



**DAI QUADERNI CALEFFI AGLI SCHEMI BIM: L'EVOLUZIONE A SUPPORTO DEI PROGETTISTI**

02/07/2020



# Sintesi del Decreto Baratonno (DM 560 1-12-2017)

*Progressiva obbligatorietà con prevalenza contrattuale digitale*

| 2018 | 2019             | 2020             | 2021             | 2022     | 2023   | 2025   |
|------|------------------|------------------|------------------|----------|--------|--------|
|      | Lavori complessi | Lavori complessi | Lavori complessi | Opere    | Opere  | Opere  |
|      | >100 mln         | >50 mln          | >15 mln          | >5,2 mln | >1 mln | <1 mln |

*Adempimenti preliminari delle Stazioni Appaltanti e delle Amministrazioni Concedenti*

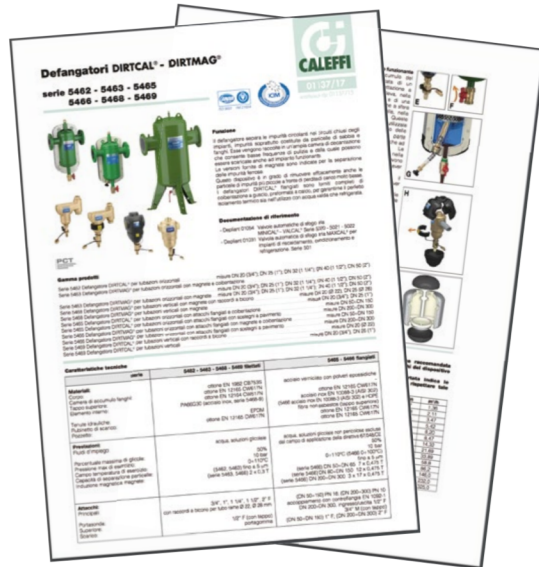
Formazione

Strumentazione

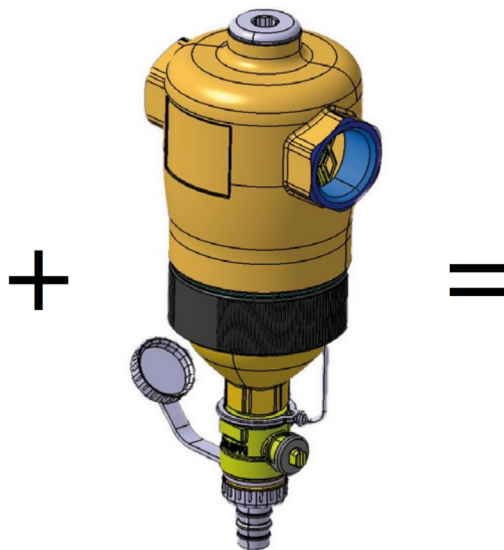
Organizzazione



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## DATI TECNICI



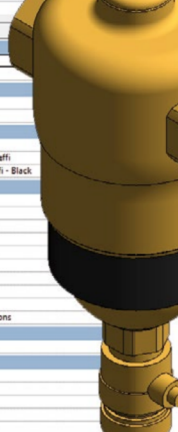
## GEOMETRIA

**Family Types**

Type name:

Search parameters

| Parameter                        |                                     |
|----------------------------------|-------------------------------------|
| <b>Constraints</b>               |                                     |
| Negative Offset (default)        | 0.00                                |
| Actual Offset (default)          | 10.00                               |
| <b>Graphics</b>                  |                                     |
| Annotation Offset RL (default)   | 0.00                                |
| Use Annotation Scale (default)   | <input type="checkbox"/>            |
| <b>Materials and Finishes</b>    |                                     |
| Yellow                           | Metal - Calfti - Brass              |
| Graphite black                   | Polystyrene Foam - Calfti           |
| Black                            | Technopolymer - Calfti - Black      |
| <b>Flumbing</b>                  |                                     |
| Particle separation rating [um]  | 5.000000                            |
| Minimum working temperature      | 0.00 °C                             |
| Maximum working temperature      | 110.00 °C                           |
| Maximum working pressure         | 1000000.00 Pa                       |
| Maximum percentage of glycol [%] | 50.000000                           |
| Maximum flow rate                | 1.3600 m³/h                         |
| Kv [m³/h]                        | 16.200000                           |
| Connection type                  | Gas ISO 228/1                       |
| Connection size                  | 3/4"                                |
| Application fluids               | Water and glycol solutions          |
| <b>Structural</b>                |                                     |
| Mass                             | 1.870 kg                            |
| <b>Dimensions</b>                |                                     |
| Use Nominal Diameter             | <input checked="" type="checkbox"/> |
| Overall Width                    | 85.90                               |
| Overall Length                   | 110.00                              |
| Overall Height                   | 689.00                              |
| Nominal Radius                   | 9.55                                |
| Nominal Diameter                 | 19.10                               |
| <b>Mechanical</b>                |                                     |
| Pressure Drop (default)          | 704.77 Pa                           |
| Flow (default)                   | 1.3600 m³/h                         |
| Loss Method                      |                                     |



## DIGITAL TWIN

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1 - 50 of 163 products

« 1 2 3 4 »



Balancing valve with flow...  
Caleffi



Ball valve for solar thermal...  
Caleffi



Collettori di distribuzione...  
Caleffi



Compact recessed indirect heat...  
Caleffi



Direct heat meter CONTECA®  
Caleffi

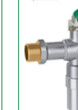
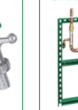


DIRTMAGMINI® - Composite dirt...  
Caleffi

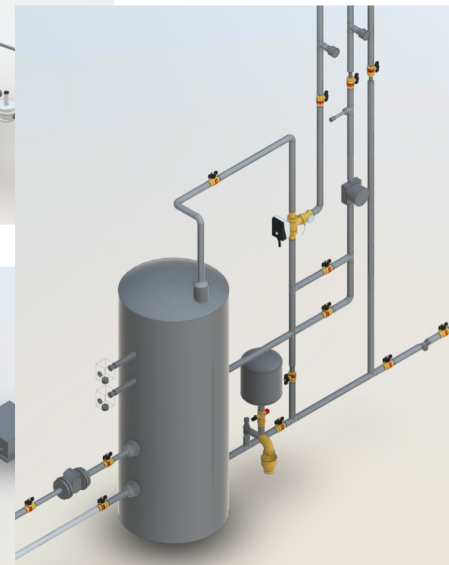
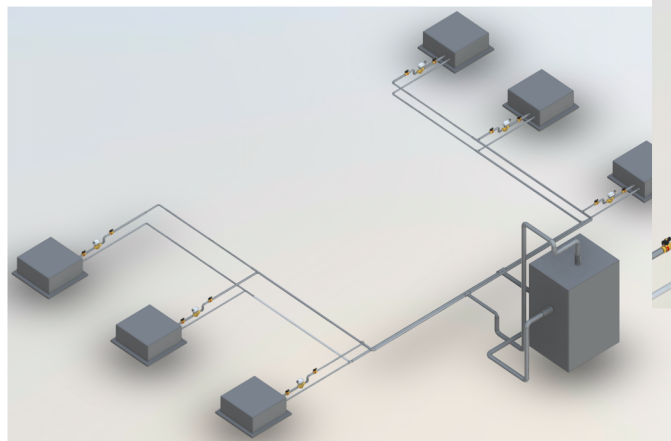
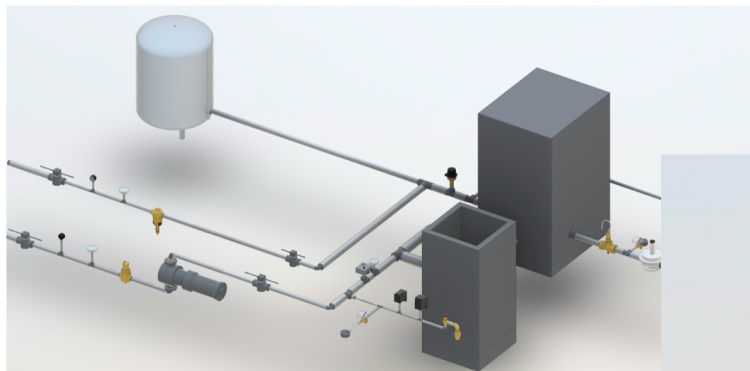
## 167 pagine di prodotto

## 500 file

## 800 codici

|                                                                                                                                         |                                                                                                                                          |                                                                                                                                         |                                                                                                                                       |                                                                                                                                         |                                                                                                                                          |
|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
|  <p>DIRTMAGSUM® - Composite dirt...<br/>Caleffi</p>   |  <p>Gas pressure closing filter...<br/>Caleffi</p>    |  <p>ICECAL® - Garden tap, ball...<br/>Caleffi</p>    |  <p>LEGIOMIX® Electronic mixing...<br/>Caleffi</p> |  <p>FlowCal™ Compact Automatic...<br/>Caleffi</p>    |  <p>LEGIOMIX® Electronic mixing...<br/>Caleffi</p>    |
|  <p>Assembled wall mounting...<br/>Caleffi</p>        |  <p>AUTOFLOW® - Compact automatic...<br/>Caleffi</p>  |  <p>AUTOFLOW® - Compact automatic...<br/>Caleffi</p> |  <p>DISCAL® - Deaerator. Female...<br/>Caleffi</p> |  <p>DISCALAIR® - High performance...<br/>Caleffi</p> |  <p>Distribution manifold group...<br/>Caleffi</p>    |
|  <p>Fuel shut-off valve. Aluminium...<br/>Caleffi</p> |  <p>Fuel shut-off valve. Aluminium...<br/>Caleffi</p> |  <p>Gas filter. Flanged connection<br/>Caleffi</p>   |  <p>Gas pressure closing...<br/>Caleffi</p>        |  <p>Thermostatic diverter valve...<br/>Caleffi</p>   |  <p>AutoFill™ Combo RPZ 5350A - NA...<br/>Caleffi</p> |

# LA RACCOLTA DAI QUADERNI CALEFFI

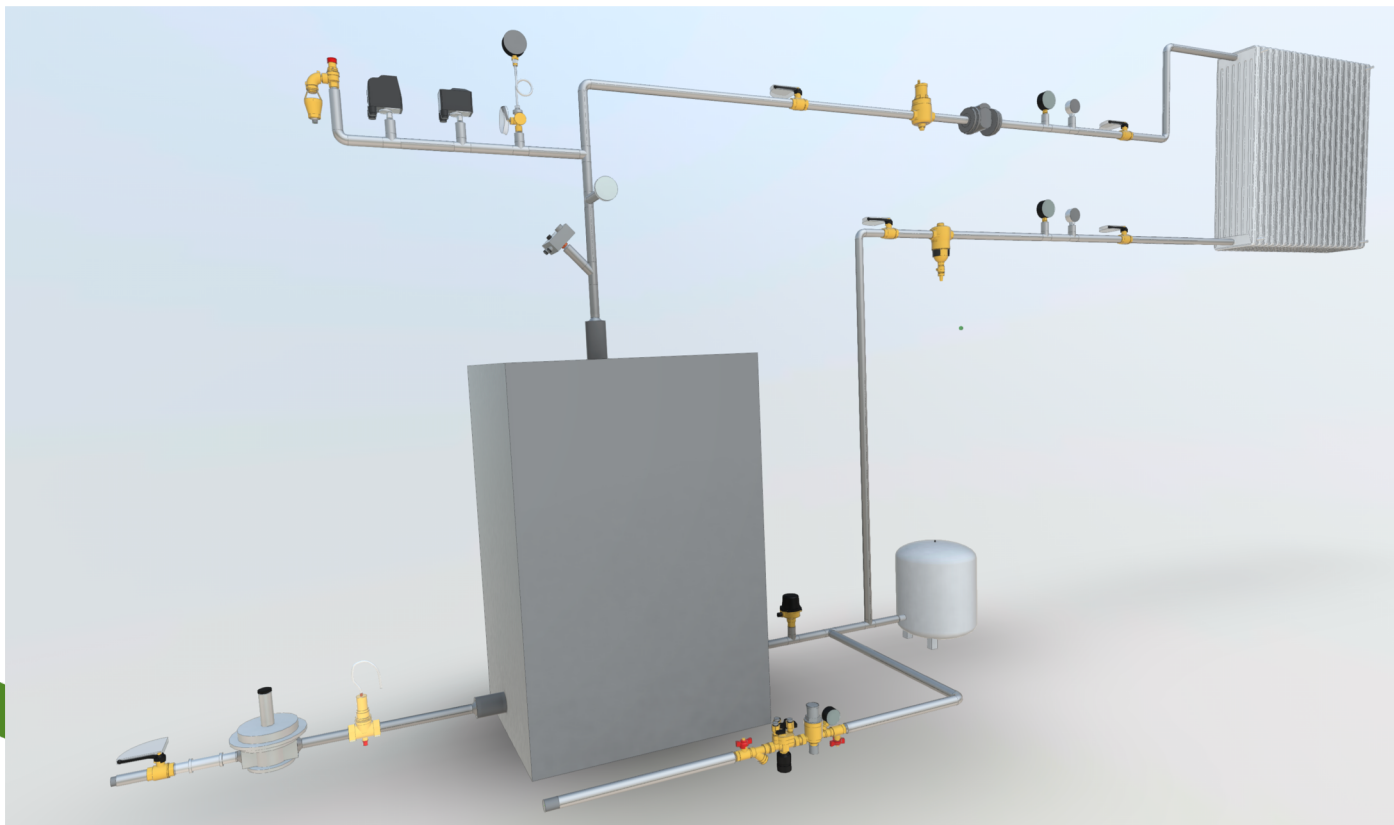


# SCHEMI DISPONIBILI GRATUITAMENTE



| IDENTIFICATIVO SCHEMA    | LINK A AUTODESK® 360 BIM                                                                                   |
|--------------------------|------------------------------------------------------------------------------------------------------------|
| Schema caleffi 10.10.rvt | CT con caldaia a portata nulla e regolazione climatica interna (senza produzione ACS in CT)                |
| Schema Caleffi 10.15.rvt | CT con due caldaie a portata nulla e regolazione climatica interna (senza produzione ACS in CT)            |
| Schema caleffi 10.30.rvt | CT con caldaia modulare e regolazione climatica interna (senza produzione ACS in CT)                       |
| Schema caleffi 10.35.rvt | CT con due moduli termici e regolazione climatica interna (senza produzione ACS in CT)                     |
| Schema Caleffi 20.10.rvt | CT con caldaia a portata nulla e produzione ACS ad accumulo con integrazione solare                        |
| Schema Caleffi 20.40.rvt | CT con caldaie a biomasse e a combustibili tradizionali con produzione ACS in CT                           |
| Schema caleffi 30.10.rvt | CT per impianti di teleriscaldamento (senza produzione ACS in CT)                                          |
| Schema caleffi 40.10.rvt | Reti di distribuzione a 5 tubi (impianti a portata costante)                                               |
| Schema Caleffi 40.20.rvt | Rete di distribuzione a 3 tubi (impianti a portata variabile)                                              |
| Schema Caleffi 40.50.rvt | Reti di distribuzione ACS con gruppi (senza collettori) per regolazione e disinfezione termica             |
| Schema caleffi 41.10.rvt | Impianto a radiatori con regolazione termostatica                                                          |
| Schema Caleffi 45.10.rvt | Bilanciamento impianto a radiatori a colonne con regolazione termostatica                                  |
| Schema Caleffi 45.35.rvt | Bilanciamento impianto a radiatori a zone con valvole monotubo                                             |
| Schema caleffi 45.50.rvt | Bilanciamento impianto a ventilconvettori con regolazione ambiente modulante                               |
| Schema Caleffi 45.51.rvt | Bilanciamento impianto a ventilconvettori a 4 tubi con regolazione ambiente modulante                      |
| Schema Caleffi 45.70.rvt | Bilanciamento impianto ad aerotermi                                                                        |
| Schema caleffi 50.10.rvt | Produzione ACS con accumulo e mix elettronico antilegionella (elevata stratificazione)                     |
| Schema caleffi 50.25.rvt | Produzione ACS con accumulo, mix termostatico e by-pass antilegionella (bassa stratificazione)             |
| Schema Caleffi 70.10.rvt | Impianto con caldaia murale e produzione istantanea interna ACS (riscaldamento a 2 livelli)                |
| Schema caleffi 75.20.rvt | Impianto con pompa di calore aria/acqua e caldaia a produzione istantanea di ACS                           |
| Schema Caleffi 75.25.rvt | Impianto riscaldamento / raffrescamento con pompa di calore aria/acqua e caldaia produzione istantanea ACS |

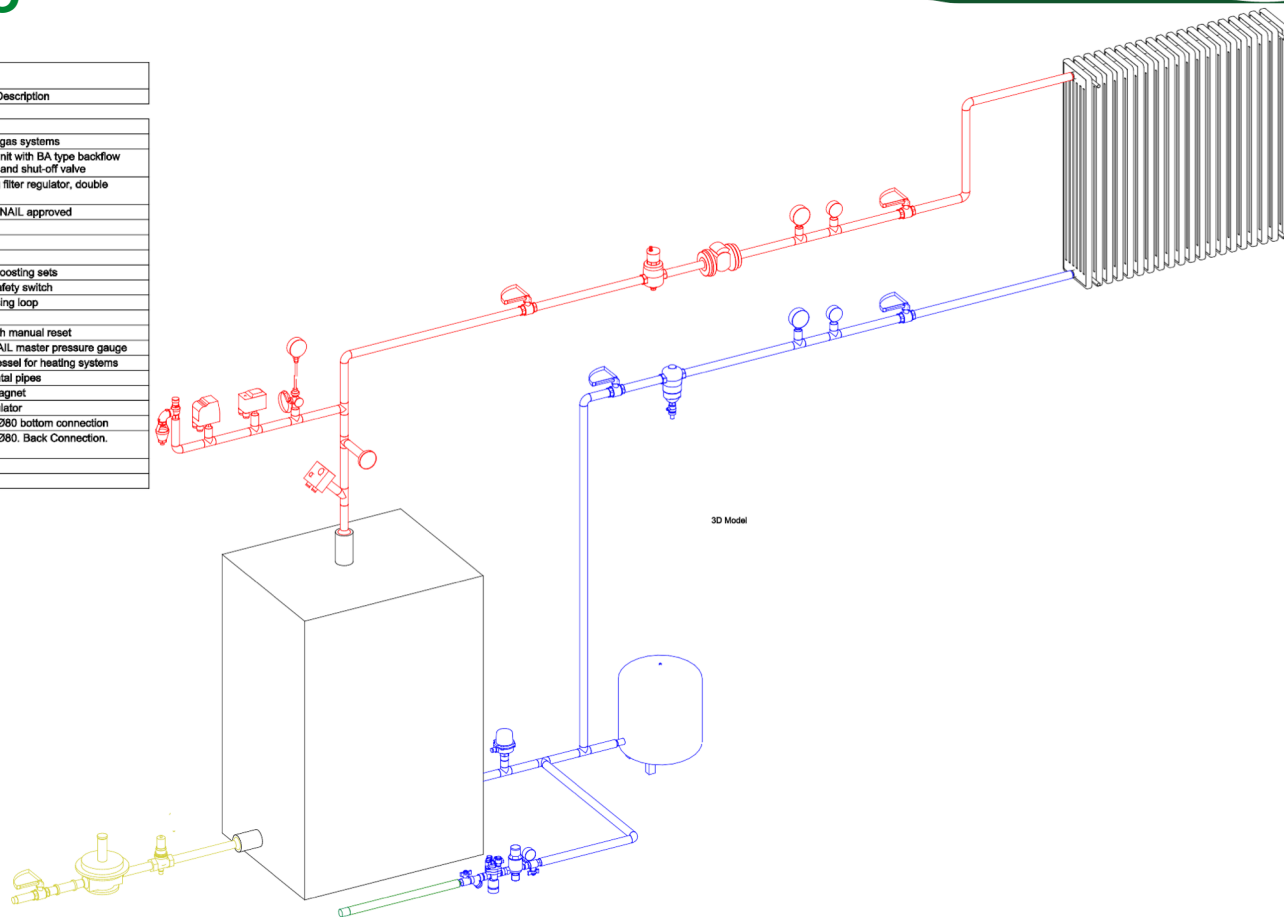
## 10.10 - CT con caldaia a portata nulla e regolazione climatica interna (senza produzione ACS in CT)



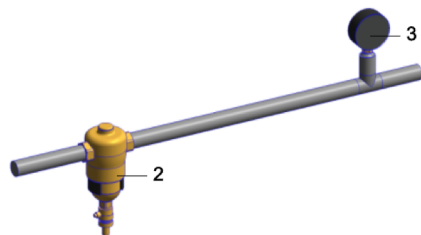
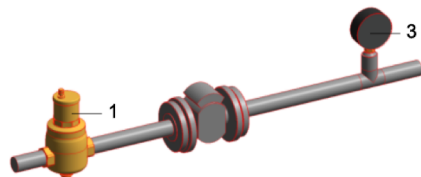


# VISTA 3D CON ABACO

| 10.10 |                                                                                 |        |                                                                                        |
|-------|---------------------------------------------------------------------------------|--------|----------------------------------------------------------------------------------------|
| Mark  | Family                                                                          | Series | Description                                                                            |
| 02    | Generic ball valve DN25                                                         |        |                                                                                        |
| 03    | HVAC_Other_Caleffi_Antivibration-joint-for-gas-systems-842                      |        | Antivibration joint for gas systems                                                    |
| 04    | Automatic charging unit with BA type backflow preventer_Caleffi_574 DN15        | 574    | Automatic charging unit with BA type backflow preventer, Y-strainer and shut-off valve |
| 05    | Gas pressure closing filter regulator_Caleffi_850 DN15 DN20 DN25 DN32 DN40 DN50 | 850    | Gas pressure closing filter regulator, double diaphragm                                |
| 09    | HVAC_Other_Fuel-Shut-Off-Valve-INAIL-Approved-541                               |        | Fuel shut-off valve - INAIL approved                                                   |
| 10    | Elbow tundish_Caleffi_5521 DN15                                                 | 5521   | Elbow tundish                                                                          |
| 11    | Boiler                                                                          |        |                                                                                        |
| 12    | Safety relief valve_Caleffi_527 DN15                                            | 527    | Safety relief valve                                                                    |
| 13    | Pressure switch for boosting sets_Caleffi_625                                   | 625    | Pressure switch for boosting sets                                                      |
| 15    | Pressure safety switch_Caleffi_625                                              | 625    | Minimum pressure safety switch                                                         |
| 17    | DN25                                                                            | 691    | Water hammer reducing loop                                                             |
| 18    | Flow switch_Caleffi_626                                                         | 626    | Flow switch                                                                            |
| 19    | Double immersion thermostat_Caleffi_623                                         | 623    | Safety thermostat with manual reset                                                    |
| 20    | Three way tap_Caleffi_690                                                       | 690    | Three way tap for INAIL master pressure gauge                                          |
| 21    | Welded expansion vessel for heating systems_Caleffi_556 35-600L                 | 556    | Welded expansion vessel for heating systems                                            |
| 22    | DISCAL Deaerator_Caleffi_551 DN20 DN25                                          | 551    | Deaerator for horizontal pipes                                                         |
| 23    | Dirt separator with magnet_Caleffi_5463 DN25                                    | 5463   | Dirt separator with magnet                                                             |
| 24    | Variable Speed Circulator DN25                                                  |        | Variable Speed Circulator                                                              |
| 25    | Temperature gauge bottom connection Ø80_Caleffi_688 DN15                        | 688    | Temperature gauge Ø80 bottom connection                                                |
| 25b   | Temperature gauge back connection_Caleffi_Series 688 DN8 DN15                   | 688    | Temperature gauge Ø80. Back Connection.                                                |
| 26    | Pressure gauge bottom connection_Caleffi_557 DN8 DN10                           | 557    |                                                                                        |
| 27    | Generic ball valve DN25                                                         |        |                                                                                        |

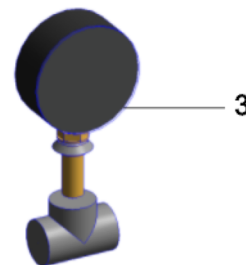


# DETTAGLIO DEI PRODOTTI



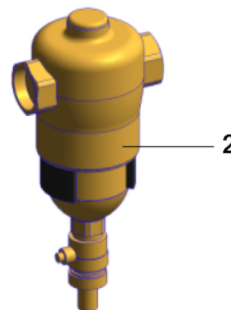
3D Model - Detail

| LEGEND |                                                          |        |                                         |
|--------|----------------------------------------------------------|--------|-----------------------------------------|
| Mark   | Family                                                   | Series | Description                             |
| 022    | DISCAL Deaerator_Caleffi_561 DN20 DN25                   | 551    | Deaerator for horizontal pipes          |
| 023    | Dirt separator with magnet_Caleffi_5463 DN25             | 5463   | Dirt separator with magnet              |
| 024    | Variable Speed Circulator DN25                           |        | Variable Speed Circulator               |
| 025    | Temperature gauge bottom connection Ø80_Caleffi_688 DN15 | 688    | Temperature gauge Ø90 bottom connection |



688 Series

3\_Temperature gauge.  
1/2" central back connection.  
With pocket.  
688 Series. Cod. 688100



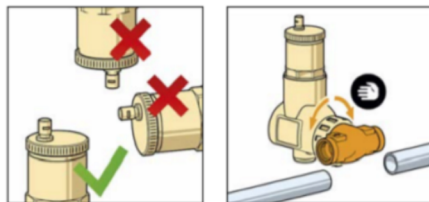
5463 Series

2\_DIRTMAG® - Dirt separator with magnet  
5463 Series. Cod 546306

# DETTAGLIO INSTALLAZIONE

## DISCAL® - 551 Series

DISCAL® devices may be used in both heating and cooling circuits, to guarantee progressive elimination of the air which forms continuously. They should preferably be installed after the boiler, on the pump suction side, as this is where the formation of micro-bubbles is most prolific. The DISCAL® deaerator must be installed vertically and preferably upstream from the pump where, due to the high speed of the medium and the ensuing drop in pressure, micro-bubbles of air develop more easily. In DISCAL® devices, the thermal medium can flow in either direction, except on the 5517 series adjustable version, for which the correct direction of flow is shown by the arrow on the T-fitting. In the 5517 series, turn the T-fitting by hand to adapt the connections for use with horizontal or vertical pipes. It is recommended that the air vent valve cap is replaced with a Caleffi 5620 series hygroscopic safety cap if the device is installed in a location that cannot be inspected.

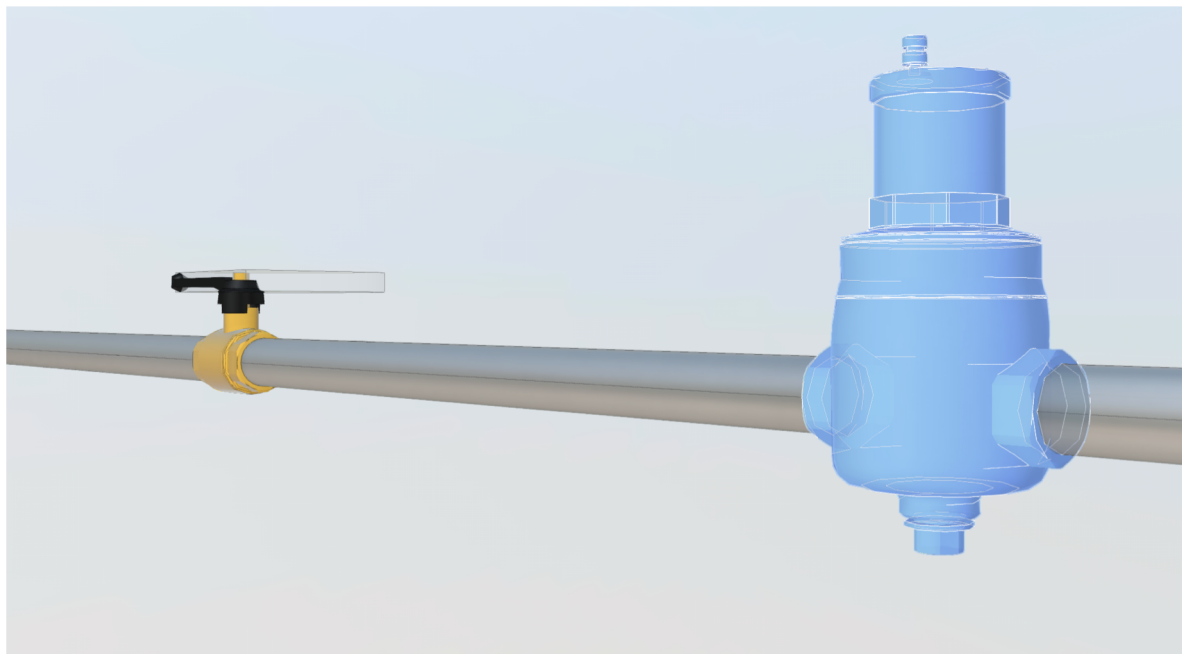


## DIRTMAG® - 5463 Series

The dirt separator should preferably be installed on the return circuit upstream of the boiler. This enables it to intercept any impurities already present in the circuit, particularly when it is first started, before they reach the boiler. The dirt separator should always be installed vertically and ideally upstream of the pump. Use the specific versions designed for installation on horizontal or vertical pipes. The flow direction of the thermal medium is not important in dirt separators. For 5466 series a space of at least 16 cm is needed underneath the dirt separator to allow the magnet extraction.

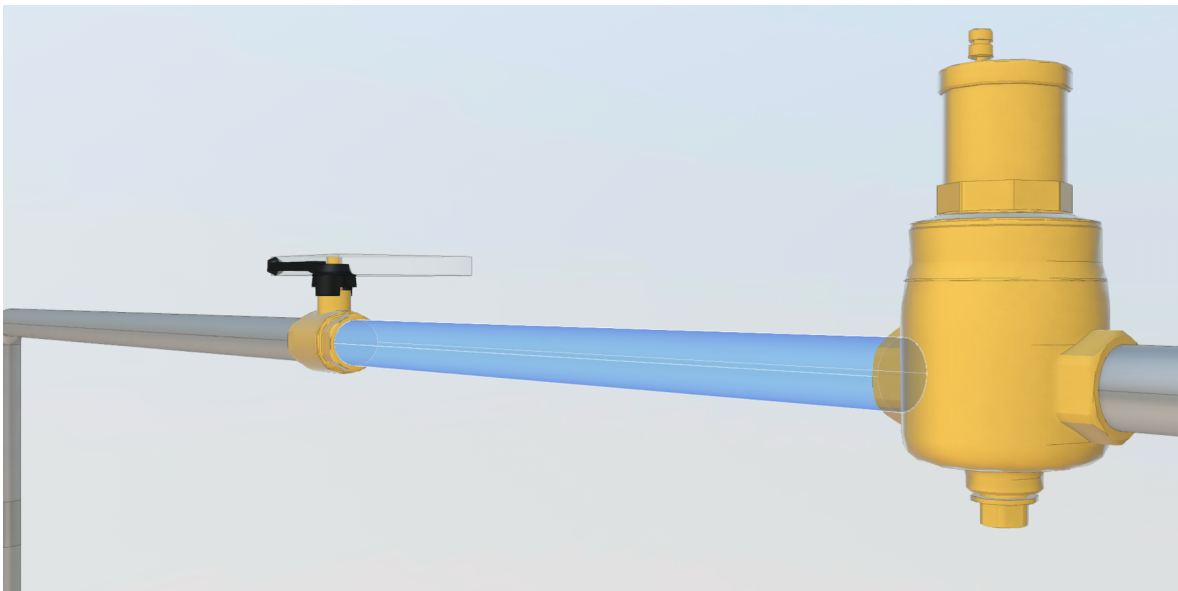


# DATI DI FUNZIONAMENTO PRODOTTO



| DISCAL Deaerator_Caleffi_551 DN20 DN25 [304624] |                                      | ✕ |
|-------------------------------------------------|--------------------------------------|---|
| Pressure Drop                                   | 126.64479933131544 pascal            |   |
| Flow                                            | 1 m³/hour                            |   |
| System Classification                           | Hydronic Supply                      |   |
| System Type                                     | Supply System                        |   |
| System Name                                     | Supply System                        |   |
| System Abbreviation                             |                                      |   |
| Loss Method                                     | 3bf616f9-6b98-4a21-80ff-da1120c8f6d6 |   |
| Loss Method Settings                            |                                      |   |
| K Coefficient Table                             |                                      |   |
| K Coefficient                                   | 0                                    |   |
| ▼ Mechanical - Flow                             |                                      |   |
| Kv                                              | 28.100000000000005 m³/hour           |   |
| Pressure Drop                                   | 126.64479933131544 pascal            |   |
| ▼ Dimensions                                    |                                      |   |
| Size                                            | 25.00ø-25.00ø                        |   |
| Overall Width                                   | 85.9 mm                              |   |
| Overall Length                                  | 110 mm                               |   |
| Overall Height                                  | 205 mm                               |   |
| Nominal Radius                                  | 12.5 mm                              |   |
| Nominal Diameter                                | 25 mm                                |   |
| ▼ Identity Data                                 |                                      |   |
| Type Name                                       | 1"                                   |   |

# DATI DI FUNZIONAMENTO SISTEMA

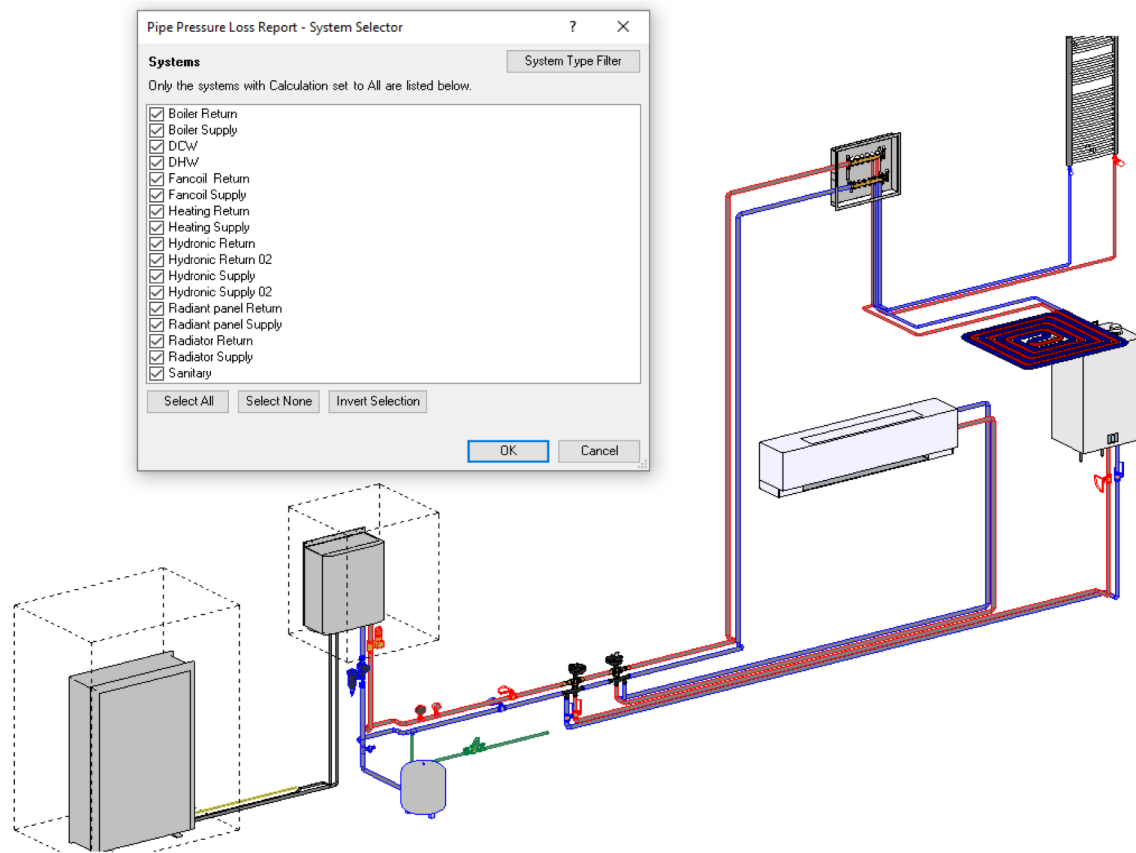


| Pipe Types [304774] |                                     |
|---------------------|-------------------------------------|
| System Type         | Supply System                       |
| System Name         | Supply System                       |
| System Abbreviation |                                     |
| Pipe Segment        | Acciaio - Caleffi                   |
| Diameter            | 25 mm                               |
| Connection Type     | Generic                             |
| Roughness           | 0.04572 mm                          |
| Material            | Acciaio                             |
| Schedule/Type       | Caleffi                             |
| Segment Description |                                     |
| Invert Elevation    | 2280.889145238691 mm                |
| Section             | 19                                  |
| Area                | 0.040689124539285894 m <sup>2</sup> |
| ▼ Mechanical - Flow |                                     |
| Additional Flow     | 0 m <sup>3</sup> /hour              |
| Flow                | 1 m <sup>3</sup> /hour              |
| Reynolds Number     | 8253.098977146747                   |
| Relative Roughness  | 0.0016686131386861314               |
| Flow State          | Turbulent                           |
| Friction Factor     | 0.022332024535292712                |
| Velocity            | 0.4710928276883732 m/s              |
| Friction            | 90.42846089999729 pascal/m          |



# CARATTERISTICHE

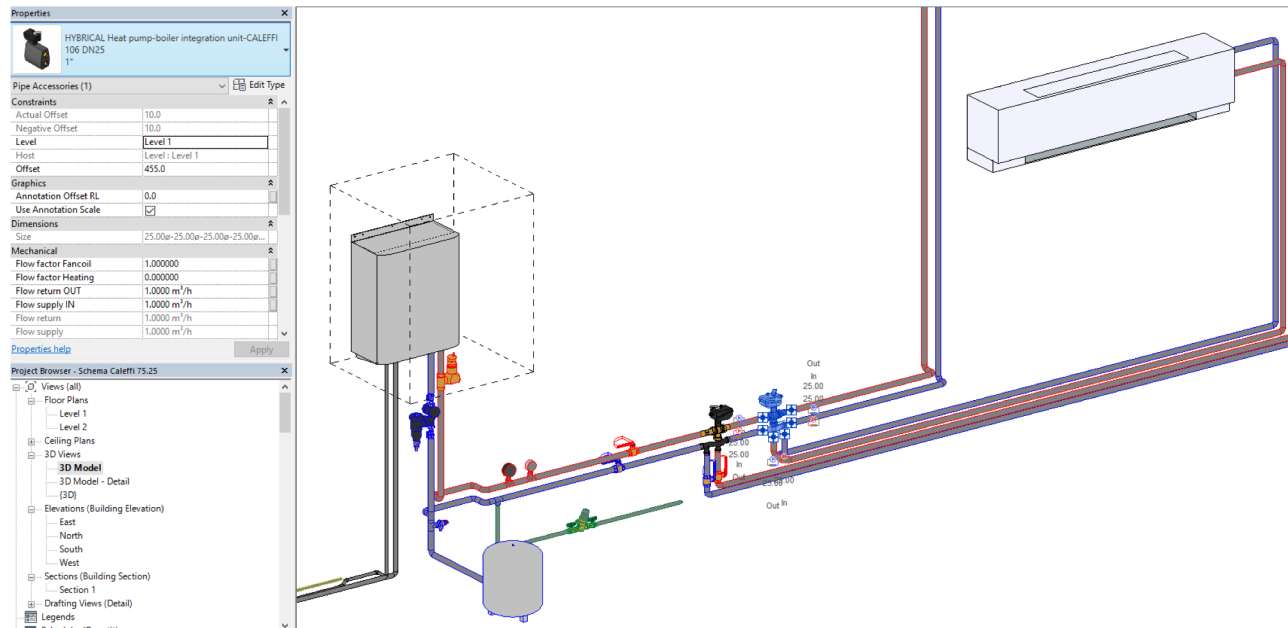
Tutti gli schemi sono stati suddivisi in sotto sistemi in modo da poter interrogare ogni tratto dell'intero sistema.



# CARATTERISTICHE

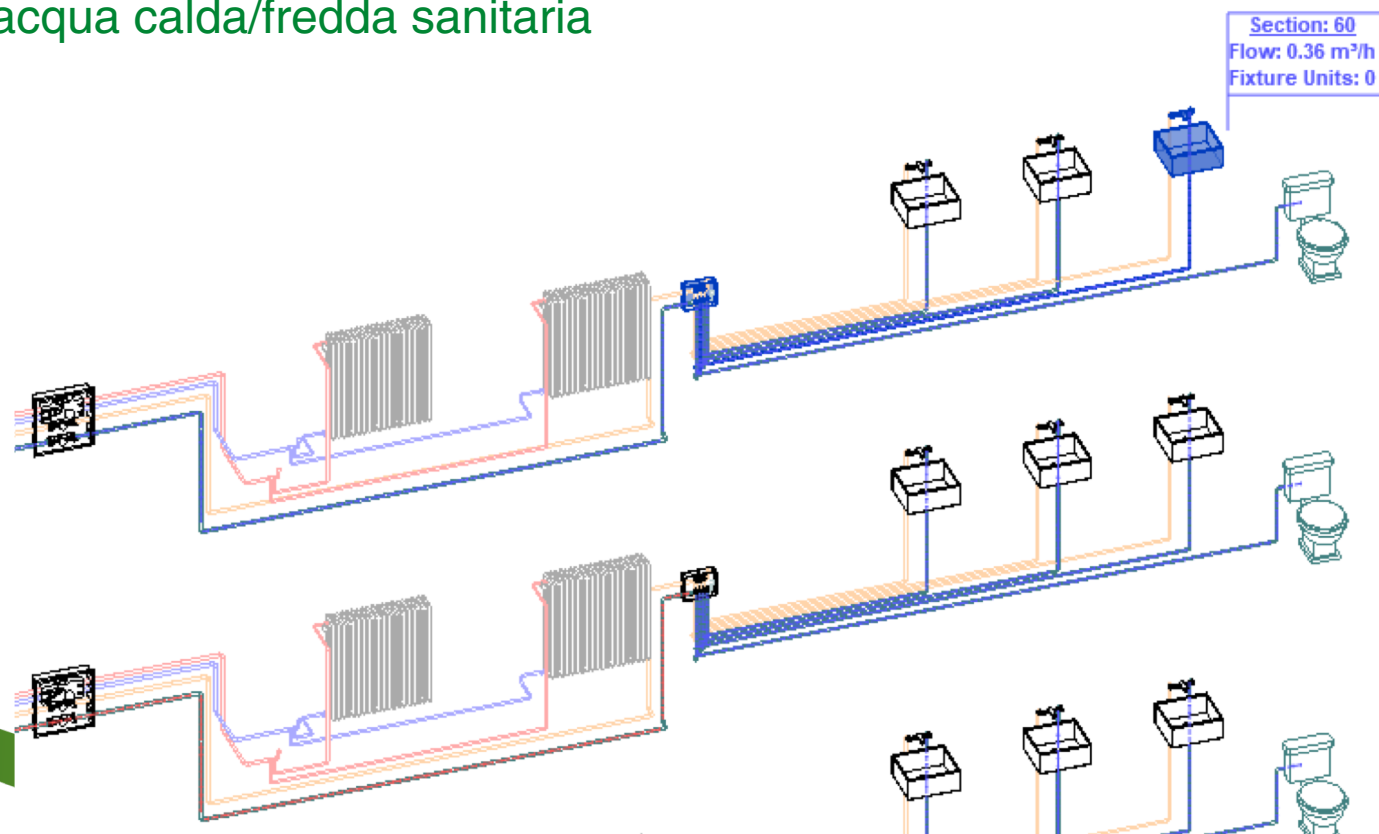
## Componenti con funzioni «speciali» per aumentarne la funzionalità

Alcuni componenti sono realizzati con delle funzioni ad hoc, in modo da far rendere molto reale lo schema, l'Hybrical per esempio con la funzione "Flow Factor" simula apertura e chiusura di una lato rispetto all'altro della valvola stessa.



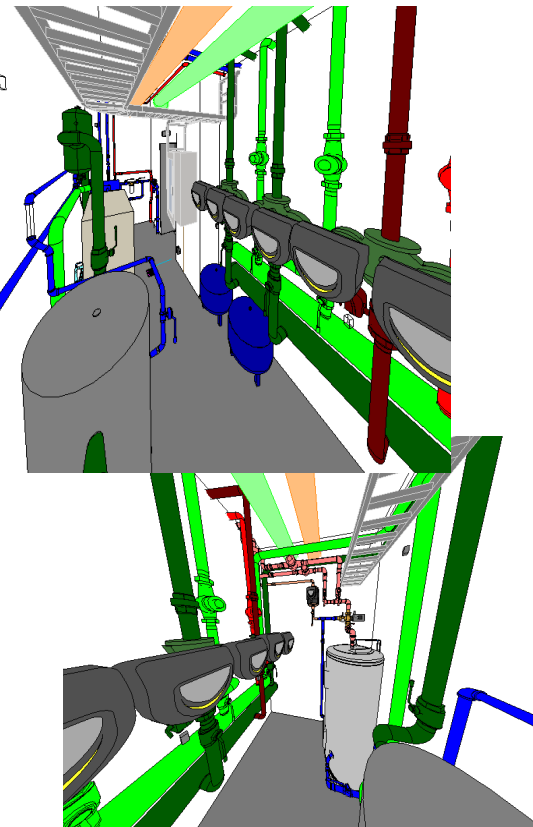
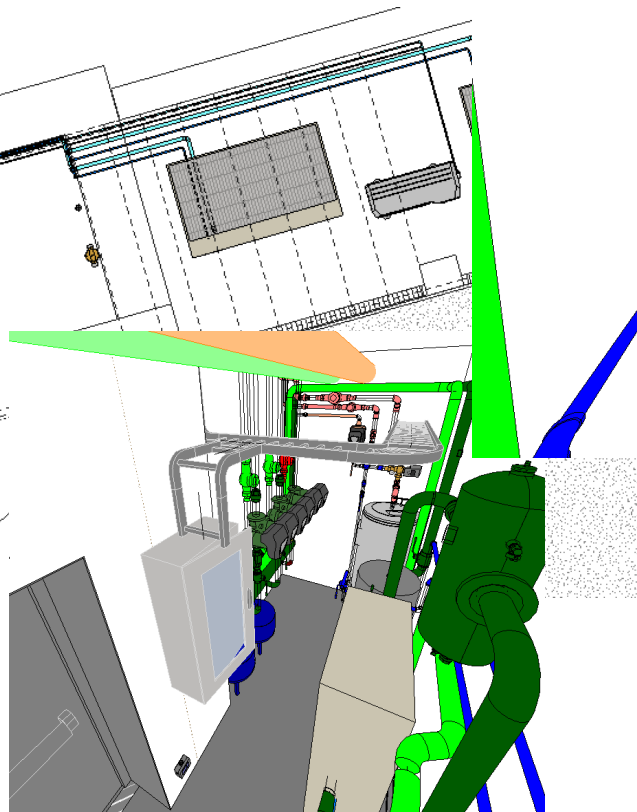
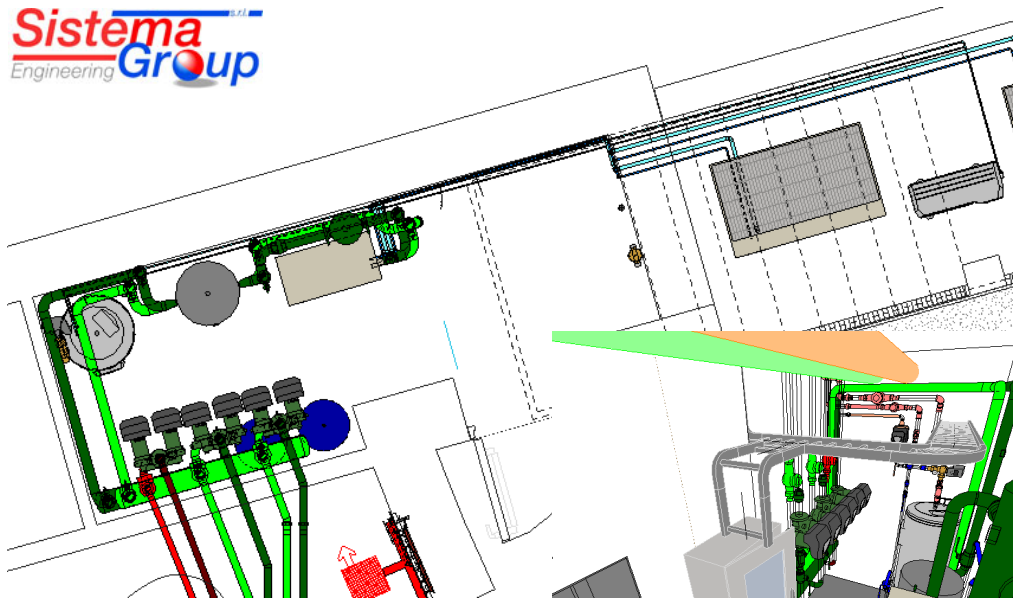
# CARATTERISTICHE

## Circuito acqua calda/fredda sanitaria



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Progetto dello Studio Sistema Group Engineering di Montichiari (BS)



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