oventrop

“Hydrocontrol MTR” PN 25
Bronze double regulating and commissioning valves with integrated measuring orifice

Technical information

Application:

Oventrop double regulating and commissioning valves “Hydrocontrol MTR” with integrated measuring orifice and pressure test points with “classic” measuring technique are installed in the risers of hot water central heating and cooling systems and serve to achieve a hydronic balance between the risers of the system.

Hydronic balancing is carried out by setting the double regulating and commissioning valve during flow measurement at the measuring orifice.

The balance can also be achieved by the reproducible presetting at the valve.

The double regulating and commissioning valves “Hydrocontrol MTR” may be installed in the supply and the return pipe.

When installing the valve it must be ensured that the direction of flow conforms to the direction of the arrow on the valve body and that the valve in installed with a minimum of L = 5 x Ø of straight pipe at the valve inlet and of L = 2 x Ø of straight pipe at the valve outlet.

In cooling systems using mixtures of water and glycol, correction factors have to be taken into consideration.

Advantages:

- the location of the functional components in <u>one</u> plane allows for a simple installation and easy operation
- the constant k_V value of the measuring orifice for all presetting values allows for a simple and quick regulation
- only <u>one</u> valve for 3 functions:
  presetting
  measuring
  isolating
- the supply and return pipe can be marked by use of the colour rings supplied with each valve
- low pressure loss (oblique pattern)
- infinitely adjustable presetting, exact measurement of the flow rate via the measuring orifice
- threads according to EN 10226, suitable for Oventrop compression fittings (item no. 102 71 51-58) for copper pipes up to max. diameter of 22 mm and the Oventrop composition pipe “Copipe”
- the integrated measuring orifice allows for an exact measurement of the pressure loss which is proportional to the flow rate
- the k_V value of the integrated measuring orifice is indicated on the marking plate

Tender specification:

Double regulating and commissioning valve PN 25 (water pH value 6.5-10) both ports female thread according to EN 10226 and integrated measuring orifice, not suitable for steam. Colour rings for marking the supply and return pipe. Oblique pattern with secured, infinitely adjustable fine presetting controllable at any time. Valve body and bonnet made of bronze, disc, stem and measuring orifice made of dezincification resistant brass. Disc with PTFE seal. Maintenance-free stem seal due to double O-ring. All functional components in one plane. Installation in the supply and the return pipe.

Technical data:

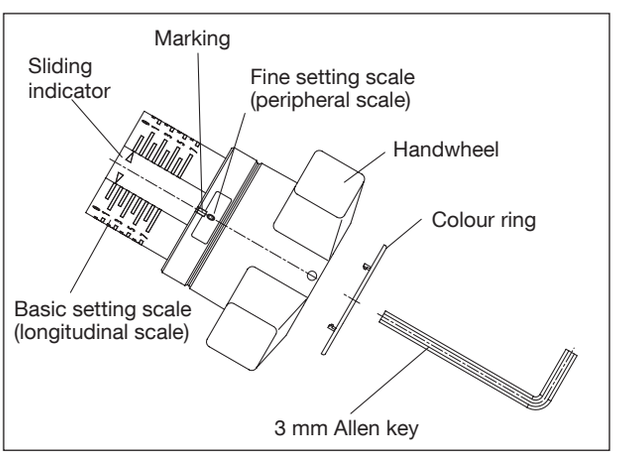
Max. operating temperature t_s:150 °C
Min. operating temperature t_s: -20 °C
Max. operating pressure p_s: 25 bar (PN 25)

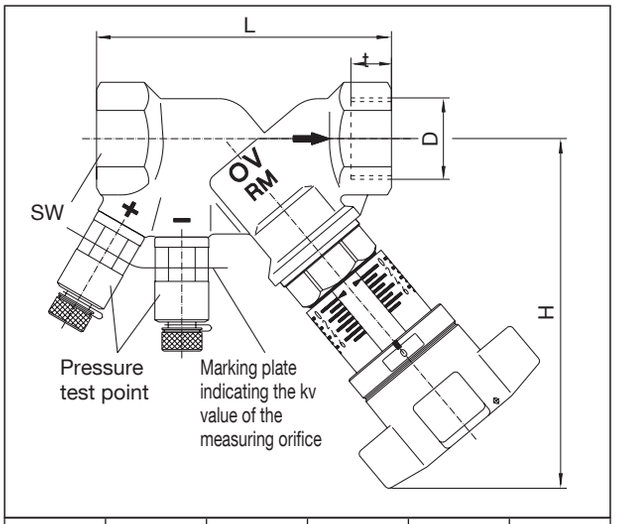
“Hydrocontrol MTR”

DN	Item no.	k_{VS}	k_V value of the integrated measuring orifice
15 LF	1060464	0.55	0.55
15 MF	1060434	1.15	1.2
15 HF	1060404	2.1	2.2
20	1060406	3.7	4.25
25	1060408	6.1	8.6
32	1060410	12.5	15.9
40	1060412	18.1	23.4
50	1060416	30.5	47.0

Presetting:

1. The presetting value of the valve is set by turning the handwheel.
   a. The basic setting is displayed by the longitudinal scale together with the sliding indicator.
   Each turn of the handwheel is represented by a line on the longitudinal scale.
   b. The fine setting is displayed by the peripheral scale together with the marking. The subdivisions of the peripheral scale correspond to 1/10th of a turn of the handwheel.
2. The set presetting value is limited by turning the inner adjustment stem clockwise until it seats. This can be done by using the long end of a 3 mm Allen key.





DN	D EN 10226	t	L	H	SW*
15	Rp ½	13,2	87	114	27
20	Rp ¾	14,5	96	116	32
25	Rp 1	16,8	102	119	41
32	Rp 1¼	19,1	119	136	50
40	Rp 1½	19,1	132	138	55
50	Rp 2	25,7	163	148	70

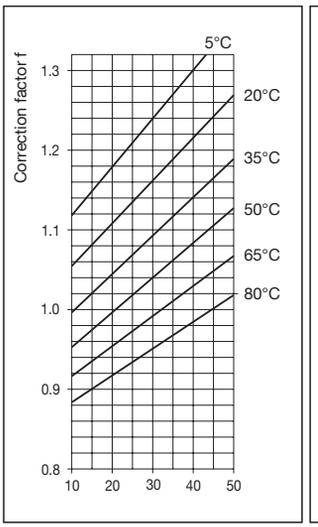
Dimensions “Hydrocontrol MTR”

*SW = spanner size

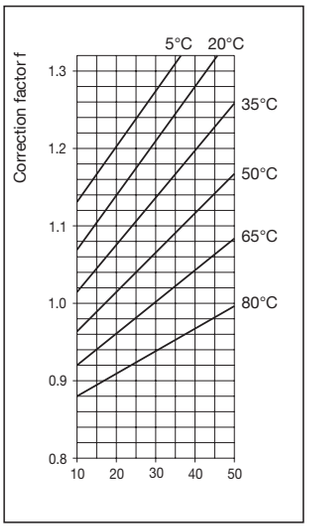
Accessories:	**Item no.:**
Pressure test point extension (80 mm)	1060295
Pressure test point extension (40 mm)	1688295
Stem extension (35 mm)	1688296
Lead sealing set (10 fold)	1089091
Locking set (1fold)	1060180

Correction factors for mixtures of water and glycol:

When antifreeze liquids are added to the heating water, the pressure loss obtained from the chart ,must be multiplied by the correction factor f.



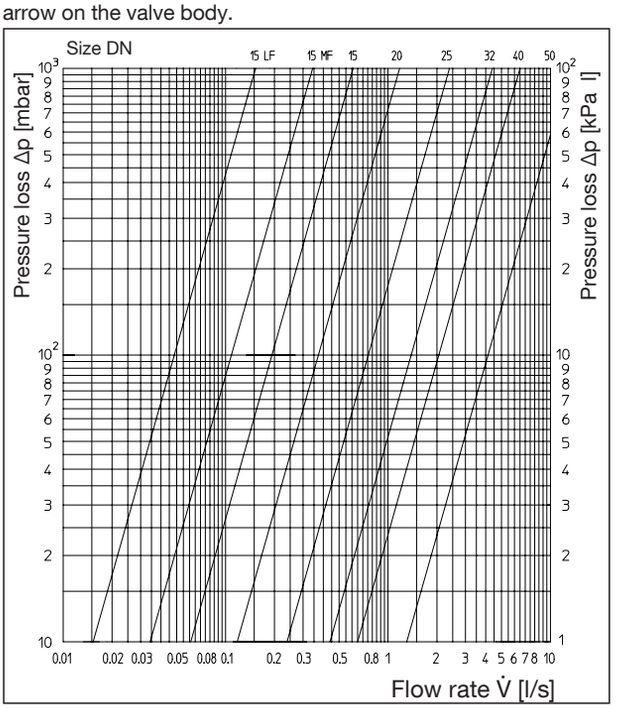
Weight proportion of ethylene glycol [%]



Weight proportion of propylene glycol[%]

Flow charts:

The flow charts are valid for installation of the double regulating and commissioning valves in the supply and the return pipe, provided the direction of flow conforms to the direction of the arrow on the valve body.



DN	15LF	15MF	15HF	20	25	32	40	50
kv	0.55	1.20	2.20	4.25	8.60	15.90	23.40	47.00

Measuring orifice

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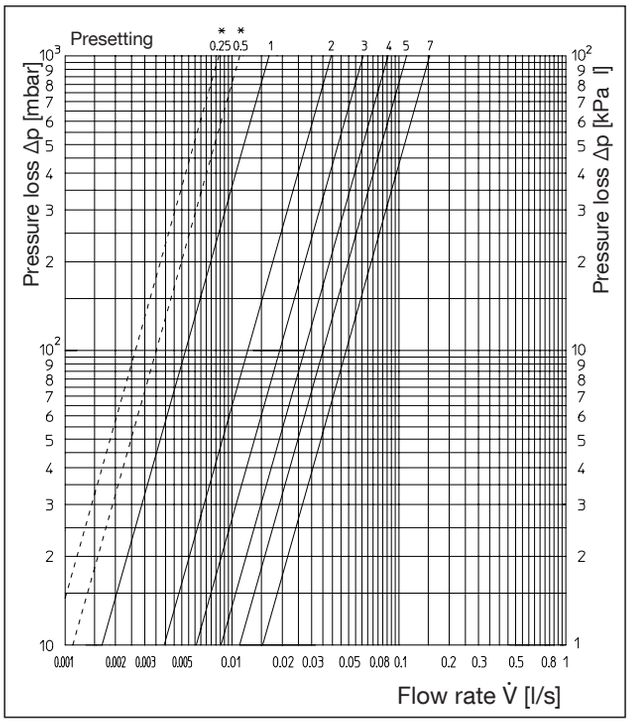
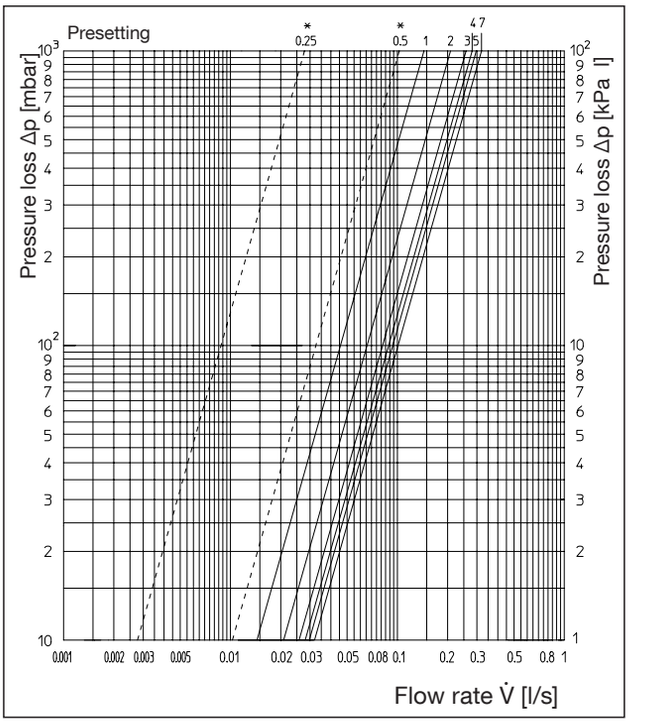
DN 15 LF



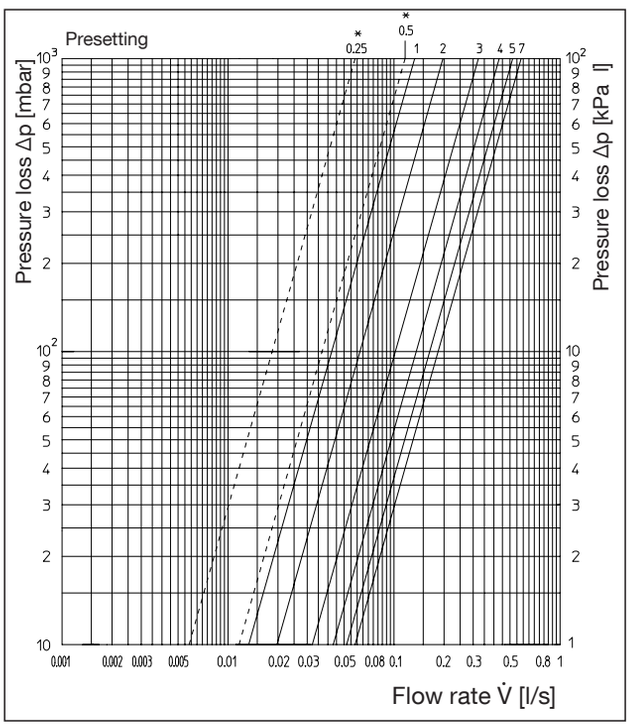
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 15 MF



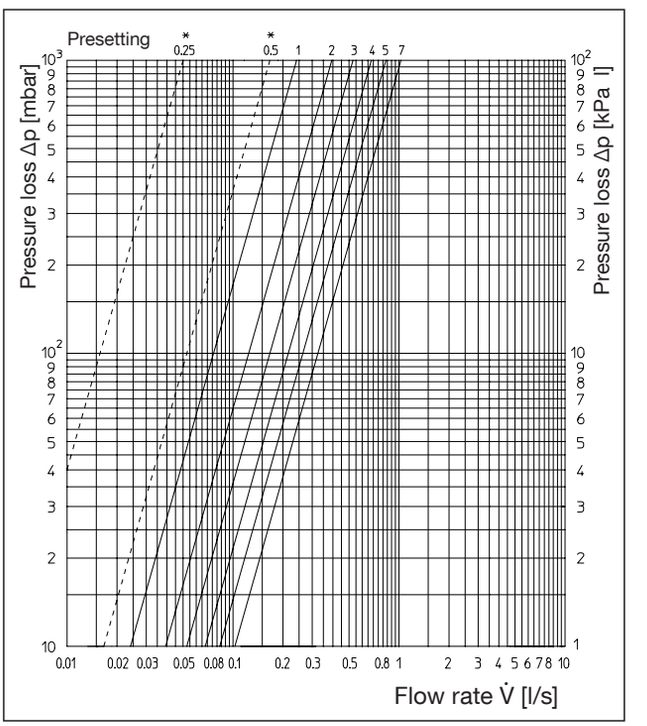
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 15 HF



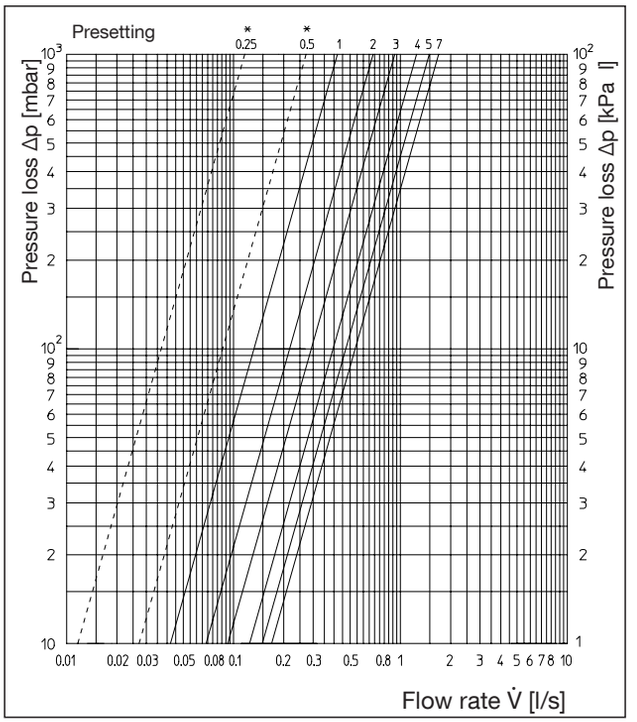
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 20



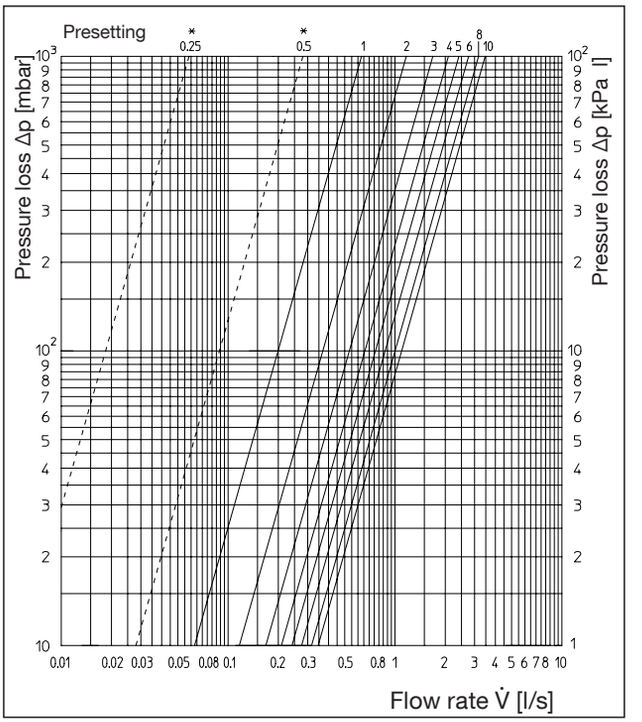
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 25



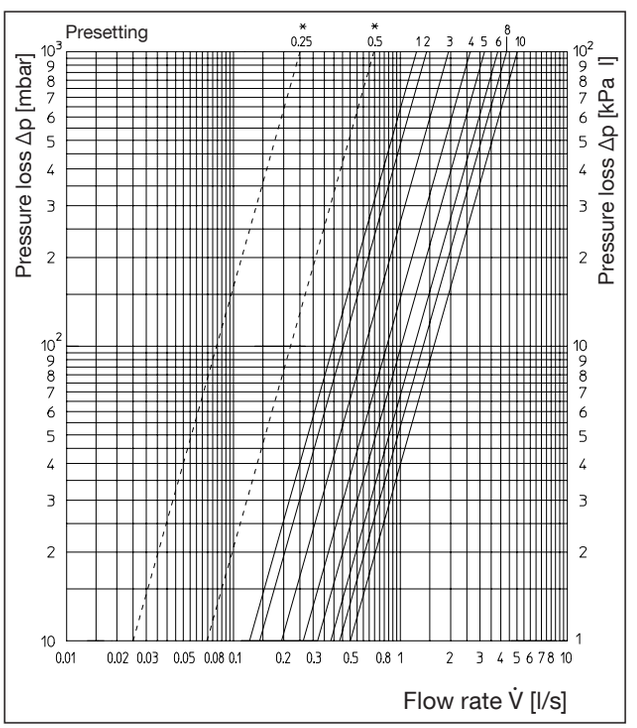
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 32



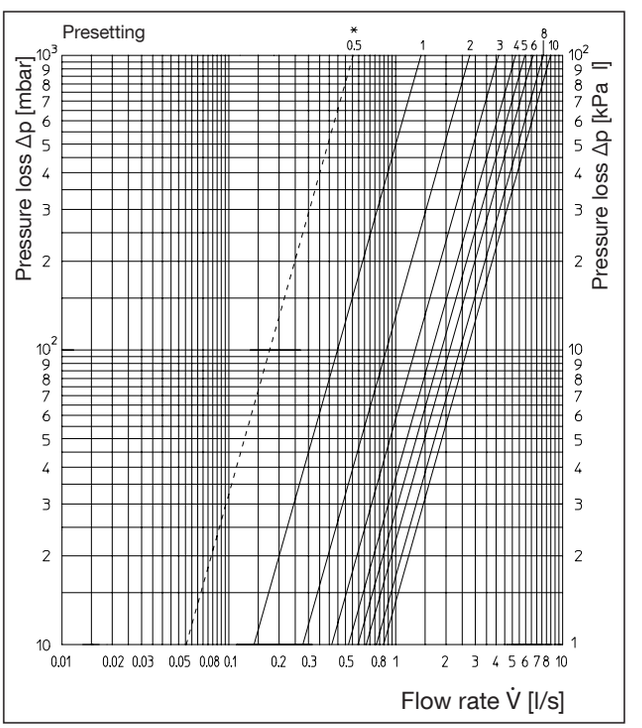
Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 40



Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

DN 50



Avoid presetting < 1, to achieve a sufficiently high flow accuracy.

Subject to technical modifications without notice.

Product range 2.1
ti 224-EN/10/MW
Edition 2020

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