The CALEFFI SOLAR® product range has been specially 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 PRIMARY CIRCUIT

We reserve the right to make changes and improvements to the products and related data in this publication, at any time and without prior notice. All the diagrams, numerical data, etc., are not binding.
SAFETY RELIEF VALVE - AIR VENTS

253  
Safety relief valve for solar thermal systems.  
Brass body. Chrome plated.  
Female connections.  
Temperature range: -30–180°C.  
Max. percentage of glycol: 50%.  
Oversized discharge outlet.  
Discharge rating: 1/2" - 50 kW  
3/4" - 100 kW  
TÜV TRD 721 certified to SV 100 § 7.7  
Settings: 2,5 - 3 - 4 - 6 - 8 - 10 bar.

Code  
253042  1/2" F x 3/4" F  2,5 bar  
253043  1/2" F x 3/4" F  3 bar  
253044  1/2" F x 3/4" F  4 bar  
253046  1/2" F x 3/4" F  6 bar  
253048  1/2" F x 3/4" F  8 bar  
253040  1/2" F x 3/4" F  10 bar  
253052  3/4" F x 1" F  2,5 bar  
253053  3/4" F x 1" F  3 bar  
253054  3/4" F x 1" F  4 bar  
253056  3/4" F x 1" F  6 bar  
253058  3/4" F x 1" F  8 bar  
253050  3/4" F x 1" F  10 bar

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  
250031  3/8" M  without cock  
250035  1/2" M  without cock

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  
250300  3/8" M x 3/8" F - butterfly handle  
250400  1/2" M x 1/2" F - lever handle

The automatic air vent must be shut off after the system has been filled.
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

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
251006 1" F
251007 1 1/4" F

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
251005 3/4" F
251006 1" F

Manual air separator for solar thermal systems.
Brass body.
Female connections.
Max. working pressure: 10 bar.
Temperature range: -30–160°C.
Max. percentage of glycol: 50%.

Code
251093 3/4" F
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.

Fitted for fitting with digital regulator DeltaSol® C+.

<table>
<thead>
<tr>
<th>Code</th>
<th>Flow meter scale (l/min)</th>
<th>Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>278050</td>
<td>3/4&quot; F</td>
<td>UPS 15-65</td>
</tr>
<tr>
<td>278052</td>
<td>3/4&quot; F</td>
<td>UPS 15-80</td>
</tr>
</tbody>
</table>

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 fitting with digital regulator DeltaSol® C+.

<table>
<thead>
<tr>
<th>Code</th>
<th>Flow meter scale (l/min)</th>
<th>Pump</th>
</tr>
</thead>
<tbody>
<tr>
<td>278750</td>
<td>3/4&quot; F</td>
<td>UPS 15-65</td>
</tr>
<tr>
<td>278752</td>
<td>3/4&quot; F</td>
<td>UPS 15-80</td>
</tr>
</tbody>
</table>
**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 fitting with digital regulator DeltaSol® C+.

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**278**

Digital regulator DeltaSol® C+.
- Electric supply: 230 V (ac).
- Complete with pre-formed shell insulation for coupling with pump stations 278 and 279 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: 2 semiconductor relays.

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**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:
- Grundfos Solar 25-120 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.
**Ball Valve - Three-Piece Union Fitting**

**259 tech. broch. 01246**

Welded expansion vessel only for primary circuit of solar thermal systems, EC certification.
- Bladder membrane.
- Max. working pressure: 10 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Litres</th>
<th>Conn</th>
<th>Precharge (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>259008</td>
<td>8</td>
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<td>2,5</td>
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<tr>
<td>259012</td>
<td>12</td>
<td>3/4&quot;</td>
<td>2,5</td>
</tr>
<tr>
<td>259018</td>
<td>18</td>
<td>3/4&quot;</td>
<td>2,5</td>
</tr>
<tr>
<td>259025</td>
<td>25</td>
<td>3/4&quot;</td>
<td>2,5</td>
</tr>
<tr>
<td>259033</td>
<td>33</td>
<td>3/4&quot;</td>
<td>2,5</td>
</tr>
</tbody>
</table>

**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%.

**255 System filling pump for pump stations 279, 278 and 255 series.**

**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%.

**588 tech. broch. 01136**

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**

<table>
<thead>
<tr>
<th>Code</th>
<th>Litres Conn</th>
<th>Precharge (bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>255007</td>
<td>3/4&quot;</td>
<td></td>
</tr>
<tr>
<td>259050</td>
<td>50</td>
<td>3/4&quot; 2,5</td>
</tr>
<tr>
<td>259060</td>
<td>80</td>
<td>1&quot;   2,5</td>
</tr>
</tbody>
</table>
MECHANICAL FITTINGS WITH O-RING SEAL

2540

Code
254055  3/4” F - Ø 15
254058  3/4” F - Ø 18
254052  3/4” F - Ø 22
254062  1” F - Ø 22
254068  1” F - Ø 28

2543

Code
254305  Ø 15
254308  Ø 18
254302  Ø 22

2544

Code
254455  3/4” M - Ø 15
254458  3/4” M - Ø 18
254452  3/4” M - Ø 22
254465  1” M - Ø 15
254462  1” M - Ø 22

2545

Code
254505  Ø 15
254508  Ø 18
254502  Ø 22

2546

Code
254602  Ø 22

2547

Code
254755  3/4” M - Ø 15
254758  3/4” M - Ø 18
254752  3/4” M - Ø 22

2548

Code
254855  3/4” F - Ø 15
254858  3/4” F - Ø 18
254852  3/4” F - Ø 22

2549
Plug for Ø 22 copper pipe.

Code
254902  Ø 22
SOLCAL® 1

Characteristic components
1) LED 1: function error or probe fault (red)
2) LED 2: Solar circuit pump ON
3) LED 3: second relays output active
4) LED 4: OFF regulator non active
5) LED 5: ON regulator active
6) LED 6: active relays test
7) Storage temperature control setting at level 1, at level 2 depending on programme (see system)
8) ΔT min. and max. control
9) Min. temperature control for solar panel activation and min. working time
10) Operation button

Regulation programs
The regulator allows to manage 11 regulation programs, depending on the possible system configurations. They can be used for systems with single or double storage, swimming-pools, heating or domestic water systems, etc..

Application diagram of regulator 257 series

Pocket for Pt1000 probe. In: stainless steel. Length: 100 mm.
Differential temperature regulator for solar thermal systems, with relays output.
Box protection class: IP 65.
Electric supply: 230 V ±6% - 50 Hz.
Nominal power consumption: 1.45 VA.
Contact rating on switch-over: 6 A (230 V).
ΔT adjustment range: 2–20 K.
Hysteresis: 2 K (±1 K).

Box complete with DIN bar, for regulator or thermostat 257 series.
Protection class: IP 65.

Contact probe for regulator or thermostat 257 series and for regulator 1520 series (flow or return). Cable length: 2 m.

Immersion probe for regulator or thermostat 257 series and for regulator 1520 series. Cable length: 2 m.

Pocket for immersion probe code 150006.
**HEAT METER**

75525 CONTECA

Direct heat metering with local LCD reading or centralised reading with controller code 755010 or interface code 755055, for solar thermal systems.

Max. working pressure: 10 bar.
Temperature range: 5–120°C.
Max. percentage of glycol: 50%.

The CONTECA module is supplied complete with:
- Pair of temperature probes with immersion pockets.
- Y pockets for immersion probes.
- Water meter, with pulse output (max. temperature 120°C).
- Electronic integrator with LCD.
- Supply 24 V (ac) 50 Hz - 1 W
- Set for transmission in RS485 Bus mode.
Conformity to EN 1434-1.

**Application diagram of heat metering 75525 series and balancing valve 258 series**

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**BALANCING VALVE WITH FLOW METER**

258

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%

**Flow rate range (l/min)**

<table>
<thead>
<tr>
<th>Code</th>
<th>Conn.</th>
<th>Flow rate range (l/min)</th>
</tr>
</thead>
<tbody>
<tr>
<td>258503</td>
<td>3/4&quot;</td>
<td>2–7</td>
</tr>
<tr>
<td>258533</td>
<td>3/4&quot;</td>
<td>3–10</td>
</tr>
<tr>
<td>258523</td>
<td>3/4&quot;</td>
<td>7–28</td>
</tr>
<tr>
<td>258603</td>
<td>1&quot;</td>
<td>10–40</td>
</tr>
</tbody>
</table>

The CONTECA module is supplied complete with:
- Pair of temperature probes with immersion pockets.
- Y pockets for immersion probes.
- Water meter, with pulse output (max. temperature 120°C).
- Electronic integrator with LCD.
- Supply 24 V (ac) 50 Hz - 1 W
- Set for transmission in RS485 Bus mode.

Conformity to EN 1434-1.
COMPONENTS FOR SECONDARY CIRCUIT

 Normally closed valve

 Diverter valve on secondary circuit
SAFETY DEVICES FOR SECONDARY CIRCUIT
Prescribed by Collection “R” 2009 ISPESL

527 SOL
Safety relief valve
certified and calibrated to INAIL.
Certified for domestic water use.
Female connections.
Discharge overpressure 10%.
Closing differential 20%.
PN 10.
Temperature range: 5–110°C.
Settings: 4 - 5 - 6 - 7 - 8 bar.

Code
527440 SOL 1/2” x 3/4” 4 bar
527450 SOL 1/2” x 3/4” 5 bar
527460 SOL 1/2” x 3/4” 6 bar
527470 SOL 1/2” x 3/4” 7 bar
527480 SOL 1/2” x 3/4” 8 bar

542 SOL
Temperature relief valve,
with fail-safe action.
Certified and calibrated to INAIL.
Certified for domestic water use.
Max. working pressure: 10 bar.
Max. working temperature: 100°C.
Setting temperature: 85°C.
Discharge rating: 108 kW.

Application diagram of 527 SOL and 542 SOL valves
**TEMPERATURE AND PRESSURE RELIEF VALVE**

309  
Temperature and pressure relief valve.  
For solar thermal systems, to protect the hot water storage.  
 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.

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Setting (°C)</th>
<th>Discharge (kW)</th>
<th>Settings</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>309461</td>
<td>1/2&quot; M x Ø 15</td>
<td>6</td>
<td>10</td>
<td>6 - 7 - 10</td>
<td>EN 1490</td>
</tr>
<tr>
<td>309471</td>
<td>1/2&quot; M x Ø 15</td>
<td>7</td>
<td>10</td>
<td>6 - 7 - 10</td>
<td>EN 1490</td>
</tr>
<tr>
<td>309401</td>
<td>1/2&quot; M x Ø 15</td>
<td>10</td>
<td>25</td>
<td>6 - 7 - 10</td>
<td>EN 1490</td>
</tr>
<tr>
<td>309561</td>
<td>3/4&quot; M x Ø 22</td>
<td>6</td>
<td>25</td>
<td>6 - 7 - 10</td>
<td>EN 1490</td>
</tr>
<tr>
<td>309571</td>
<td>3/4&quot; M x Ø 22</td>
<td>7</td>
<td>25</td>
<td>6 - 7 - 10</td>
<td>EN 1490</td>
</tr>
<tr>
<td>309501</td>
<td>3/4&quot; M x Ø 22</td>
<td>10</td>
<td></td>
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<td>EN 1490</td>
</tr>
</tbody>
</table>

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

**ANTI-FREEZE SAFETY DEVICE**

603  
ICECAL®  
Anti-freeze safety device.  
For solar thermal systems, to protect the hot water storage.  
 dezincification resistant alloy body. Chrome plated.  
Max. working pressure: 10 bar. Ambient temperature range: -30–90°C. Opening temperature: 3°C.

<table>
<thead>
<tr>
<th>Code</th>
<th>Product</th>
<th>Setting (°C)</th>
<th>Discharge (kW)</th>
<th>Ambient (°C)</th>
<th>Opening (°C)</th>
<th>Certification</th>
</tr>
</thead>
<tbody>
<tr>
<td>603040</td>
<td>1/2&quot; F with nut</td>
<td></td>
<td></td>
<td></td>
<td>3</td>
<td>Buildcert (UK)</td>
</tr>
</tbody>
</table>

Application diagram of 603 series device on domestic water circuit

**MOTORISED BALL DIVERTER VALVE**

6443  
Motorised three-way ball diverter valve.  
Max. working pressure: 10 bar. Max. Δp: 10 bar.  
Temperature range: -5–110°C.  
Complete with actuator with 3-contact control.  
With auxiliary microswitch.  
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 (90° rotation).  
Cable length: 100 cm.

<table>
<thead>
<tr>
<th>Code</th>
<th>Supply voltage (V)</th>
<th>Discharge (m³/h)</th>
<th>Ambient (°C)</th>
<th>Opening (°C)</th>
<th>Certification</th>
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<tr>
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<td>230</td>
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<td>24</td>
<td>9.0</td>
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<td>Buildcert (UK)</td>
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</table>
**ANTI-SCALD THERMOSTATIC MIXING VALVE**

**2527 tech. broch. 01165**


<table>
<thead>
<tr>
<th>Code</th>
<th>Temperature adjustment</th>
<th>Kv (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>252714</td>
<td>1/2&quot;</td>
<td>1.5</td>
</tr>
<tr>
<td>252713</td>
<td>3/4&quot;</td>
<td>1.7</td>
</tr>
</tbody>
</table>

**ANTI-SCALD THERMOSTATIC MIXING VALVE**

**2521 tech. broch. 01127**


<table>
<thead>
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<th>Temperature adjustment</th>
<th>Kv (m³/h)</th>
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<tbody>
<tr>
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<td>2.6</td>
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<tr>
<td>252150</td>
<td>3/4&quot;</td>
<td>2.6</td>
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</table>

**2523 tech. broch. 01127**


<table>
<thead>
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<th>Temperature adjustment</th>
<th>Kv (m³/h)</th>
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<td>252370</td>
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<td>252380</td>
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<tr>
<td>252390</td>
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<td>19.0</td>
</tr>
</tbody>
</table>

**2523 tech. broch. 01127**

Spare cartridge. For thermostatic mixing valve 2523 series.

<table>
<thead>
<tr>
<th>Code</th>
<th>Size</th>
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<tbody>
<tr>
<td>252305</td>
<td>1/2&quot; - 3/4&quot;</td>
</tr>
</tbody>
</table>

**2523 tech. broch. 01127**

Spare cartridge. For thermostatic mixing valve 2523 series.

<table>
<thead>
<tr>
<th>Code</th>
<th>Size</th>
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<tbody>
<tr>
<td>252306</td>
<td>1&quot; - 1 1/4&quot;</td>
</tr>
<tr>
<td>252308</td>
<td>1 1/2&quot; - 2&quot;</td>
</tr>
</tbody>
</table>

**2521 tech. depl. 01257**


<table>
<thead>
<tr>
<th>Code</th>
<th>Temperature adjustment</th>
<th>Kv (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>252153</td>
<td>3/4&quot;</td>
<td>2.6</td>
</tr>
</tbody>
</table>

**2521 tech. depl. 01257**


<table>
<thead>
<tr>
<th>Code</th>
<th>Temperature adjustment</th>
<th>Kv (m³/h)</th>
</tr>
</thead>
<tbody>
<tr>
<td>252151</td>
<td>3/4&quot;</td>
<td>4.5</td>
</tr>
<tr>
<td>252160</td>
<td>1&quot;</td>
<td>5.5</td>
</tr>
<tr>
<td>252170</td>
<td>1 1/4&quot;</td>
<td>7.6</td>
</tr>
<tr>
<td>252180</td>
<td>1 1/2&quot;</td>
<td>11.0</td>
</tr>
<tr>
<td>252190</td>
<td>2&quot;</td>
<td>13.3</td>
</tr>
</tbody>
</table>
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.

**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.

**Diverter-mixing valve coupling with adjustable position of the inlet and outlet connections.**

**Mixing valve**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>dezincification resistant alloy body.</td>
</tr>
<tr>
<td>Pressure</td>
<td>Max. working pressure: 10 bar.</td>
</tr>
<tr>
<td>Temperature</td>
<td>Temperature range: -5–110°C.</td>
</tr>
</tbody>
</table>

**Diverter valve**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Body</td>
<td>Brass body.</td>
</tr>
<tr>
<td>Pressure</td>
<td>Max. working pressure: 10 bar.</td>
</tr>
<tr>
<td>Temperature</td>
<td>Temperature range: -5–110°C.</td>
</tr>
</tbody>
</table>

**Actuator**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type</td>
<td>Three-contact type.</td>
</tr>
<tr>
<td>Supply</td>
<td>Electric supply: 230 V (ac).</td>
</tr>
<tr>
<td>Consumption</td>
<td>Power consumption: 8 VA.</td>
</tr>
<tr>
<td>Switch</td>
<td>Auxiliary microswitch contact rating: 0.8 A (230 V).</td>
</tr>
<tr>
<td>Protection</td>
<td>Protection class: IP 44 (vertical stem).</td>
</tr>
<tr>
<td>Ambient</td>
<td>IP 40 (horizontal stem).</td>
</tr>
<tr>
<td>Time</td>
<td>Operating time: 10 s.</td>
</tr>
<tr>
<td>Length</td>
<td>Cable length: 1 m.</td>
</tr>
</tbody>
</table>

**Thermostat with probe**

<table>
<thead>
<tr>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supply</td>
<td>Electric supply: 230 V (ac).</td>
</tr>
<tr>
<td>Temperature</td>
<td>Adjustable temperature range: 25–50°C.</td>
</tr>
<tr>
<td>Setting</td>
<td>Factory setting: 45°C.</td>
</tr>
<tr>
<td>Protection</td>
<td>Box protection class: IP 54.</td>
</tr>
</tbody>
</table>

**Application diagram of SOLARNOCAL kit 264 series**

---

**Code**

264352 3/4”
**SOLAR STORAGE-TO-BOILER CONNECTION KIT**

**265 SOLARINCAL**

**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.

**Hydraulic diagrams**

![Hydraulic diagrams](image)

**Application diagram of SOLARINCAL kit 265 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;
- 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-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.

**ACCESSORIES**

**265**

Thermostat with display showing storage temperature. For devices 264 and 265 series.

Electric supply: 230 V (ac).

Adjustable temperature range: 25–50°C.

Factory setting: 45°C.

Box protection class: IP 54.

**Code**

265001

**Code**

264359 kit 264 series without thermostat and probe
265359 kit 265 series without thermostat and probe
257004 Stainless steel pocket for Ø 6 mm probe
F29525 box with switching 3 contact relay
F29466 Ø 15 mm contact probe
F29467 pocket for Ø 15 mm probe
SOLAR STORAGE-TO-BOILER THERMOSTATIC CONNECTION KIT

262 SOLARINCAL-T

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.

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-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.

Hydraulic diagrams

T_{SOLAR} > 45°C

T_{SOLAR} < 45°C

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;
- thermostatic control device;
- pre-formed shell protective cover.

**Mixing valve**
- 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.

**Diverter valve**
- dezincification resistant alloy body.
- Max. working pressure: 10 bar.
- Factory setting: 45°C.
- Max. inlet temperature: 100°C.

**Control device**
- dezincification resistant alloy body.
- Factory setting: 30°C.
- Max. inlet temperature: 85°C.

**Hydraulic diagrams**

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
</tr>
<tr>
<td>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.</td>
</tr>
</tbody>
</table>

**Application diagram of SOLARINCAL-T Plus kit 263 series**

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Code</strong> 263350 3/4&quot;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Hydraulic diagrams</strong></td>
</tr>
<tr>
<td><strong>T (_{\text{SOLAR}} &gt; 45^\circ\text{C})</strong></td>
</tr>
<tr>
<td><strong>T (_{\text{SOLAR}} &lt; 45^\circ\text{C})</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Function</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mixing valve</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Diverter valve</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Control device</strong></td>
</tr>
</tbody>
</table>

<table>
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<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
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</thead>
<tbody>
<tr>
<td><strong>Hydraulic diagrams</strong></td>
</tr>
<tr>
<td><strong>T (_{\text{SOLAR}} &gt; 45^\circ\text{C})</strong></td>
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<tr>
<td><strong>T (_{\text{SOLAR}} &lt; 45^\circ\text{C})</strong></td>
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</tbody>
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<table>
<thead>
<tr>
<th>Solar Storage-to-Boiler Connection Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Application diagram of SOLARINCAL-T Plus kit 263 series</strong></td>
</tr>
</tbody>
</table>