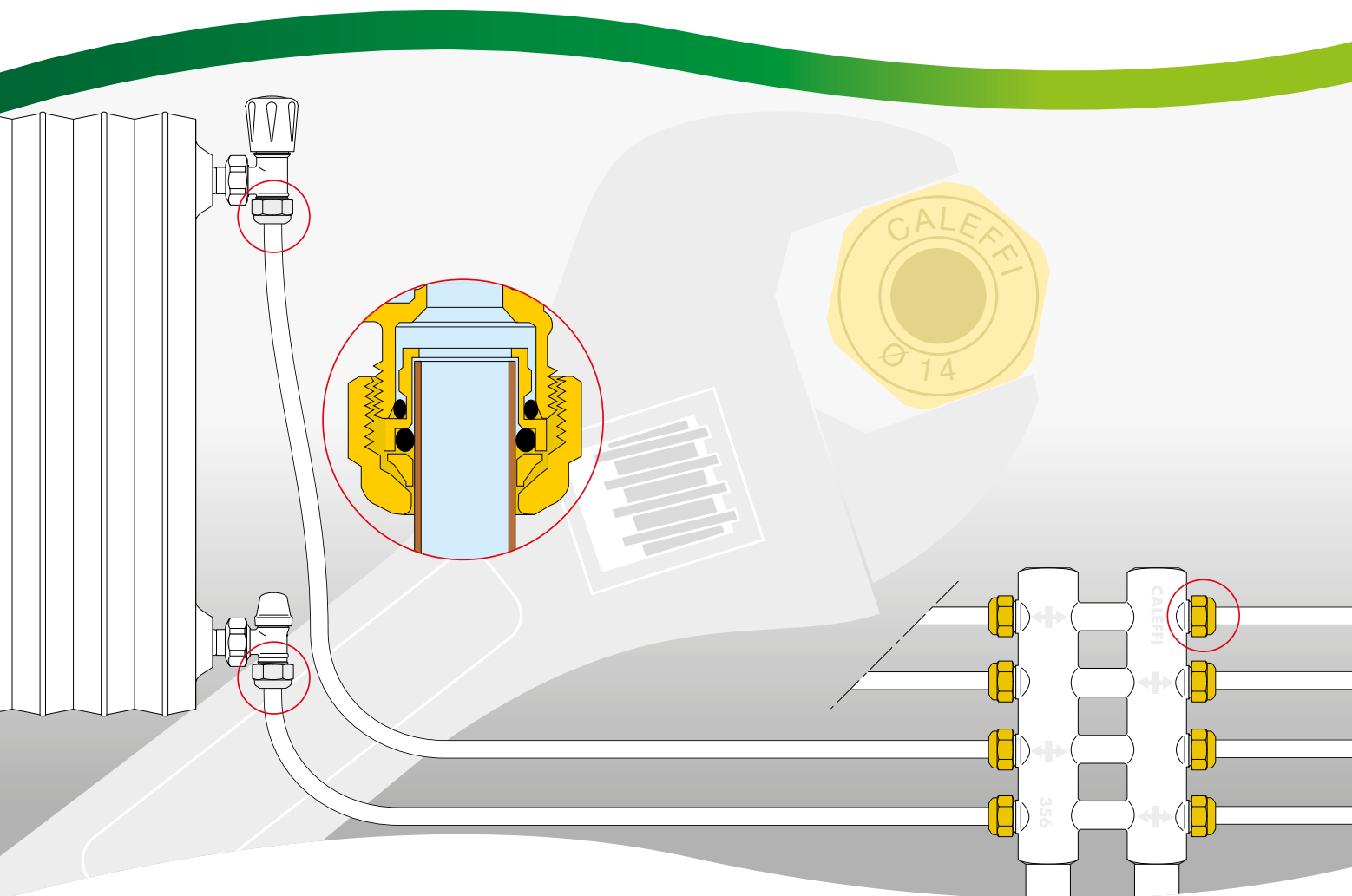
FOR SPARE PARTS, PLEASE CONTACT THE APPROPRIATE DEPARTMENT







FITTING COUPLING  
PRODUCT DIMENSIONS are available on [www.caleffi.com](http://www.caleffi.com)



## CHROME PLATED BRASS FITTINGS

### 23 p.1,5 pipes connection



#### 6790 DARCAL

Fitting for multilayer plastic pipe with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

|         |                                  |
|---------|----------------------------------|
| 679014  | 23 p.1,5 - Ø 14x2                |
| 679024  | 23 p.1,5 - Ø 16x2                |
| 679025  | 23 p.1,5 - Ø 16x2,25             |
| 679044  | 23 p.1,5 - Ø 18x2                |
| 679064* | 23 p.1,5 - Ø 20x2                |
| 679065* | 23 p.1,5 - Ø 20x2,25             |
| 679066* | 23 p.1,5 - Ø 20x2,5              |
| 679067* | 23 p.1,5 - Ø 20x2,9 (REHAU pipe) |

\* With metal ring



#### 6810 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

|        |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 681000 | 23 p.1,5 | 7,5- 8              | 12-14                |
| 681002 | 23 p.1,5 | 9 - 9,5             | 14-16                |
| 681001 | 23 p.1,5 | 9,5-10              | 12-14                |
| 681006 | 23 p.1,5 | 9,5-10              | 14-16                |
| 681015 | 23 p.1,5 | 10,5-11             | 14-16                |
| 681017 | 23 p.1,5 | 10,5-11             | 16-18                |
| 681024 | 23 p.1,5 | 11,5-12             | 14-16                |
| 681026 | 23 p.1,5 | 11,5-12             | 16-18                |
| 681035 | 23 p.1,5 | 12,5-13             | 16-18                |
| 681044 | 23 p.1,5 | 13,5-14             | 16-18                |



#### 6810 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes. High chrome finish.

Code

|        |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 681101 | 23 p.1,5 | 9,5-10              | 12-14,4              |
| 681124 | 23 p.1,5 | 11,5-12             | 14-16,4              |



#### 4470

Pre-assembled compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

|        |                 |
|--------|-----------------|
| 447010 | 23 p.1,5 - Ø 10 |
| 447012 | 23 p.1,5 - Ø 12 |
| 447014 | 23 p.1,5 - Ø 14 |
| 447015 | 23 p.1,5 - Ø 15 |
| 447016 | 23 p.1,5 - Ø 16 |



#### 4370

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

|        |                 |
|--------|-----------------|
| 437010 | 23 p.1,5 - Ø 10 |
| 437012 | 23 p.1,5 - Ø 12 |
| 437014 | 23 p.1,5 - Ø 14 |
| 437015 | 23 p.1,5 - Ø 15 |
| 437016 | 23 p.1,5 - Ø 16 |



#### 4371

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal. High chrome finish.

Code

|        |                 |
|--------|-----------------|
| 437112 | 23 p.1,5 - Ø 12 |
| 437114 | 23 p.1,5 - Ø 14 |
| 437115 | 23 p.1,5 - Ø 15 |
| 437116 | 23 p.1,5 - Ø 16 |



#### 4380

Compression fitting, for copper pipes. With PTFE seal.

Code

|        |                                  |
|--------|----------------------------------|
| 438010 | 23 p.1,5 - Ø 10                  |
| 438012 | 23 p.1,5 - Ø 12                  |
| 438014 | 23 p.1,5 - Ø 14                  |
| 438015 | 23 p.1,5 - Ø 15                  |
| 438016 | 23 p.1,5 - Ø 16                  |
| 438018 | 23 p.1,5 - Ø 18 with metal olive |



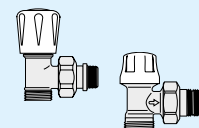
#### 4390

Fitting for copper pipe, with gasket. Chrome plated. Do not use with valves 232 series.

Code

|        |                 |
|--------|-----------------|
| 439010 | 23 p.1,5 - Ø 10 |
| 439012 | 23 p.1,5 - Ø 12 |
| 439014 | 23 p.1,5 - Ø 14 |
| 439016 | 23 p.1,5 - Ø 16 |

### 23 p.1,5 M - Ø 18



Series: 338

339

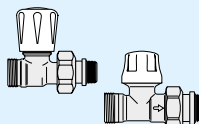
425

426

222 232

223 233

227 237

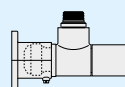


Series: 4001

4003

4004

4005

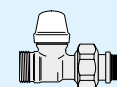
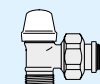


Series: 340

341

342

343



Series: 456

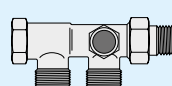
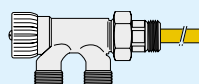
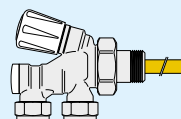
455

4501

348

452

328



Series: 382



382

## CHROME PLATED BRASS FITTINGS

### 3/4" pipes connection



#### 6792 DARGAL

Fitting for multilayer plastic pipe with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

|        |                  |
|--------|------------------|
| 679264 | 3/4" - Ø 20x2    |
| 679265 | 3/4" - Ø 20x2,25 |
| 679266 | 3/4" - Ø 20x2,5  |



#### 4375

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel. With O-Ring seal.

Code

|        |             |
|--------|-------------|
| 437510 | 3/4" - Ø 10 |
| 437512 | 3/4" - Ø 12 |
| 437514 | 3/4" - Ø 14 |
| 437515 | 3/4" - Ø 15 |
| 437516 | 3/4" - Ø 16 |
| 437518 | 3/4" - Ø 18 |



#### 6815 DAR

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

|        |      | Øinside  | Øoutside |
|--------|------|----------|----------|
| 681502 | 3/4" | 7,5- 8   | 12-14    |
| 681500 | 3/4" | 9 - 9,5  | 14-16    |
| 681501 | 3/4" | 9,5-10   | 12-14    |
| 681506 | 3/4" | 9,5-10   | 14-16    |
| 681515 | 3/4" | 10,5-11  | 14-16    |
| 681517 | 3/4" | 10,5-11  | 16-18    |
| 681524 | 3/4" | 11,5-12  | 14-16    |
| 681526 | 3/4" | 11,5-12  | 16-18    |
| 681535 | 3/4" | 12,5-13  | 16-18    |
| 681537 | 3/4" | 12,5-13  | 18-20    |
| 681546 | 3/4" | 13,5-14  | 18-20    |
| 681555 | 3/4" | 14,5-15  | 18-20    |
| 681556 | 3/4" | 15 -15,5 | 18-20    |
| 681564 | 3/4" | 15,5-16  | 18-20    |



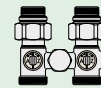
#### 4385

Compression fitting, for copper pipes. With PTFE seal.

Code

|        |             |
|--------|-------------|
| 438512 | 3/4" - Ø 12 |
| 438514 | 3/4" - Ø 14 |
| 438515 | 3/4" - Ø 15 |
| 438516 | 3/4" - Ø 16 |
| 438518 | 3/4" - Ø 18 |

### 3/4" M - Ø 18



Series: 3010

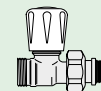
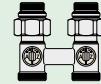
3011

3012

3013

3014

3015



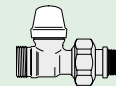
Codes: 338452

339452

340452

342452

343452



## BRASS FITTINGS

### 23 p.1,5 pipes connection



#### 6791 DARCAL

Fitting for multilayer plastic pipes with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

|        |                      |
|--------|----------------------|
| 679114 | 23 p.1,5 - Ø 14x2    |
| 679124 | 23 p.1,5 - Ø 16x2    |
| 679125 | 23 p.1,5 - Ø 16x2,25 |
| 679144 | 23 p.1,5 - Ø 18x2    |



#### 4460

Pre-assembled compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal.

Code

|        |                 |
|--------|-----------------|
| 446010 | 23 p.1,5 - Ø 10 |
| 446012 | 23 p.1,5 - Ø 12 |
| 446014 | 23 p.1,5 - Ø 14 |
| 446015 | 23 p.1,5 - Ø 15 |
| 446016 | 23 p.1,5 - Ø 16 |



#### 6800 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

|        |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 680000 | 23 p.1,5 | 7,5- 8              | 12-14                |
| 680002 | 23 p.1,5 | 9 - 9,5             | 14-16                |
| 680001 | 23 p.1,5 | 9,5-10              | 12-14                |
| 680006 | 23 p.1,5 | 9,5-10              | 14-16                |
| 680015 | 23 p.1,5 | 10,5-11             | 14-16                |
| 680017 | 23 p.1,5 | 10,5-11             | 16-18                |
| 680024 | 23 p.1,5 | 11,5-12             | 14-16                |
| 680026 | 23 p.1,5 | 11,5-12             | 16-18                |
| 680035 | 23 p.1,5 | 12,5-13             | 16-18                |
| 680044 | 23 p.1,5 | 13,5-14             | 16-18                |



#### 3470

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal.

Code

|        |                 |
|--------|-----------------|
| 347010 | 23 p.1,5 - Ø 10 |
| 347012 | 23 p.1,5 - Ø 12 |
| 347014 | 23 p.1,5 - Ø 14 |
| 347015 | 23 p.1,5 - Ø 15 |
| 347016 | 23 p.1,5 - Ø 16 |

#### 6800 DARCAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.



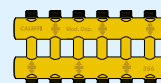
Code

|        |          | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----------|---------------------|----------------------|
| 680055 | 23 p.1,5 | 14,5-15             | 18-20                |
| 680064 | 23 p.1,5 | 15,5-16             | 18-20                |

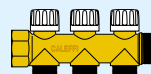
### 23 p.1,5 M - Ø 18



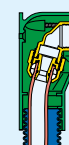
Series: 350  
351  
349



Series: 356  
357  
385  
161



Series: 354



Series: 933 940  
941 942  
943 944  
945 946  
947 948





## BRASS FITTINGS

### 3/4" pipes connection



#### 6795 DARGAL

Fitting for multilayer plastic pipes with continuous high temperature use.

For a correct use, adjust the multilayer pipe diameter before installation using the Caleffi calibrator 679 series.

Code

|        |      |             |
|--------|------|-------------|
| 679514 | 3/4" | Ø 14 x 2    |
| 679524 | 3/4" | Ø 16 x 2    |
| 679525 | 3/4" | Ø 16 x 2,25 |
| 679544 | 3/4" | Ø 18 x 2    |
| 679564 | 3/4" | Ø 20 x 2    |
| 679565 | 3/4" | Ø 20 x 2,25 |
| 679566 | 3/4" | Ø 20 x 2,5  |



#### 6805 DARGAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

|        |      | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|------|---------------------|----------------------|
| 680507 | 3/4" | 7,5- 8              | 10,5-12              |
| 680502 | 3/4" | 7,5- 8              | 12 -14               |
| 680503 | 3/4" | 8,5- 9              | 12 -14               |
| 680500 | 3/4" | 9 - 9,5             | 14 -16               |
| 680501 | 3/4" | 9,5-10              | 12 -14               |
| 680506 | 3/4" | 9,5-10              | 14 -16               |
| 680515 | 3/4" | 10,5-11             | 14 -16               |
| 680517 | 3/4" | 10,5-11             | 16 -18               |
| 680524 | 3/4" | 11,5-12             | 14 -16               |
| 680526 | 3/4" | 11,5-12             | 16 -18               |
| 680535 | 3/4" | 12,5-13             | 16 -18               |
| 680537 | 3/4" | 12,5-13             | 18 -20               |
| 680544 | 3/4" | 13,5-14             | 16 -18               |
| 680546 | 3/4" | 13,5-14             | 18 -20               |
| 680555 | 3/4" | 14,5-15             | 18 -20               |
| 680556 | 3/4" | 15 -15,5            | 18 -20               |
| 680564 | 3/4" | 15,5-16             | 18 -20               |
| 680505 | 3/4" | 17                  | 22,5                 |



#### 6802 DARGAL

Compression ends fitting for multilayer pipes with fitting M-F.

Code

|        |                   |
|--------|-------------------|
| 680285 | 3/4" F - Ø 25x2,5 |
| 680296 | 3/4" F - Ø 26x3   |



#### 3475

Compression fitting, for annealed copper, hard copper, brass, mild and stainless steel pipes. With O-Ring seal.

Code

|        |             |
|--------|-------------|
| 347510 | 3/4" - Ø 10 |
| 347512 | 3/4" - Ø 12 |
| 347514 | 3/4" - Ø 14 |
| 347515 | 3/4" - Ø 15 |
| 347516 | 3/4" - Ø 16 |
| 347518 | 3/4" - Ø 18 |



#### 3475..S1

Compression fitting for annealed copper, hard copper, brass, mild steel and stainless steel pipes. With O-Ring seal. Specific to be used with manifolds 668...S1 series.

Code

|          |             |
|----------|-------------|
| 347512S1 | 3/4" - Ø 12 |
| 347514S1 | 3/4" - Ø 14 |

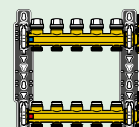
### 3/4" M - Ø 18



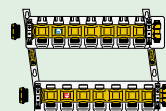
Series: 592



Series: 650



Series: 662



6620

6621

663

6630

6631

666...S1\*

667...S1\*

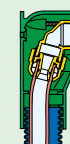
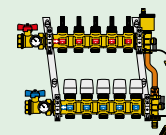
668...S1\*

664

665

669

657



Series: 933

940

941

942

943

945

946



\* Do not use with copper pipe fittings 347 and 5812 series

### 1" pipes connection



#### 6806 DARGAL

Self-adjustable diameter fitting for single and multilayer plastic pipes.

Code

|        |    | Ø <sub>inside</sub> | Ø <sub>outside</sub> |
|--------|----|---------------------|----------------------|
| 680687 | 1" | 17,5                | 25                   |
| 680605 | 1" | 19,5                | 25                   |

### 1" M - Ø 25



Series: 941

942

*We reserve the right to change our products and their relevant technical data, contained in this publication, at any time and without prior notice.*

The products in this catalogue have been designed, manufactured and factored by Caleffi in accordance with the requirements of EN ISO 9001 standard.

Factored products, listed by series in the index, are clearly identified by the "light blue dot ●".



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