oventrop

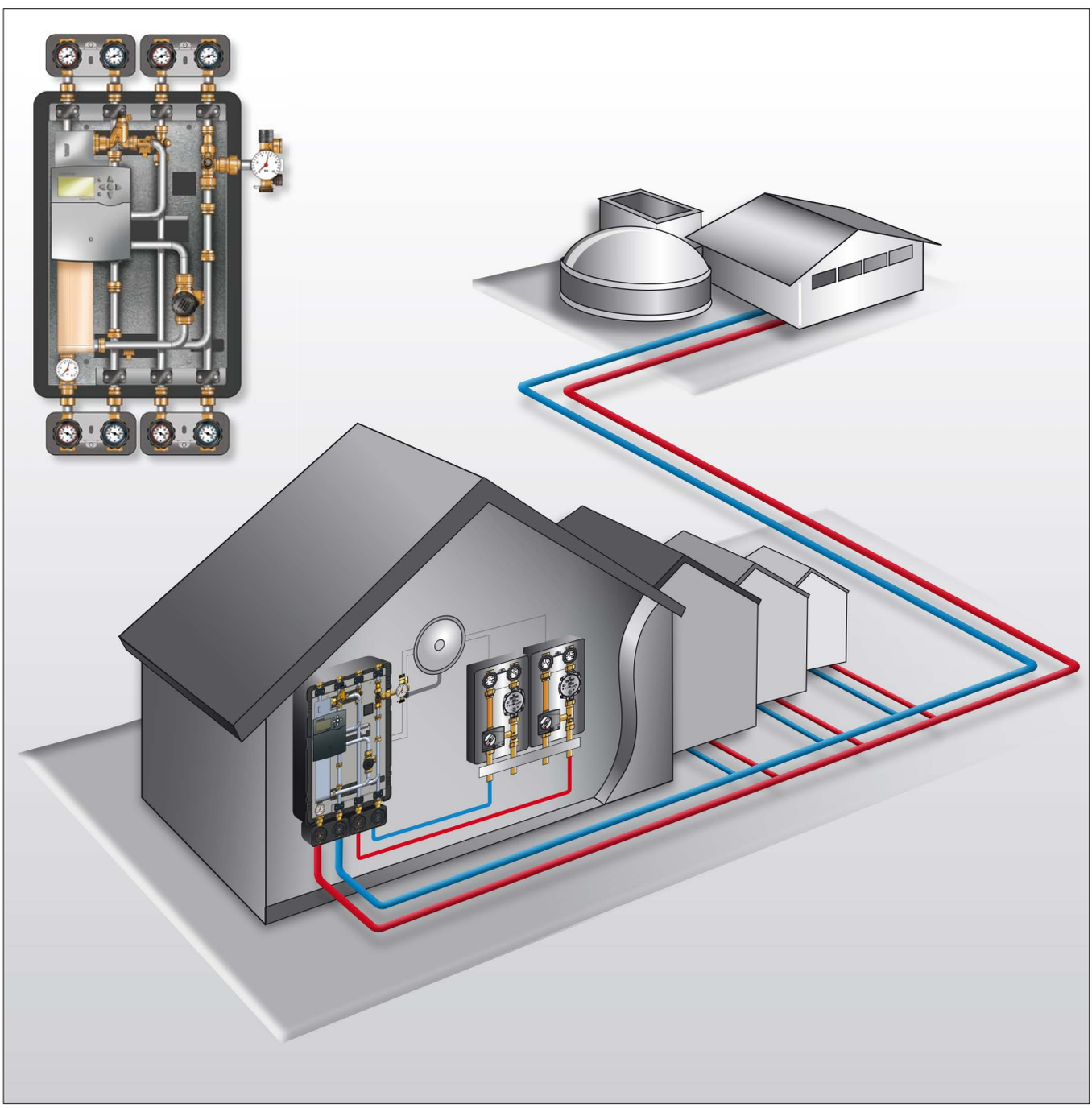
Innovation + Quality

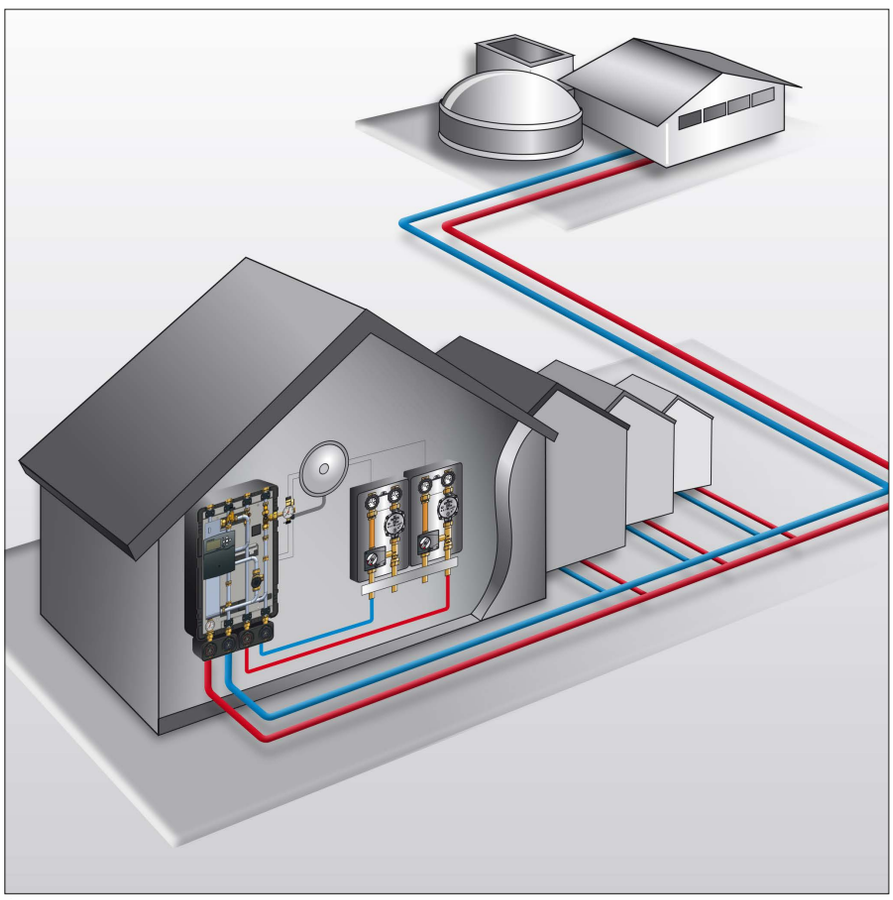
Valves, controls + systems

Local and district heating technology

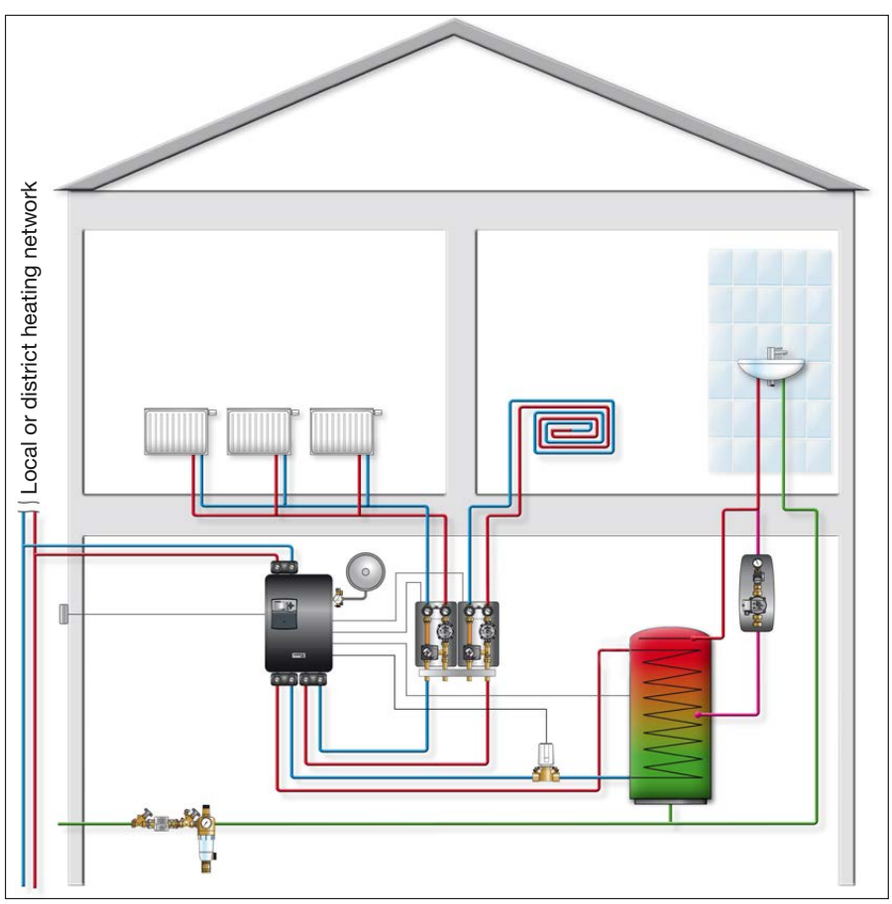
Product range

*for improved energy efficiency ...*





1




2

The term “Local and district heating” describes the supply of heat to buildings, for the purpose of providing heating and hot water preparation. The thermal energy is supplied in a thermally insulated underground pipework system.

Contrary to district heating, local heating is contained to small, local units (the typical thermal capacities are between 50 kW and several MW). The low operating temperature of local heating networks (approx. 70 °C) allows for the integration of CHP, solar collector plants and geothermal plants. The local heating supplies heat to several buildings, a residential area or a community.

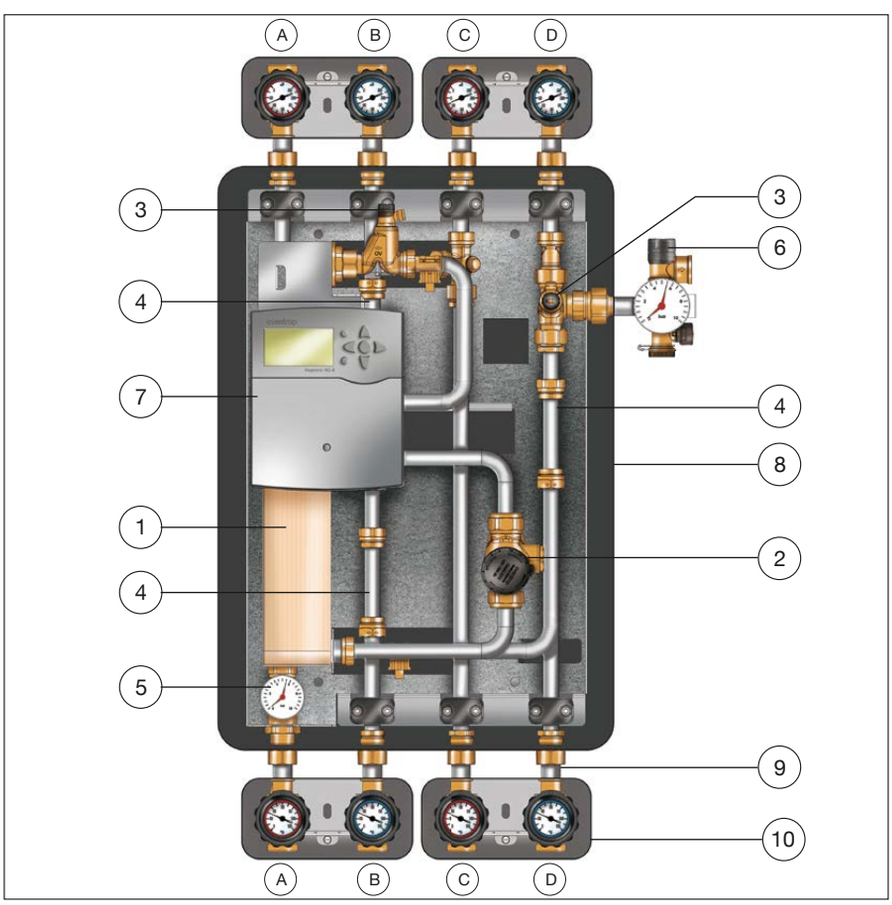
District heating systems, however, supply energy for heating purposes and hot water preparation to residential buildings, office buildings and public buildings. District heating relates to the supply of complete cities or city districts.

In general, local and district heating systems differ in temperature and pressure.

**Advantages:**
- energy-saving and reliable technology (throughout the year)
- ecological and future-proof
- cost- and time-saving solution with high comfort
- space-saving (no boiler)

**1-2** System illustrations of a local heating connection


1




2

**1** "Regudis H-HT" Transmission station with plate heat exchanger for indirect heat transmission from a local or district heating network to the potable water and heating installation of detached or semi-detached houses. Alternatively, the primary circuit features a connection facility for direct hot potable water preparation on the storage cylinder principle. For use in closed local and district heating networks, for operation with non-aggressive, harmless fluids (e.g. water or suitable water and glycol mixtures according to VDI 2035/ÖNORM 5195). With electronic controller for weather guided control of the flow temperature of the heating system.

| | |
|---|---|
| Nominal size: | DN 20 |
| Operating pressure: | |
| Primary side: | PN 10 |
| Secondary side: | safety valve 3 bar |
| Max. primary temperature: | 90 °C |
| Max. primary volume flow: | 1300 l/h |
| Max. performance range: (with primary: 90/40 °C, secondary: 70/30 °C) | 75 kW |
| Display range of the pressure gauge: | 0 - 10 bar |
| Heating network and domestic connection: | G ¾ |

Dimensions: (W x H x D in mm): 470 x 680 x 295

**2** Components:

① Plate heat exchanger
② Pressure independent control valve "Cocon QTZ" with actuator
③ Strainer with venting and draining valve
④ Spacers for heat meter (110 mm)
⑤ Pressure gauge
⑥ Safety group
⑦ Electronic controller
⑧ Thermal insulation housing made of expanded polypropylene
⑨ Ball valves with thermometers on fixing plate
⑩ Thermal insulation housing made of expanded polypropylene

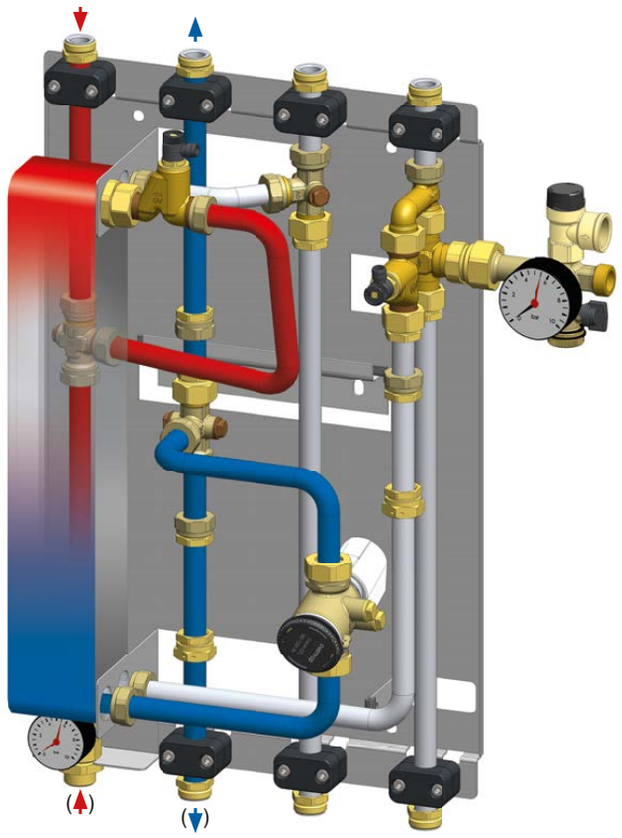
Connections:
(from the top and/or from below):

Ⓐ Local/district heating supply and potable water storage cylinder supply
Ⓑ Local/district heating return and potable water storage cylinder return
Ⓒ Domestic connection supply
Ⓓ Domestic connection return

**Advantages:**

- simple hydronic connection to the local heating network via the integrated pressure independent control valve "Cocon QTZ" (automatic hydronic balancing)
- direct or indirect connection facilities to the potable water system in the building
- heat meter integration option
- electronic control for weather guided flow temperature control and hot water preparation
- modular construction allowing various connection possibilities
- combination with the extensive product range of the Oventrop station technology
- complete product assembly with high functional reliability
- all components from one supplier
- high-quality materials
- technology allowing compact installation and easy maintenance

Primary side



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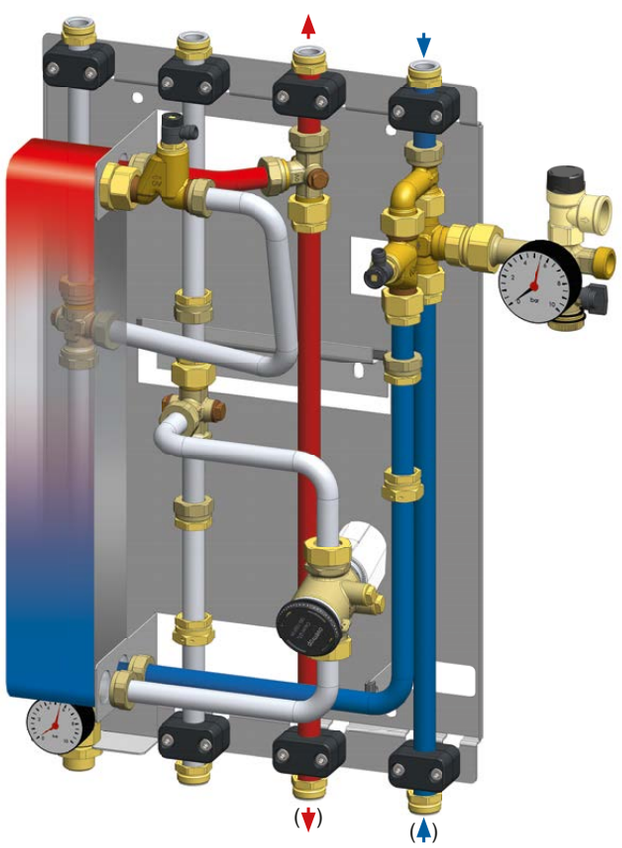
Secondary side



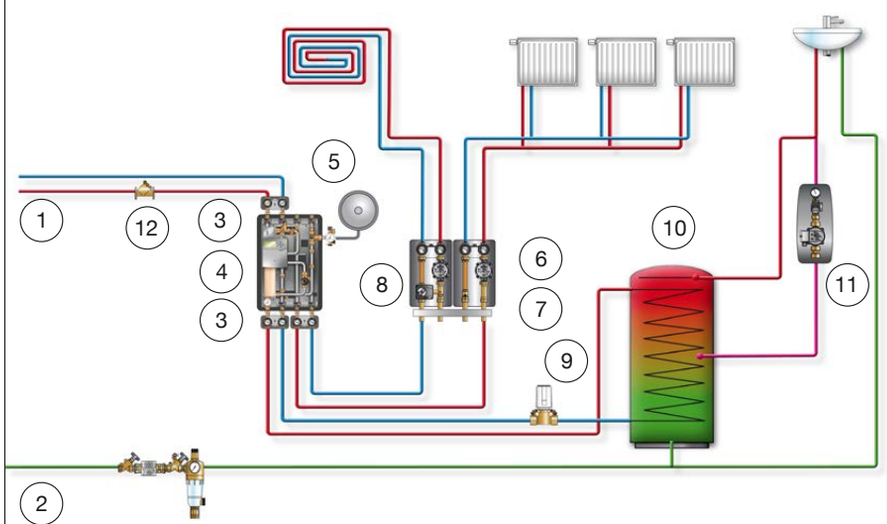
2

The modular construction of the transmission station “Regudis H-HT” allows for various connection possibilities without complex reconstruction measures.

**1 Connection possibilities on the primary side:**
The station can be connected to the local or district heating network from the top or from below. The connection to a **direct** hot potable water preparation can also be carried out from the top or from below.

**2 Connection possibilities on the secondary side:**
The connection possibilities from the top and from below allow for a flexible connection to the domestic heating system. The connections not in use are closed with blind plugs or are used for the **indirect** hot potable water preparation.

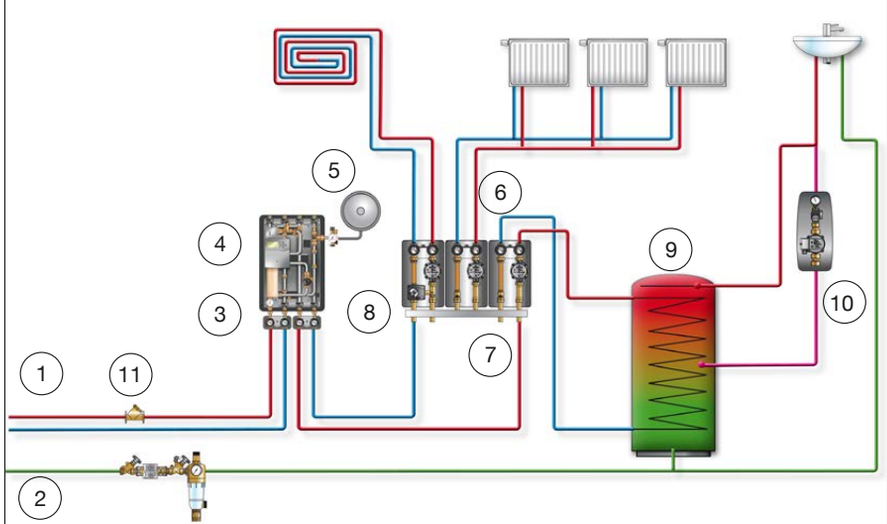
Illustration with direct hot potable water preparation




**1** System illustration:
Integration of the transmission station “Regudis H-HT” into a local or district heating network and the domestic installation with **direct** hot potable water preparation.

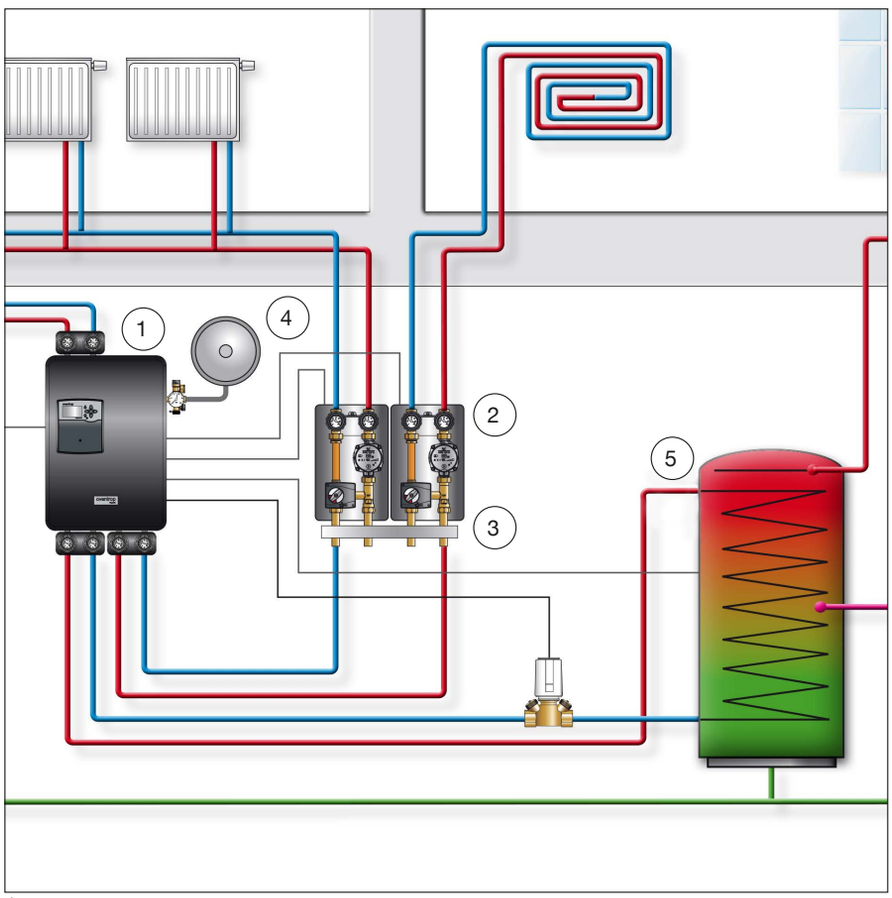
① Local/district heating network
② Potable water connection
③ Ball valve connection set
④ “Regudis H-HT”
⑤ Diaphragm expansion tank
⑥ “Regumat S”
⑦ Distributor
⑧ “Regumat M3”
⑨ “Hycocon HTZ” with actuator
⑩ “Hydrocor WM”
⑪ “Regucirc B”
⑫ Strainer PN 16

Illustration with indirect hot potable water preparation




**2** System illustration:
Integration of the transmission station “Regudis H-HT” into a local or district heating network and the domestic installation with **indirect** hot potable water preparation.

① Local/district heating network
② Potable water connection
③ Ball valve connection set
④ “Regudis H-HT”
⑤ Diaphragm expansion tank
⑥ “Regumat S”
⑦ Distributor
⑧ “Regumat M3”
⑨ “Hydrocor WM”
⑩ “Regucirc B”
⑪ Strainer PN 16




1

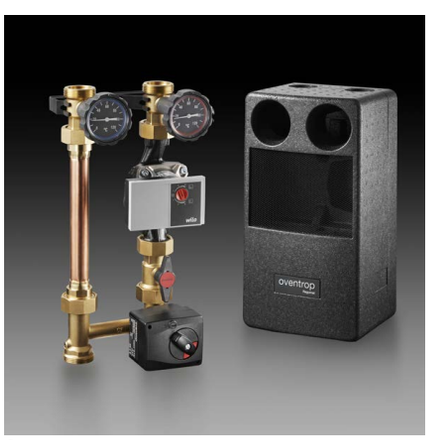
**1** System illustration of the Oventrop components for the heat distribution in the building:

① “Regudis H-HT”
② “Regumat M3-180”
③ Distributor DN 20/25
④ Diaphragm expansion tank
⑤ “Hydrocor WM”

**2** “Regumat M3-180” Boiler connection system for the connection of the transmission station to the heating system. Product assembly with high-efficiency pump and three-way mixing valve.

**3** Distributor DN 20/25, module distributor or hydronic header/distributor combination for the distribution of the volume flows of the transmission station to up to 8 heating circuits.

**4** “Hydrocor WM” monovalent potable water storage cylinder with internal tube collector. Thermal insulation made of PUR rigid foam. **Type 120, energy efficiency class B, item no. 1395010**

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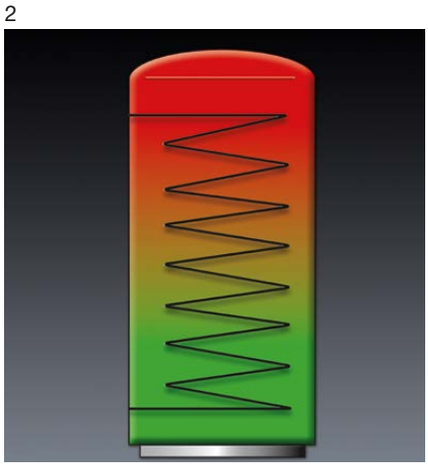

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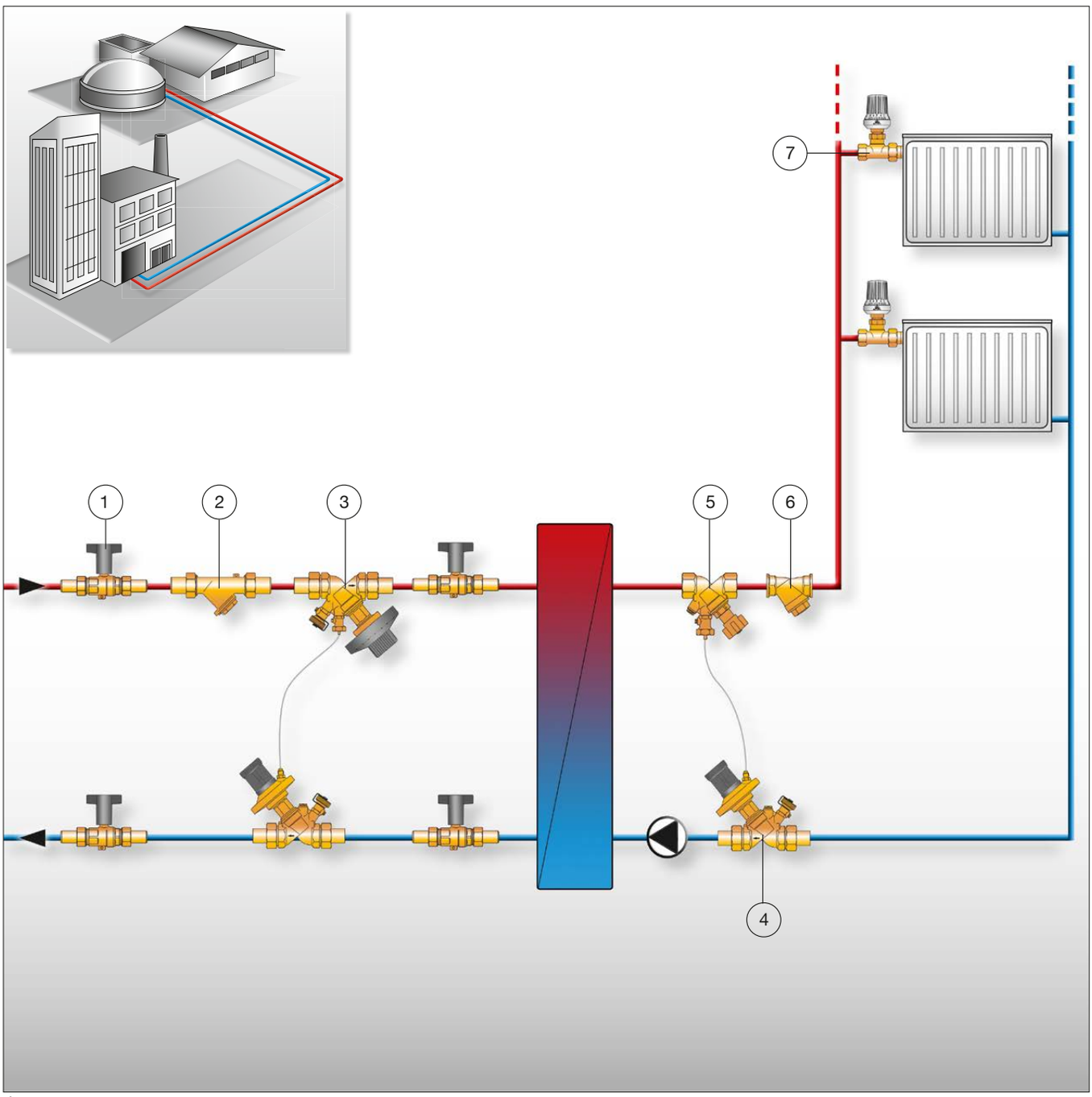


1

As the district heating connections of buildings are subjected to high operating pressures and temperatures, the selection of suitable components is of major importance.

Oventrop district heating components have to comply with high quality standards. They distinguish themselves by a high pressure and temperature resistance and offer maximum security over years.

**Advantages:**
- products of high functionality and quality
- flow temperature up to 150 °C (“Series AF”, ”Hydromat DTR/QTR” up to 120 °C)
- designed for high pressure ratings
- technology for compact installation and easy maintenance

**1** System illustration of a district heating connection
① “Optibal “ Ball valve PN 40 (alternatively isolating valve)
② Strainer PN 16/25
③ “Hydromat QTR” Flow regulator, male threads with collar nuts
④ “Hydromat DTR” Differential pressure regulator, male threads with collar nuts
⑤ “Hydrocontrol ATR” Isolating and orifice valve
⑥ Strainer PN 16
⑦ “Series AF” District heating valve

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**1** Thermostatic valve “Series AF” (with red protection cap), especially designed for installations with high temperature difference and a precise presetting at the radiator.
**2** Double regulating and commissioning valve “Hydrocontrol VTR”, oblique pattern, with secured, infinitely adjustable fine presetting controllable at any time. Optical display of the presetting depending on the position of the handwheel. All functional components in one plane. Installation in either the supply or the return pipe.
**3** Differential pressure regulator “Hydromat DTR” for the constant control of a set nominal value as proportional regulator working without auxiliary energy. Infinitely adjustable nominal value between 50 and 300 mbar or between 250 and 700 mbar. The nominal value can be locked and is visible from outside. With concealed isolating facility and with ball valve for draining and filling. Installation in the return pipe.
**4** Bronze oblique pattern globe valve PN 25, both ports with flat sealing weldable steel tailpipes. Bonnet secured against accidental release, washer made of PTFE, DN 15 – DN 32. Lockshield spindle available as spare part.
**5** Bronze oblique pattern drain valve PN 25, one port with flat sealing weldable steel tailpipe, one port with cap. Bonnet secured against accidental release, DN 15 – DN 32. Lockshield spindle available as spare part.
**6** Bronze ball valve PN 40, both ports with flat sealing weldable steel tailpipes. Chrome plated brass ball with PTFE seats. DN 15 – DN 32.
**7** Bronze “Y” type strainer PN 25, both ports with flat sealing weldable steel tailpipes. Wire basket made of stainless chromium steel, mesh size 0.6 mm, DN 15 – DN 32. Airvent PN 25, body made of weldable steel, stem made of DZR 5 brass, DN 15.

Further information can be found in the Oventrop catalogue “Products” and on the internet: **www.oventrop.de**

Subject to technical modifications without notice.

Private persons may purchase our products from their qualified installer.

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