

Tender specification:

Oventrop thermostatic valve made of bronze/brass for use in cooling water circuits with regulation characteristics, body nickel plated. Stainless steel stem with double seal. O-rings and valve seat made of EPDM. Complete valve insert is replaceable during operation by using the special tool “Demo-Bloc”.

Connection for threaded pipes or compression fittings.

Technical data:

Max. operating temperature t_s : 120 °C
(for short periods up to 130 °C)

Min. operating temperature t_s : -20 °C

Max. operating pressure p_s : 10 bar (PN 10)

Max. differential pressure: 0.5 bar

Models:

| | k_v | k_v | k_{vs} | Item no.: |
|-------------------------------------|-------------|-------------|----------|-----------|
| | 1K | 2K | | |
| | P-deviation | P-deviation | | |
| Angle pattern valve | | | | |
| DN 15 | 0.25 | 0.50 | 1.00 | 1141704 |
| DN 20 | 0.25 | 0.50 | 1.00 | 1141706 |
| DN 25 | 0.25 | 0.50 | 1.00 | 1141708 |
| Straight pattern valve | | | | |
| DN 15 | 0.25 | 0.50 | 1.00 | 1141804 |
| DN 20 | 0.25 | 0.50 | 1.00 | 1141806 |
| DN 25 | 0.25 | 0.50 | 1.00 | 1141808 |
| Reversed angle pattern valve | | | | |
| DN 15 | 0.25 | 0.50 | 1.00 | 1141904 |
| DN 20 | 0.25 | 0.50 | 1.00 | 1141906 |
| Valve insert | | | | 1147169 |

Description and function:

Oventrop thermostatic valves for use in cooling water circuits are proportional regulators working without auxiliary energy. They regulate the room temperature by varying the volume flow of cooling water. The valve opens with the temperature at the sensor rising.

The Oventrop thermostats “Uni XH” and “Uni LH” with remote sensor or the Oventrop thermostats with remote control “Uni FH” are used for valve actuation.

Application:

These control valves were developed for the control of fan coil units and induction air systems which are installed in two or four pipe systems.

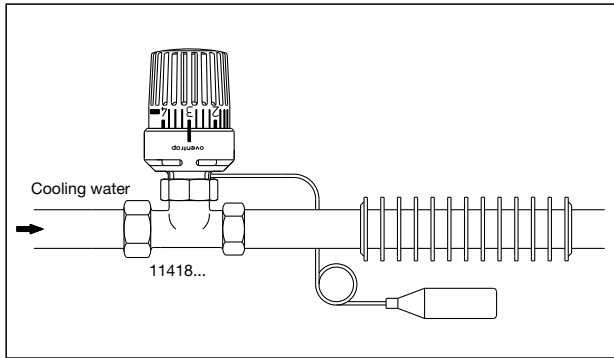
When designing the induction air appliance in a two pipe system, it has to be observed that only the secondary cooling load, such as sunshine, human heat emission and heat emitted by lighting are absorbed by the heat exchanger of the appliance. Otherwise unwanted cooling could take place in winter.

When using this control valve in four pipe systems with two heat exchangers, a second thermostatic valve (valve closes with the temperature at the sensor rising) is required for the control of the heating circuit.

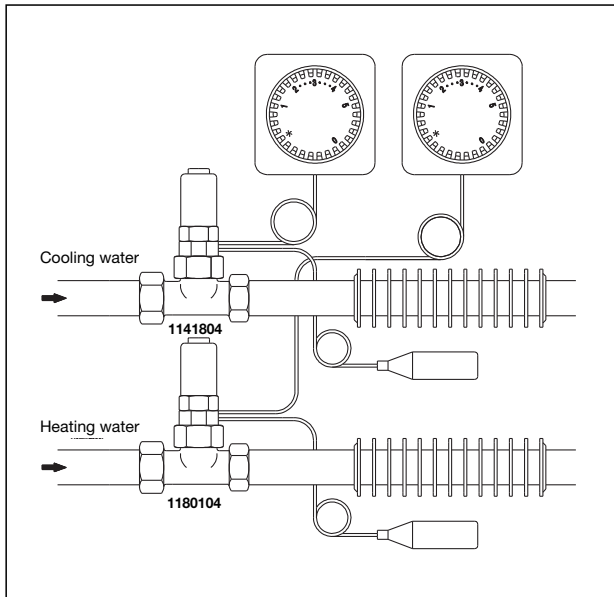
During the construction period, the valve may be operated with the screw cap. The screw cap may not be used for a permanent closure of the valve. A metal cap has to be fitted to the connection nipple at the outlet port of the valve.



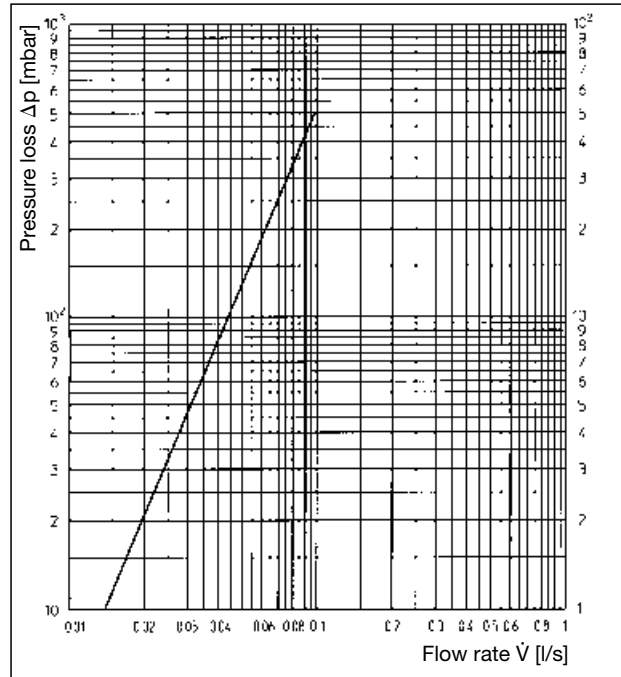
Thermostatic valve “Series KTB” for cooling water circuits



System illustration – Two pipe cooling system



System illustration – Four pipe system with 2 heat exchangers



Performance data

All patterns and sizes at 2 K P-deviation

Flow rate depending on the pressure loss at 2 K P-deviation

k_v - and Zeta values:

| DN | di | k_v | Zeta |
|----|------|-------|------|
| 15 | 12.5 | 0.5 | 150 |
| 20 | 16.0 | 0.5 | 404 |
| 25 | 21.6 | 0.5 | 1340 |

Zeta values related to the inner pipe diameter according to DIN EN 10255.

k_v -values in m^3/h at Δp 1 bar, at 2 K P-deviation
 $k_{vs} = 1.0$

Thermostats

Thermostat “Uni XH” with remote sensor

| | | |
|-------------|----------|-----------------------------|
| white model | | M 30 x 1.5 |
| Capillary | 2 m long | 1011565 with ‘0’ setting |
| | 5 m long | 1011566 with ‘0’ setting |
| | 2 m long | 1011582 without ‘0’ setting |

Thermostat “Uni LH” with remote sensor

| | | |
|-------------|------------|-----------------------------|
| white model | | M 30 x 1.5 |
| Capillary | 0.5 m long | 1011664 with ‘0’ setting |
| | 2 m long | 1011665 with ‘0’ setting |
| | 5 m long | 1011666 with ‘0’ setting |
| | 10 m long | 1011667 with ‘0’ setting |
| | 2 m long | 1011682 without ‘0’ setting |

Thermostat with remote control “Uni FH”

| | | |
|-------------|-----------|--------------------------|
| white model | | |
| Capillary | 2 m long | 1012295 with ‘0’ setting |
| | 5 m long | 1012296 with ‘0’ setting |
| | 10 m long | 1012297 with ‘0’ setting |

with additional remote sensor

| | | |
|-----------|----------|--------------------------|
| Capillary | 2 m long | 1012395 with ‘0’ setting |
| | 5 m long | 1012396 with ‘0’ setting |

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