

### Function:

Oventrop double regulating and commissioning valves are installed in the pipework of hot water central heating and cooling systems and serve to achieve a hydronic balance between the various circuits of the system.

The balance is achieved by a presetting with memory lock.

The required presetting values can be obtained from the flow charts. All intermediate values are infinitely adjustable.

The selected presetting can be read off two scales (basic scale and fine adjustment scale, see illustration presetting). The Oventrop double regulating and commissioning valves have 2 threaded ports for fill and drain ball valves or pressure test points for the measurement of differential pressure.

The double regulating and commissioning valves may be installed in either the supply or 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 is installed with a minimum of  $L = 3 \times \varnothing$  of straight pipe at the valve inlet and of  $L = 2 \times \varnothing$  of straight pipe at the valve outlet.

The flow charts are valid for both, installation in the supply or the return pipe, provided the direction of flow conforms to the arrow on the valve body.

In cooling systems using mixtures of water and glycol, the correction factors related to the indicated chart values have to be taken into consideration.

### Advantages:

- the location of the functional components in one plane allows a simple assembly and easy operation
- only one valve for 5 functions:
  - presetting
  - measuring
  - isolating
  - filling
  - draining
- the supply and the 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 pressure loss and flow via the pressure test points
- threads according to EN 10226 (BS 21), suitable for Oventrop compression fittings (1027151-58) for copper pipes up to a max. diameter of 22 mm and Oventrop composition pipe “Copipe”
- fill and drain ball valve with internal stop and pressure test point with O-ring seal between valve body and test point (no additional seals required)
- patented measuring channel led around the stem assembly to the test points ensures the best possible accuracy between the differential pressure measured at the pressure test points and the actual differential pressure of the valve (see chart indicating flow rate tolerances)



“Hydrocontrol VTR”



both ports male thread  
for weldable steel tailpipes  
DN 10 up to DN 50

or:

... for solder tailpipes 15 mm  $\varnothing$  up to 54 mm  $\varnothing$

or:

... for threaded tailpipes DN 10 up to DN 50

or:

...for female threaded tailpipes DN 15 up to DN 32



both ports female thread according to EN 10226 (BS 21)  
DN 10 to DN 65

**Double regulating and commissioning valve  
“Hydrocontrol VTR” both ports with female thread  
according to EN 10226 (BS 21)  
Measuring technique “classic”**

**Tender specification:**

Double regulating and commissioning valve PN 25 (water pH value 6.5-10) (DN 65: PN 16), both ports with female thread according to EN 10226 (BS 21), not suitable for steam. Colour rings for marking of supply and return pipe (except for DN 65), oblique pattern with secured, infinitely adjustable fine presetting controllable at any time; optical display of the presetting depending on the position of the handwheel, valve body and bonnet made of bronze (Rg 5), disc and stem made of brass resistant to de-zincification (DZR), disc with PTFE seal, maintenance-free stem seal due to double O-ring, all functional components in one plane, pressure test point and fill and drain ball valve interchangeable, installation in the supply or the return pipe. DN 15 up to DN 32 DVGW tested and registered, DN 10 up to DN 50 WRAS tested and registered.

DN 10 to DN 50 with type approval certificate for shipbuilding.  
(Pressure loss charts,  $k_v$  and Zeta values, see following pages)

**Technical data:**

Max. operating temperature  $t_s$ : +150 °C  
(press connection: +120 °C)  
Min. operating temperature  $t_s$ : -20 °C  
Max. operating pressure  $p_s$ : 25 bar (PN 25)  
(female thread, DN 10-DN 50)  
16 bar (PN 16)  
(press connection, DN 65)

Double regulating and commissioning valves both ports with female thread according to EN 10226 (BS 21) with threaded ports for accessories sets (closed with blind plugs)

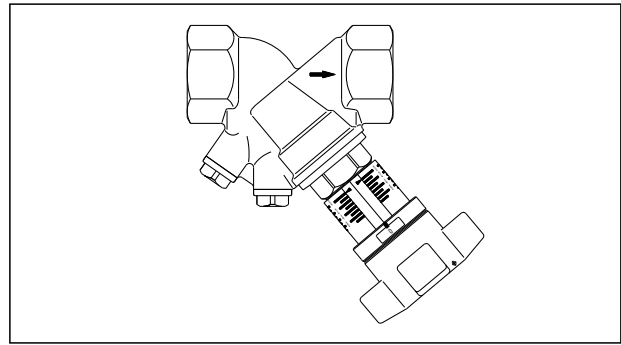
		Item no.
DN 10	3/8"	1060103
DN 15	1/2"	1060104
DN 20	3/4"	1060106
DN 25	1"	1060108
DN 32	1 1/4"	1060110
DN 40	1 1/2"	1060112
DN 50	2"	1060116
DN 65	2 1/2"	1060120

both ports female thread according to EN 10226 (BS 21) with mounted accessories set no. 2 = 2 pressure test points G 1/4"

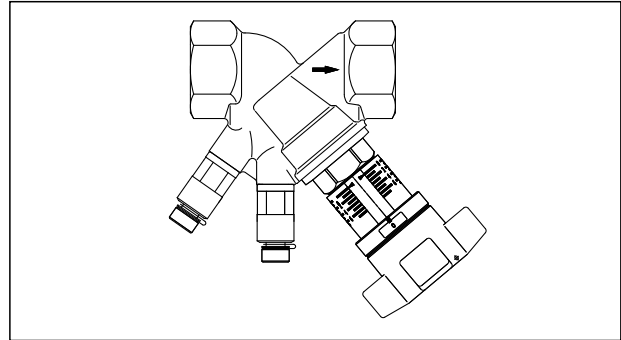
		Item no.
DN 10	3/8"	1060203
DN 15	1/2"	1060204
DN 20	3/4"	1060206
DN 25	1"	1060208
DN 32	1 1/4"	1060210
DN 40	1 1/2"	1060212
DN 50	2"	1060216

both ports female thread according to EN 10226 (BS 21) with mounted accessories set no. 3 = 1 pressure test point G 1/4" and 1 fill and drain ball valve G 1/4"

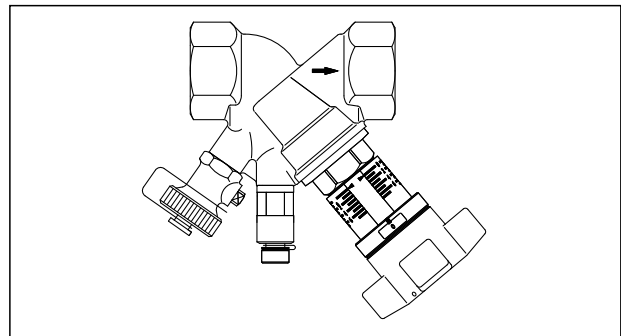
		Item no.
DN 10	3/8"	1060303
DN 15	1/2"	1060304
DN 20	3/4"	1060306
DN 25	1"	1060308
DN 32	1 1/4"	1060310
DN 40	1 1/2"	1060312
DN 50	2"	1060316



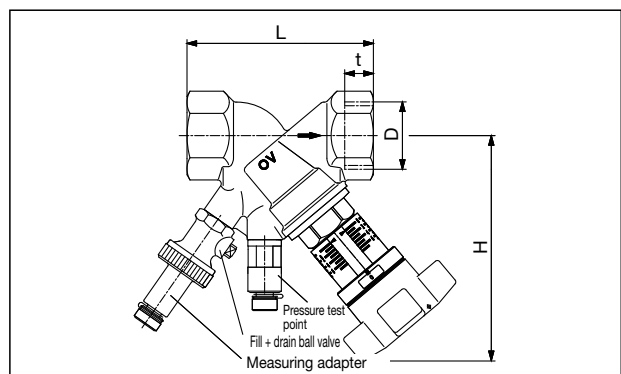
both ports female thread according to EN 10226 (BS 21), item no. 10601..



both ports female thread according to EN 10226 (BS 21), item no. 10602..



both ports female thread according to EN 10226 (BS 21), item no. 10603..



DN	D EN 10226	t	L	H
10	Rp 3/8	10.1	73	114
15	Rp 1/2	13.2	80	114
20	Rp 3/4	14.5	84	116
25	Rp 1	16.8	97.5	119
32	Rp 1 1/4	19.1	110	136
40	Rp 1 1/2	19.1	120	138
50	Rp 2	25.7	150	148
65	Rp 2 1/2	20.0	151	186

Dimensions

**Double regulating and commissioning valve**  
**“Hydrocontrol VPR” both ports with press connection**

**Measuring technique “classic”**

Size	$k_{VS}$ value		Item no.
DN 15	3.88	15 mm	1060151
DN 15	3.88	18 mm	1060152
DN 20	5.71	22 mm	1060154
DN 25	8.89	25 mm	1060156
DN 32	19.45	35 mm	1060158
DN 40	27.51	42 mm	1060160
DN 50	38.78	54 mm	1060162

For the direct connection of copper pipes according to EN 1057/DVGW GW 392, stainless steel pipes according to EN 10088/DVGW 541 and thin-walled C-steel pipes (material no. E 195/1.0034) according to EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the original contours SANHA (SA), Geberit-Mapress (MM) or Viega (Profipress). Processing must be carried out according to the installation instructions.

Accessories sets:	Item no.
1 fill and drain ball valve	1060191
2 pressure test points	1060281
1 pressure test point	
1 fill and drain ball valve	1060381
1 extension for accessories sets (80 mm)	1060295
1 extension for accessories sets (40 mm)	1688295
1 measuring adapter	1060298
1 stem extension (DN 10 - DN 50, 35 mm)	1688296
Lead sealing set (10-fold)	1089091
Locking set (1-fold)	1060180

**Double regulating and commissioning valve**  
**“Hydrocontrol VTR” both ports with male thread and collar nut**  
**Measuring technique “classic”**

**Tender specification:**

Double regulating and commissioning valve PN 16 (PN 20 for cold water, pH value 6.5-10), both ports with male thread and collar nut for weldable, solder and threaded tailpipes, flat sealing, between -20°C and +150°C, not suitable for steam. Colour rings for marking of supply and return pipe, oblique pattern with secured, infinitely adjustable fine presetting controllable at any time; optical display of the presetting depending on the position of the handwheel, valve body and bonnet made of bronze (Rg 5), disc and stem made of brass resistant to dezincification (DZR), disc with PTFE seal, maintenance-free stem seal due to double O-ring, all functional components in one plane, pressure test point and fill and drain ball valve interchangeable, installation in the supply or the return pipe.

DN 15 to DN 32 DVGW tested and registered.

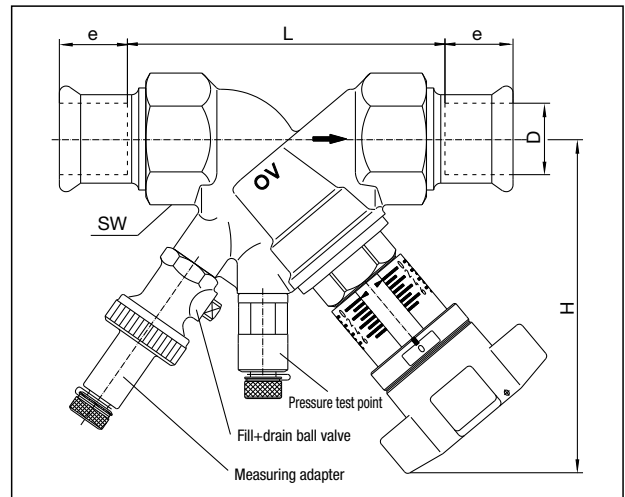
DN 10 to DN 50 with type approval certificate for shipbuilding.

(Pressure loss charts,  $k_V$  and Zeta values, see following pages)

Double regulating and commissioning valves both ports male thread and collar nut, with threaded ports for accessories sets (closed with blind plugs)

Size		Item no.
DN 10	3/8"	1060503
DN 15	1/2"	1060504
DN 20	3/4"	1060506
DN 25	1"	1060508
DN 32	1 1/4"	1060510
DN 40	1 1/2"	1060512
DN 50	2"	1060516

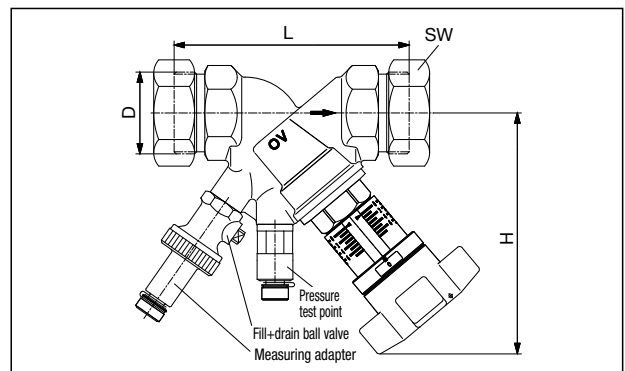
Accessories sets:	Item no.
1 fill and drain ball valve	1060191
2 pressure test points	1060281
1 pressure test point	
1 fill and drain ball valve	1060381
1 extension for accessories sets (80 mm)	1060295
1 extension for accessories sets (40 mm)	1688295
1 measuring adapter	1060298
1 stem extension (DN 20 to DN 50, 35 mm)	1688296
Lead sealing set (10-fold)	1089091
Locking set (1-fold)	1060180



DN	D	e	L	H	SW*
15	15	18	85	114	27
15	18	20	85	114	27
20	22	24	91	116	32
25	28	27	104.5	119	41
32	35	32	119	136	50
40	42	37.5	129	138	55
50	54	42.5	159	148	70

Dimensions “Hydrocontrol VPR”

\*SW = spanner size

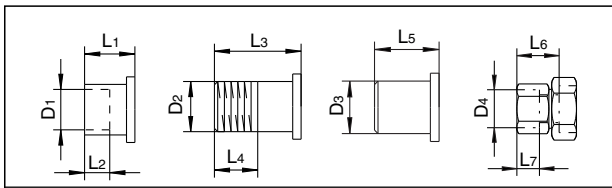


DN	D ISO 228	L	H	SW*
10	G 5/8	86	114	26
15	G 3/4	88	114	30
20	G 1	93	116	37
25	G 1 1/4	110	119	46
32	G 1 1/2	110	136	52
40	G 1 3/4	120	138	58
50	G 2 3/8	150	148	75

Dimensions “Hydrocontrol VTR”

\*SW = spanner size

**“Hydrocontrol VTR/VPR”  
Bronze double regulating and commissioning valves PN 16/PN 25**



DN	D1	L1	L2	D2 EN 10226	L3	L4	D3	L5	D4 EN 10226	L6	L7
10	-	-	-	R 3/8	25	10.1	16	50	-	-	-
15	15	18	12	R 1/2	31	13.2	20.5	50	Rp 1/2	37	13.2
20	18	23	15	R 3/4	34	14.5	26	50	Rp 3/4	39	14.5
20	22	24	17	-	-	-	-	-	-	-	-
25	28	27	20	R 1	40	16.8	33	60	Rp 1	53	16.8
32	35	32	25	R 1 1/4	46	19.1	41	60	Rp 1 1/4	55	19.1
40	42	37	29	R 1 1/2	49	19.1	47.5	65	-	-	-
50	54	50	40	R 2	55	23.4	60	65	-	-	-

Dimensions

Tailpipe sets:

2 weldable tailpipes

- for valve DN 10
- for valve DN 15
- for valve DN 20
- for valve DN 25
- for valve DN 32
- for valve DN 40
- for valve DN 50

- Item no.
- 1060591
- 1060592
- 1060593
- 1060594
- 1060595
- 1060596
- 1060597

2 solder tailpipes

- 15 mm for valve DN 15
- 18 mm for valve DN 20
- 22 mm for valve DN 20
- 28 mm for valve DN 25
- 35 mm for valve DN 32
- 42 mm for valve DN 40
- 54 mm for valve DN 50

- 1061092
- 1061093
- 1061094
- 1061095
- 1061096
- 1061097
- 1061098

2 tailpipes with male thread

- R 3/8 for valve DN 10
- R 1/2 for valve DN 15
- R 3/4 for valve DN 20
- R 1 for valve DN 25
- R 1 1/4 for valve DN 32
- R 1 1/2 for valve DN 40
- R 2 for valve DN 50

- 1061491
- 1061492
- 1061493
- 1061494
- 1061495
- 1061496
- 1061497

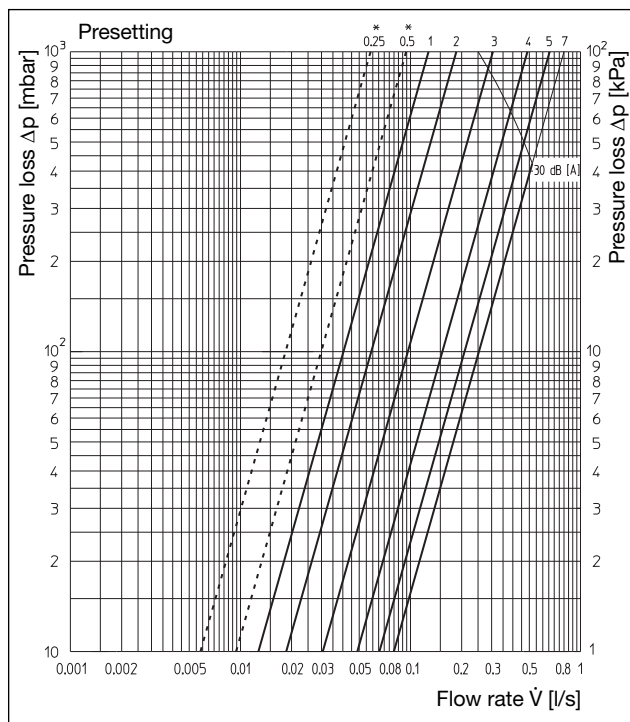
2 tailpipes with female thread

- Rp 1/2 for valve DN 15
- Rp 3/4 for valve DN 20
- Rp 1 for valve DN 25
- Rp 1 1/4 for valve DN 32

- 1019364
- 1019366
- 1061394
- 1061395

**Flow charts for double regulating and commissioning valves:**

**DN 10**

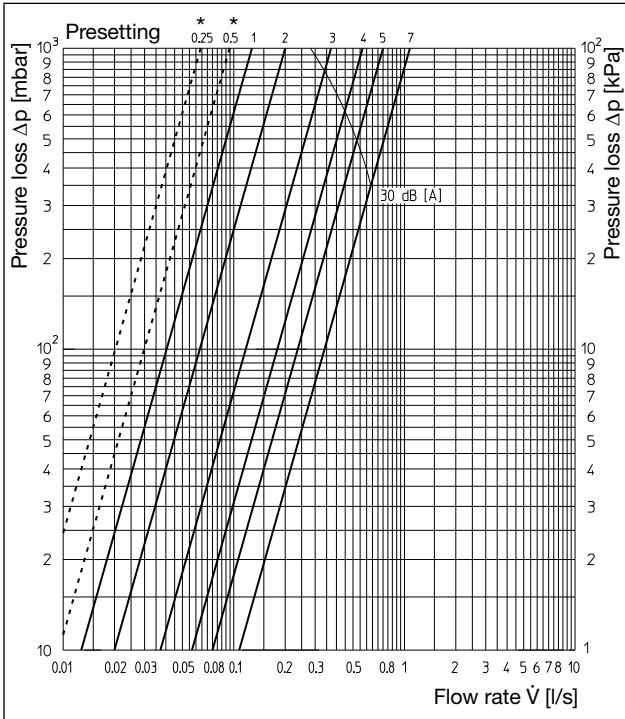


\* Avoid presetting < 1, see tolerance curve page 9.

Turn	k <sub>v</sub> -value	Zeta-value	Turn	k <sub>v</sub> -value	Zeta-value	Turn	k <sub>v</sub> -value	Zeta-value
0.25	0.21	885						
0.5	0.34	335						
0.75	0.40	244						
1.	0.46	184	5.	2.37	6.9			
1.1	0.48	169	5.1	2.42	6.7			
1.2	0.50	156	5.2	2.47	6.4			
1.3	0.52	144	5.3	2.52	6.1			
1.4	0.54	134	5.4	2.56	6.0			
1.5	0.56	124	5.5	2.60	5.8			
1.6	0.58	116	5.6	2.63	5.6			
1.7	0.60	108	5.7	2.66	5.5			
1.8	0.63	98	5.8	2.69	5.4			
1.9	0.65	92	5.9	2.72	5.3			
2.	0.67	87	6.	2.75	5.2			
2.1	0.70	80	6.1	2.77	5.1			
2.2	0.73	73	6.2	2.79	5.0			
2.3	0.76	68	6.3	2.81	4.9			
2.4	0.79	63	6.4	2.83	4.9			
2.5	0.83	57	6.5	2.84	4.8			
2.6	0.87	52	6.6	2.85	4.8			
2.7	0.91	47	6.7	2.86	4.8			
2.8	0.96	42	6.8	2.87	4.7			
2.9	1.03	37	6.9	2.87	4.7			
3.	1.10	32	7.	2.88	4.7			
3.1	1.16	29						
3.2	1.23	26						
3.3	1.29	23						
3.4	1.36	21						
3.5	1.42	19						
3.6	1.49	18						
3.7	1.56	16						
3.8	1.62	15						
3.9	1.69	14						
4.	1.76	13						
4.1	1.82	12						
4.2	1.88	11						
4.3	1.94	10						
4.4	2.00	9.8						
4.5	2.06	9.2						
4.6	2.12	8.7						
4.7	2.19	8.1						
4.8	2.25	7.7						
4.9	2.31	7.3						

**Flow charts for double regulating and commissioning valves:**

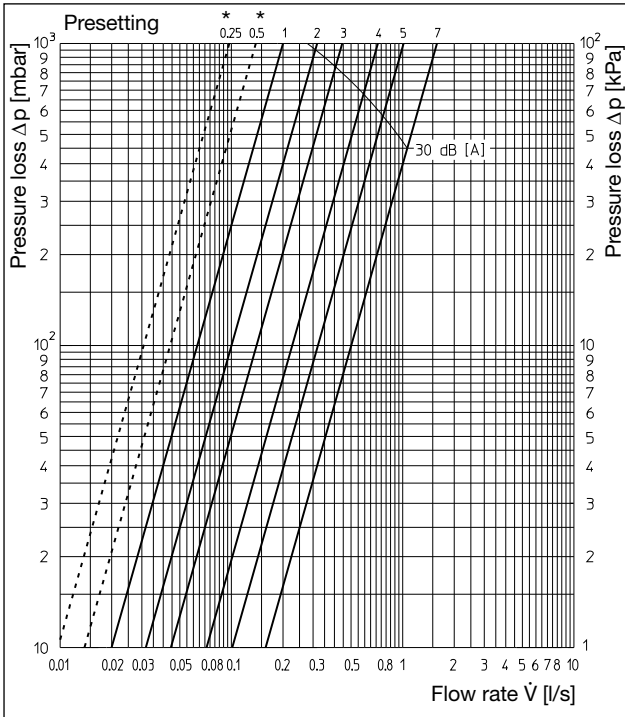
**DN 15**



\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_V$ -value	Zeta-value	Turn	$k_V$ -value	Zeta-value	Turn	$k_V$ -value	Zeta-value
0.25	0.23	1981						
0.5	0.34	906						
0.75	0.40	655						
1.	0.46	495	5.	2.70	14			
1.1	0.48	455	5.1	2.77	14			
1.2	0.50	419	5.2	2.84	13			
1.3	0.52	388	5.3	2.92	12			
1.4	0.55	346	5.4	2.99	12			
1.5	0.57	323	5.5	3.06	11			
1.6	0.60	291	5.6	3.13	11			
1.7	0.63	264	5.7	3.20	10			
1.8	0.66	241	5.8	3.27	9.8			
1.9	0.69	220	5.9	3.34	9.4			
2.	0.72	202	6.	3.40	9.1			
2.1	0.76	181	6.1	3.47	8.7			
2.2	0.80	164	6.2	3.54	8.4			
2.3	0.85	145	6.3	3.61	8.0			
2.4	0.91	127	6.4	3.67	7.8			
2.5	0.98	109	6.5	3.72	7.6			
2.6	1.05	95	6.6	3.76	7.4			
2.7	1.12	84	6.7	3.79	7.3			
2.8	1.20	73	6.8	3.82	7.2			
2.9	1.27	65	6.9	3.85	7.1			
3.	1.34	58	7.	3.88	7			
3.1	1.41	53						
3.2	1.48	48						
3.3	1.55	44						
3.4	1.62	40						
3.5	1.70	36						
3.6	1.77	33						
3.7	1.84	31						
3.8	1.91	29						
3.9	1.98	27						
4.	2.05	25						
4.1	2.12	23						
4.2	2.18	22						
4.3	2.24	21						
4.4	2.31	20						
4.5	2.38	18						
4.6	2.44	18						
4.7	2.51	17						
4.8	2.57	16						
4.9	2.63	15						

**DN 20**

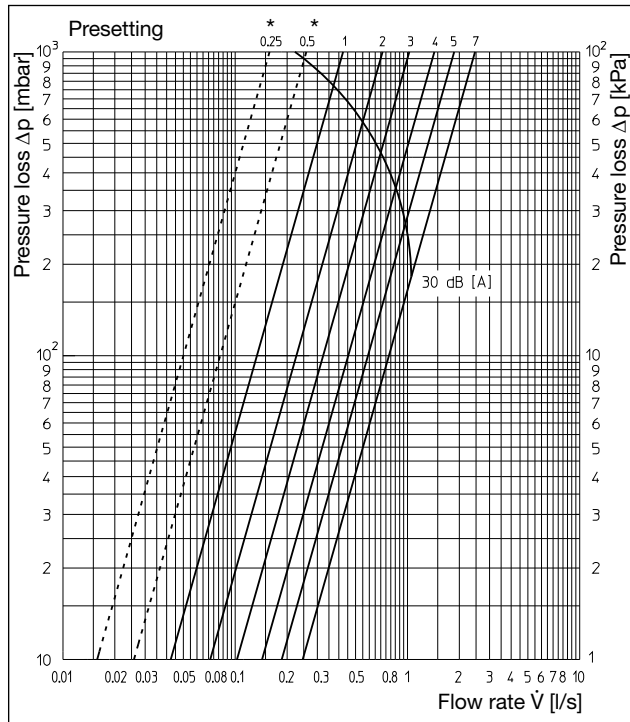


\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_V$ -value	Zeta-value	Turn	$k_V$ -value	Zeta-value	Turn	$k_V$ -value	Zeta-value
0.25	0.35	2841						
0.5	0.50	1392						
0.75	0.63	877						
1.	0.72	671	5.	3.65	26			
1.1	0.76	603	5.1	3.78	24			
1.2	0.81	530	5.2	3.90	23			
1.3	0.85	482	5.3	4.02	22			
1.4	0.89	439	5.4	4.15	20			
1.5	0.93	402	5.5	4.27	19			
1.6	0.97	370	5.6	4.40	17			
1.7	1.01	341	5.7	4.52	17			
1.8	1.05	316	5.8	4.65	16			
1.9	1.10	288	5.9	4.77	15			
2.	1.14	268	6.	4.89	15			
2.1	1.18	250	6.1	5.02	14			
2.2	1.22	234	6.2	5.15	13			
2.3	1.26	219	6.3	5.28	12			
2.4	1.30	206	6.4	5.36	12			
2.5	1.35	191	6.5	5.44	12			
2.6	1.40	178	6.6	5.50	12			
2.7	1.45	166	6.7	5.56	11			
2.8	1.50	155	6.8	5.61	11			
2.9	1.55	145	6.9	5.66	11			
3.	1.60	136	7.	5.71	11			
3.1	1.66	126						
3.2	1.74	115						
3.3	1.82	105						
3.4	1.93	93						
3.5	2.04	84						
3.6	2.15	75						
3.7	2.25	69						
3.8	2.36	62						
3.9	2.47	57						
4.	2.58	52						
4.1	2.69	48						
4.2	2.80	44						
4.3	2.91	41						
4.4	3.01	38						
4.5	3.12	36						
4.6	3.23	33						
4.7	3.34	31						
4.8	3.44	29						
4.9	3.55	28						

**Flow charts for double regulating and commissioning valves:**

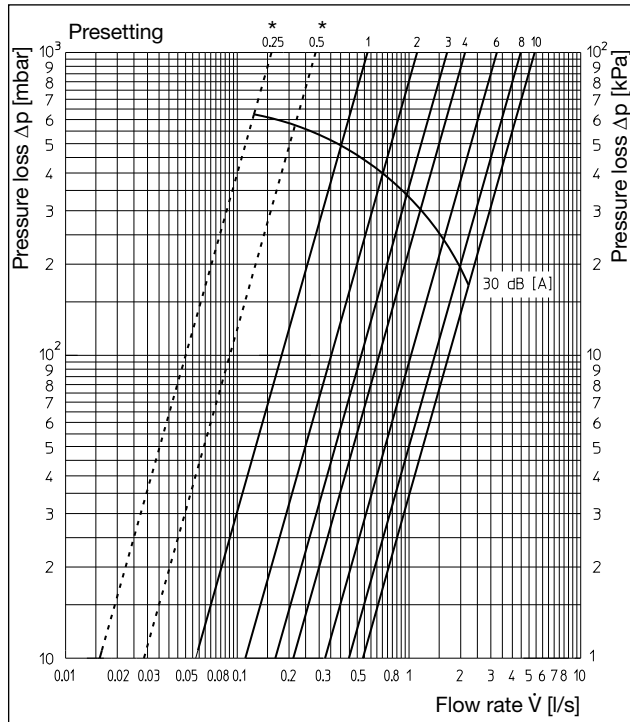
**DN 25**



\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_y$ -value	Zeta-value	Turn	$k_y$ -value	Zeta-value
5.	6.72	20			
5.1	6.84	19			
5.2	6.96	19			
5.3	7.08	18			
5.4	7.20	17			
5.5	7.32	17			
5.6	7.44	16			
5.7	7.56	16			
5.8	7.68	15			
5.9	7.80	15			
6.	7.91	14			
6.1	8.02	14			
6.2	8.12	14			
6.3	8.22	13			
6.4	8.31	13			
6.5	8.41	13			
6.6	8.51	12			
6.7	8.61	12			
6.8	8.71	12			
6.9	8.80	12			
7.	8.89	11			

**DN 32**

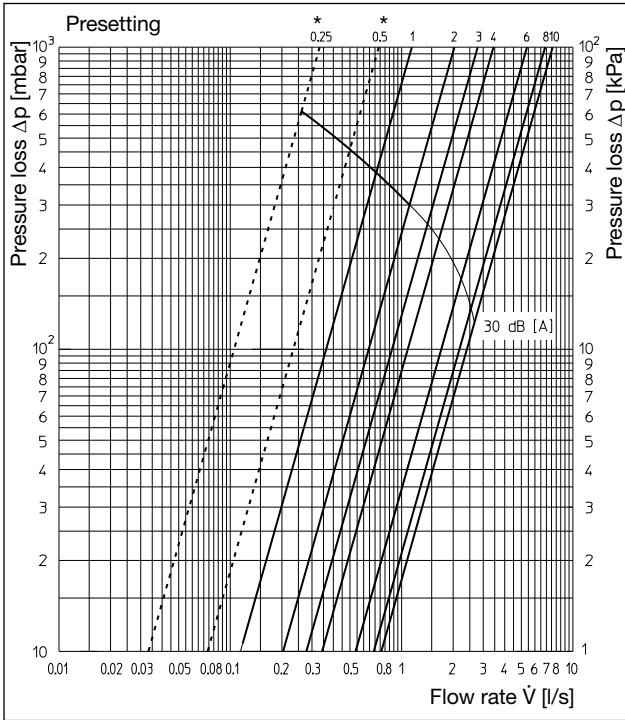


\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_y$ -value	Zeta-value	Turn	$k_y$ -value	Zeta-value
5.	9.69	28			
5.1	9.90	27			
5.2	10.10	26			
5.3	10.30	25			
5.4	10.50	24			
5.5	10.70	23			
5.6	10.90	22			
5.7	11.10	22			
5.8	11.30	21			
5.9	11.50	20			
6.	11.70	19			
6.1	11.90	19			
6.2	12.12	18			
6.3	12.35	17			
6.4	12.57	17			
6.5	12.80	16			
6.6	13.00	16			
6.7	13.22	15			
6.8	13.45	15			
6.9	13.68	14			
7.	13.91	14			
7.1	14.13	13			
7.2	14.35	13			
7.3	14.57	13			
7.4	14.80	12			
7.5	15.02	12			
7.6	15.24	11			
7.7	15.46	11			
7.8	15.68	11			
7.9	15.90	11			
8.	16.11	10			
8.1	16.33	10			
8.2	16.55	9.7			
8.3	16.77	9.4			
8.4	16.98	9.2			
8.5	17.17	9.0			
8.6	17.36	8.8			
8.7	17.57	8.6			
8.8	17.78	8.4			
8.9	17.98	8.2			
9	18.18	8.0			
9.1	18.35	7.9			
9.2	18.50	7.8			
9.3	18.65	7.6			
9.4	18.80	7.5			
9.5	18.93	7.4			
9.6	19.05	7.3			
9.7	19.15	7.2			
9.8	19.25	7.2			
9.9	19.35	7.1			
10.	19.45	7.0			

**Flow charts for double regulating and commissioning valves:**

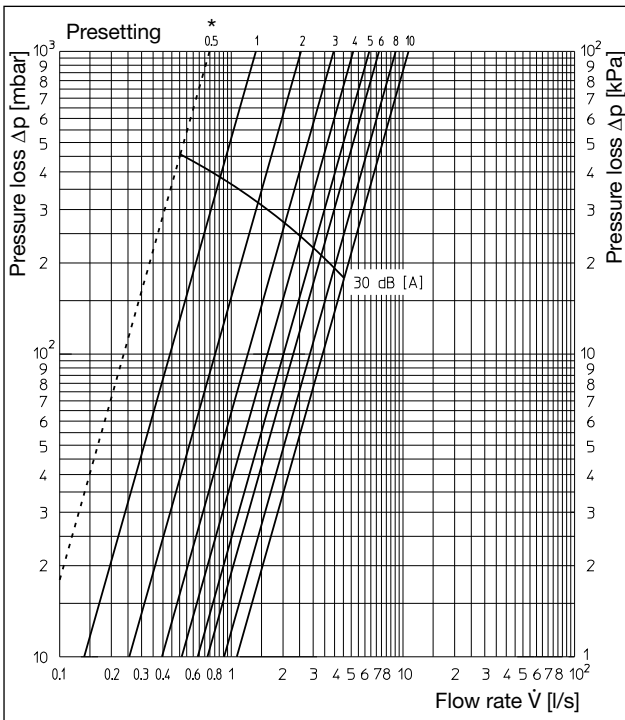
**DN 40**



\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value
0.25	1.20	3390						
0.5	2.66	690						
0.75	3.54	390						
1.	4.13	286	5.	15.26	21	9	26.09	7.2
1.1	4.46	245	5.1	15.65	20	9.1	26.24	7.1
1.2	4.78	214	5.2	16.10	19	9.2	26.38	7.0
1.3	5.10	188	5.3	16.55	18	9.3	26.52	6.9
1.4	5.42	166	5.4	16.95	17	9.4	26.66	6.9
1.5	5.74	148	5.5	17.35	16	9.5	26.80	6.8
1.6	6.06	133	5.6	17.80	15	9.6	26.94	6.7
1.7	6.38	120	5.7	18.20	15	9.7	27.08	6.7
1.8	6.70	109	5.8	18.65	14	9.8	27.22	6.6
1.9	7.02	99	5.9	19.05	13	9.9	27.37	6.5
2.	7.34	91	6.	19.45	13	10.	27.51	6.4
2.1	7.62	84	6.1	19.75	13			
2.2	7.89	78	6.2	20.05	12			
2.3	8.16	73	6.3	20.35	12			
2.4	8.43	69	6.4	20.65	11			
2.5	8.70	64	6.5	20.95	11			
2.6	8.97	61	6.6	21.25	10			
2.7	9.24	57	6.7	21.55	10			
2.8	9.51	54	6.8	21.85	10			
2.9	9.77	51	6.9	22.15	9.9			
3.	10.02	49	7.	22.45	9.7			
3.1	10.25	46	7.1	22.70	9.5			
3.2	10.50	44	7.2	22.95	9.3			
3.3	10.73	42	7.3	23.15	9.1			
3.4	10.97	41	7.4	23.35	9.0			
3.5	11.20	39	7.5	23.62	8.7			
3.6	11.43	37	7.6	23.87	8.6			
3.7	11.66	36	7.7	24.10	8.4			
3.8	11.90	34	7.8	24.35	8.2			
3.9	12.13	33	7.9	24.58	8.1			
4.	12.36	32	8.	24.82	7.9			
4.1	12.65	31	8.1	24.95	7.8			
4.2	12.95	29	8.2	25.07	7.7			
4.3	13.25	28	8.3	25.20	7.7			
4.4	13.52	27	8.4	25.32	7.6			
4.5	13.80	26	8.5	25.45	7.5			
4.6	14.10	25	8.6	25.57	7.5			
4.7	14.40	24	8.7	25.70	7.4			
4.8	14.70	23	8.8	25.83	7.3			
4.9	14.98	22	8.9	25.96	7.2			

**DN 50**

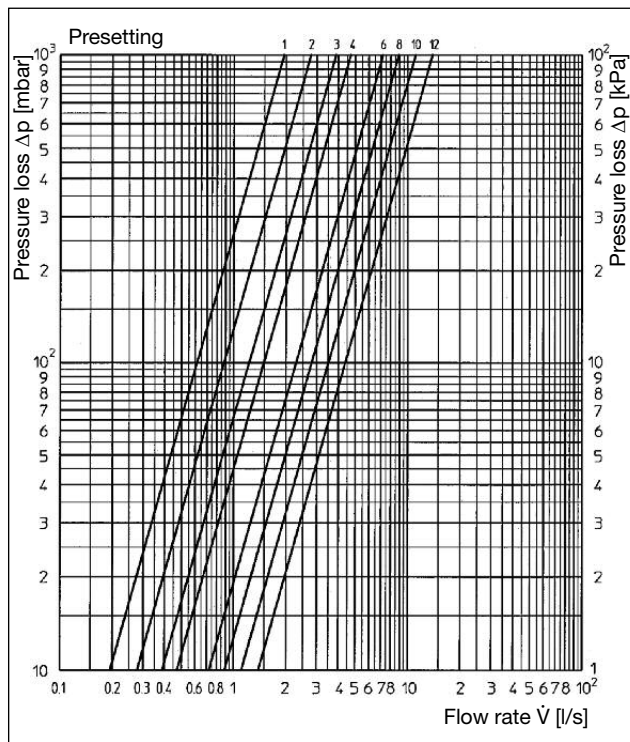


\* Avoid presetting < 1, see tolerance curve page 9.

Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value
0.5	2.69	1743						
0.75	4.17	726						
1.	5.06	493						
1.1	5.50	417	5.	22.93	24	9.	36.68	9.4
1.2	5.95	356	5.1	23.25	23	9.1	37.00	9.2
1.3	6.35	313	5.2	23.57	23	9.2	37.25	9.1
1.4	6.75	277	5.3	23.90	22	9.3	37.50	9.0
1.5	7.15	247	5.4	24.20	22	9.4	37.75	8.9
1.6	7.55	221	5.5	24.50	21	9.5	37.95	8.8
1.7	7.95	200	5.6	24.80	21	9.6	38.15	8.7
1.8	8.40	179	5.7	25.15	20	9.7	38.35	8.6
1.9	8.80	163	5.8	25.45	19	9.8	38.50	8.5
2.	9.17	150	5.9	25.80	19	9.9	38.65	8.5
2.1	9.65	135	6.	26.09	19	10.	38.78	8.4
2.2	10.15	122	6.1	26.45	18			
2.3	10.65	111	6.2	26.80	18			
2.4	11.15	101	6.3	27.10	17			
2.5	11.65	93	6.4	27.45	17			
2.6	12.15	85	6.5	27.75	16			
2.7	12.65	79	6.6	28.05	16			
2.8	13.20	72	6.7	28.40	16			
2.9	13.70	67	6.8	28.75	15			
3.	14.23	62	6.9	29.10	15			
3.1	14.65	59	7.	29.41	15			
3.2	15.10	55	7.1	29.75	14			
3.3	15.50	53	7.2	30.10	14			
3.4	15.95	50	7.3	30.40	14			
3.5	16.35	47	7.4	30.75	13			
3.6	16.80	45	7.5	31.10	13			
3.7	17.25	42	7.6	31.45	13			
3.8	17.65	40	7.7	31.80	12			
3.9	18.10	39	7.8	32.10	12			
4.	18.50	37	7.9	32.45	12			
4.1	19.00	35	8.	32.73	12			
4.2	19.45	33	8.1	33.15	11			
4.3	19.85	32	8.2	33.55	11			
4.4	20.30	31	8.3	33.90	11			
4.5	20.70	29	8.4	34.30	11			
4.6	21.15	28	8.5	34.70	10			
4.7	21.60	27	8.6	35.10	10			
4.8	22.05	26	8.7	35.50	10			
4.9	22.50	25	8.8	35.90	9.8			
			8.9	36.30	9.6			

**Flow charts for double regulating and commissioning valves:**

**DN 65**



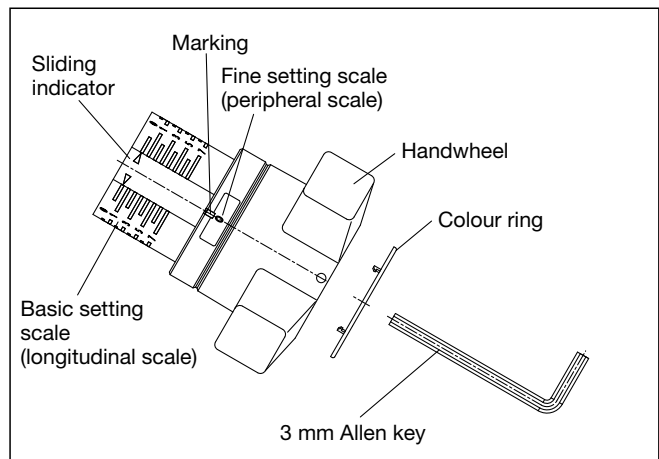
Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value	Turn	$k_v$ -value	Zeta-value
1.	7.00	705	5.	22.00	71	9.	35.00	28
1.1	7.30	648	5.1	22.40	69	9.1	35.50	27
1.2	7.60	598	5.2	22.80	66	9.2	36.00	27
1.3	7.90	554	5.3	23.20	64	9.3	36.50	26
1.4	8.20	514	5.4	23.60	62	9.4	37.00	25
1.5	8.50	478	5.5	24.00	60	9.5	37.50	25
1.6	8.80	446	5.6	24.40	58	9.6	38.00	24
1.7	9.10	417	5.7	24.80	56	9.7	38.50	23
1.8	9.40	391	5.8	25.20	54	9.8	39.00	23
1.9	9.70	367	5.9	25.60	53	9.9	39.50	22
2.	10.00	345	6.	26.00	51	10.	40.00	22
2.1	10.40	319	6.1	26.30	50	10.1	40.50	21
2.2	10.80	296	6.2	26.60	49	10.2	41.00	21
2.3	11.20	275	6.3	26.90	48	10.3	41.50	20
2.4	11.60	257	6.4	27.20	47	10.4	42.00	20
2.5	12.00	240	6.5	27.50	46	10.5	42.50	19
2.6	12.40	225	6.6	27.70	45	10.6	43.00	19
2.7	12.80	211	6.7	27.90	44	10.7	43.50	18
2.8	13.20	198	6.8	28.10	44	10.8	44.00	18
2.9	13.60	187	6.9	28.30	43	10.9	44.50	17
3.	14.00	176	7.	28.50	43	11.	45.00	17
3.1	14.30	169	7.1	28.50	42	11.1	45.50	17
3.2	14.60	162	7.2	29.10	41	11.2	46.00	16
3.3	14.90	156	7.3	29.40	40	11.3	46.50	16
3.4	15.20	150	7.4	29.70	39	11.4	47.00	16
3.5	15.50	144	7.5	30.00	38	11.5	47.50	15
3.6	15.80	138	7.6	30.40	37	11.6	48.00	15
3.7	16.10	133	7.7	30.80	36	11.7	48.50	15
3.8	16.40	128	7.8	31.20	35	11.8	49.00	14
3.9	16.70	124	7.9	31.60	35	11.9	49.50	14
4.	17.00	120	8.	32.00	34	12.	50.00	14
4.1	17.50	113	8.1	32.30	33			
4.2	18.00	107	8.2	32.60	33			
4.3	18.50	101	8.3	32.90	32			
4.4	19.00	96	8.4	33.20	31			
4.5	19.50	91	8.5	33.50	31			
4.6	20.00	86	8.6	33.80	30			
4.7	20.50	82	8.7	34.10	30			
4.7	21.00	78	8.8	34.40	29			
4.9	21.50	75	8.9	34.70	29			

**Presetting:**

1. The presetting value of the valve is set by turning the handwheel.
  - a. The display of the basic setting is shown 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 display of the fine setting is shown by the peripheral scale on the handwheel together with the marking. The subdivisions of the peripheral scale correspond to 1/10<sup>th</sup> of a turn of the handwheel.
2. Limitation of the set presetting value 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.

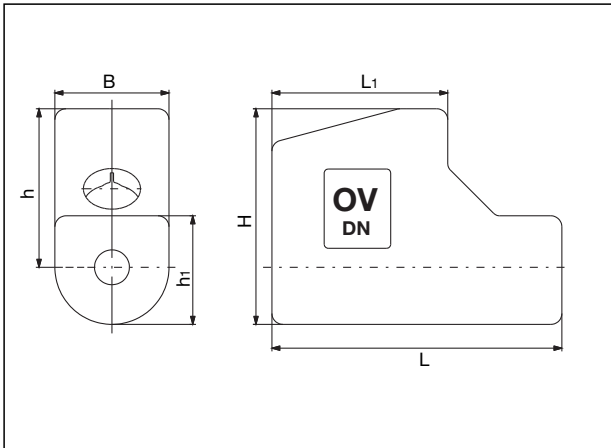
**Marking of the flow and return pipe:**

Clip one of the colour rings (red = supply, blue = return) supplied with each valve onto the handwheel.





**“Hydrocontrol VTR/VPR”  
Bronze double regulating and commissioning valves PN 16/PN 25**



Insulation shells

Size	Item no.
DN 10	1060081
DN 15	1060081
DN 20	1060082
DN 25	1060083
DN 32	1060084
DN 40	1060085
DN 50	1060086

DN	B	L	L <sub>1</sub>	H	h	h <sub>1</sub>
15	72	183	111	136	100	69
20	80	195	122	143	103	77
25	88	243	141	151	107	85
32	102	254	149	172	121	97
40	109	250	152	185	131	105
50	125	276	163	209	147	120

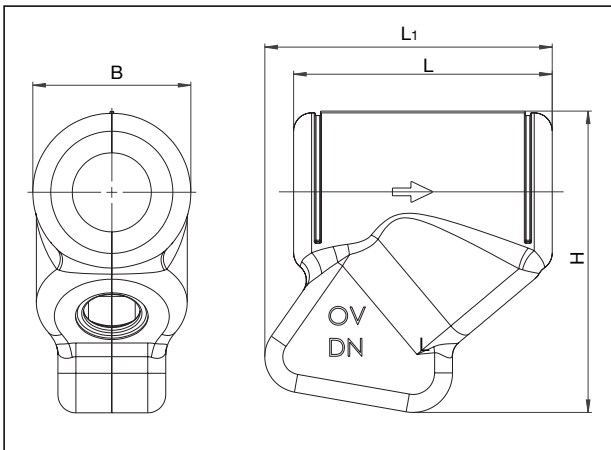
Dimensions

**Tender specification:**

Insulation shells made of polyurethane, double shells with tongue-and-groove fitting.

Only for heating systems.

Operating temperature  $t_s$ : +130°C (for short periods up to +150°C)



Insulation shells

Size	Item no.
DN 10/15	1060481
DN 20	1060482
DN 25	1060483
DN 32	1060484
DN 40	1060485
DN 50	1060486

DN	B	L	L <sub>1</sub>	H
10/15	66	120	137	135
20	74	126	140	142
25	88	140	149	155
32	88	144	160	168
40	93	145	156	178
50	110	188	179	202

Dimensions

**Tender specification:**

Insulation shells made of closed-cell foamed polyethylene with additional solid mesh effect made of polypropylene; one-piece insulation of symmetric construction with tongue-and-groove fitting.

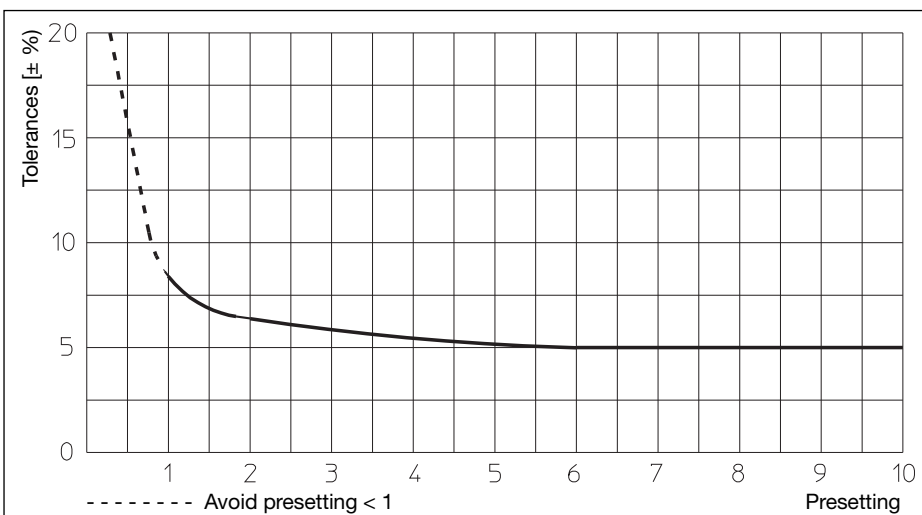
Only for heating systems.

Operating temperature  $t_s$ : 100°C

**Installation advice:**

Oventrop double regulating and commissioning valves serve to achieve the hydronic balance between the various circuits of a system. It is to be observed that the direction of flow conforms to

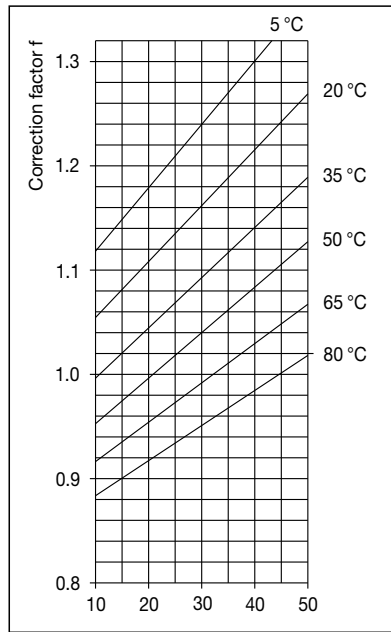
the arrow on the valve body. The flow tolerance is  $\pm 5\%$ . If installed against the flow, an increase in the flow rate of 1-3%, related to the chart value, must be considered.



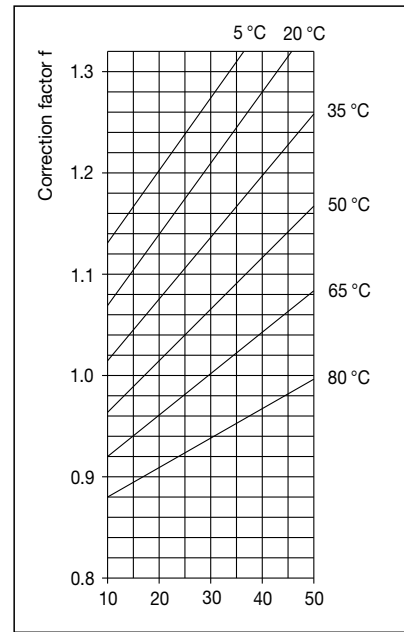
Flow tolerances depending on the presetting for 10601/02/03/05, DN 15 - DN 50

**Correction factor for mixtures of water and glycol:**

When antifreeze liquids are added to the heating water, the values given in the chart must be multiplied by the correction factor f.



Weight proportion of ethylene glycol [%]



Weight proportion of propylene glycol [%]

**Measuring and regulation**

**Oventrop measuring system “OV-DMC 2” (with memory and microprocessor)**

featuring numerous functions and a wide range of applications:

- Flow rate indication (indication m<sup>3</sup>/h, l/s, l/min. und gal/min.)
- Differential pressure measurement (indication in mbar, kPa, PSI, mm WG, m WG)
- Temperature measurement (indication in °C or °F)
- Presetting: Arriving at the presetting value based on the measured differential pressure, the given flow rate and the valve size.

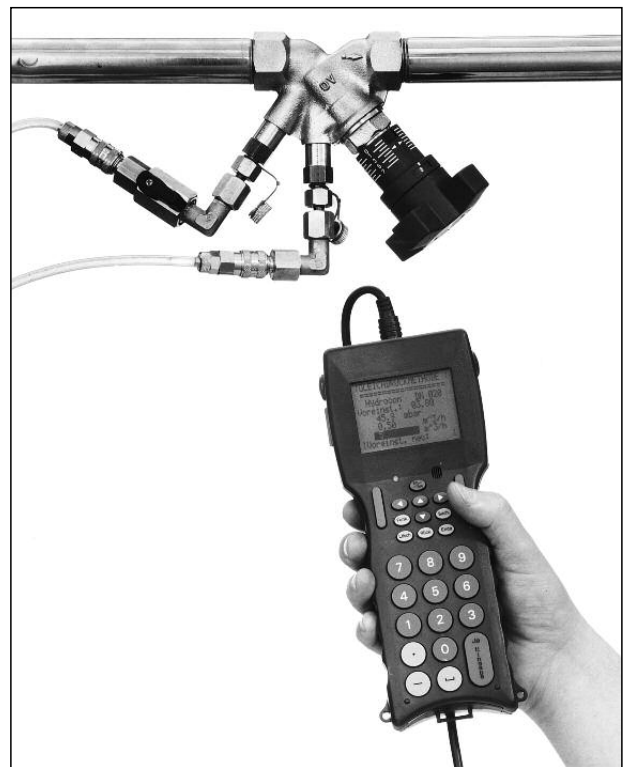
The characteristic lines of all Oventrop regulating valves are memorised in the flow-meter.

With the use of a respective  $k_V$  value, it is possible to carry out measurements on valves of other manufacturers.

(For practical use of the “OV-DMC 2”, special operating instructions are available.)

**Oventrop measuring system “OV-DMPC”**

consisting of differential pressure transmitter “DMPC-sensor” with USB interface and software including accessories. The measuring system is connected to a commercial computer (not included).



Flow-meter “OV-DMC 2”, item no. 1069177 with “Hydrocontrol VTR”

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 E-Mail mail@oventrop.de  
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For an overview of our global presence visit [www.oventrop.de](http://www.oventrop.de)

Subject to technical modification without notice.

Product group 3  
 ti 19-EN/10/MW  
 Edition 2015