Function:

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

The balance is achieved by a reproducible presetting.

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 and fine setting scale, see “Presetting” on page 8). The Oventrop double regulating and commissioning valves have two threaded ports which can be fitted with fill and drain ball valves or pressure test points for differential pressure measurement.

The double regulating and commissioning valves may be installed in the supply and the return pipe.

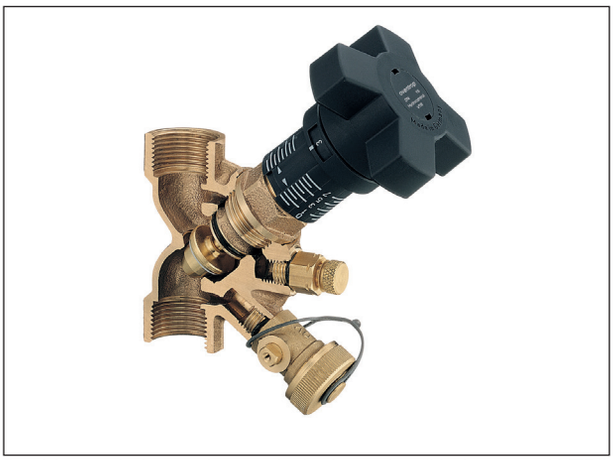
When installing the valve it must be ensured that the direction of flow conforms to the direction of the arrow on the valve body and that the valve is installed with a minimum of L = 3 x Ø of straight pipe at the valve inlet and of L = 2 x Ø of straight pipe at the pipe outlet.

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 (see page 10).

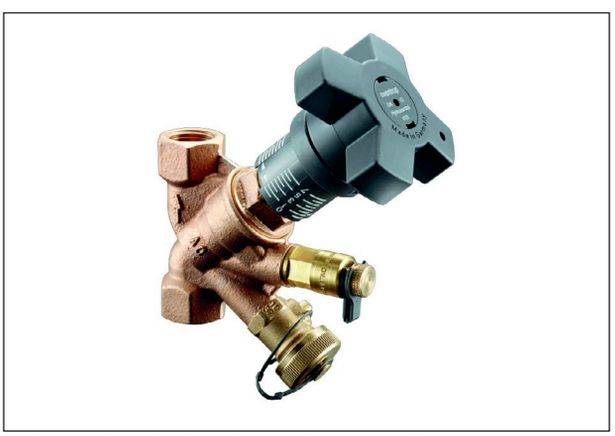
Advantages:

- the location of the functional components in <u>one</u> plane allows for a simple installation and easy operation
- only <u>one</u> valve for 5 functions:
  presetting
  measuring
  isolating
  filling
  draining
- 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 pressure loss and flow via the pressure test points
- threads according to EN 10226, suitable for Oventrop compression fittings (item no. 1027151-58) for copper pipes up to a max. diameter of 22 mm and the Oventrop composition pipe “Copipe”
- fill and drain ball valve pressure test point with O-ring seal towards the valve body (no additional seals required)
- patented measuring channel lead around the stem assembly to the test point 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 tolerances on page 9)



Double regulating and commissioning valve “Hydrocontrol VTR”

both ports male thread and collar nut for
weldable steel tailpipes DN 10 up to DN 50
or:
. . . solder tailpipes 15 mm Ø up to 54 mm Ø
or:
. . . male threaded tailpipes DN 10 up to DN 50
or:
. . . female threaded tailpipes DN 15 up to DN 32



both ports female thread according up to EN 10226
DN 10 to DN 65

Double regulating and commissioning valve
“Hydrocontrol VTR” both ports female thread
according to EN 10226
“classic” measuring technique

Tender specification:

Double regulating and commissioning valve PN 25 (water pH value 6.5-10) (DN 65: PN 16) both ports female thread according to EN 10226, 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 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 return pipe.

Item no. 1060112-16:	ACS certified (France) for installation in potable water systems
Item no. 1060204-16:	WaterMark certified
Item no. 1060103-16:	WRAS certified
Item no. 1060104-20:	WaterMark certified

(Pressure loss charts as well as k_V and Zeta values see following pages)

Technical data:

Max. operating temperature t_S:150 °C

Min. operating temperature t_S:-20 °C

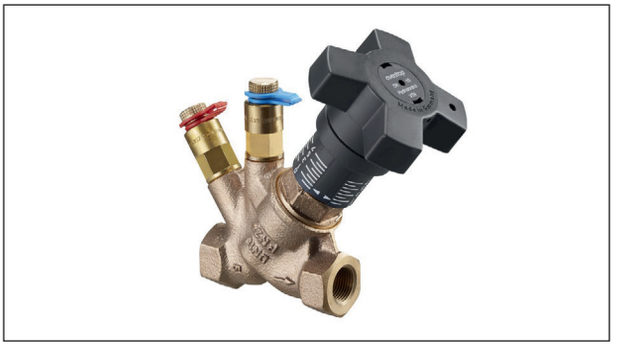
Max. operating pressure p_S: 25 bar (PN 25) (DN 10-DN 50)
16 bar (PN 16) (DN 65)

Double regulating and commissioning valves
both ports female thread according to EN 10226

Size:	**Item no.**
with mounted accessories set no. 3 = 1 pressure test point G ¼ and 1 fill and drain ball valve G ¼	
DN 10	1060303
DN 15	1060304
DN 20	1060306
DN 25	1060308
DN 32	1060310
DN 40	1060312
DN 50	1060316
with mounted accessories set no. 2 = 2 pressure test points G ¼	
DN 10	1060203
DN 15	1060204
DN 20	1060206
DN 25	1060208
DN 32	1060210
DN 40	1060212
DN 50	1060216
with threaded ports for accessories sets (closed with blind plugs)	
DN 10	1060103
DN 15	1060104
DN 20	1060106
DN 25	1060108
DN 32	1060110
DN 40	1060112
DN 50	1060116
DN 65	1060120
with mounted accessories set no. 2 = 2 pressure test points G ¼	
DN 10	1688703
DN 15	1688704
DN 20	1688706
DN 25	1688708
DN 32	1688710
DN 40	1688712
DN 50	1688716

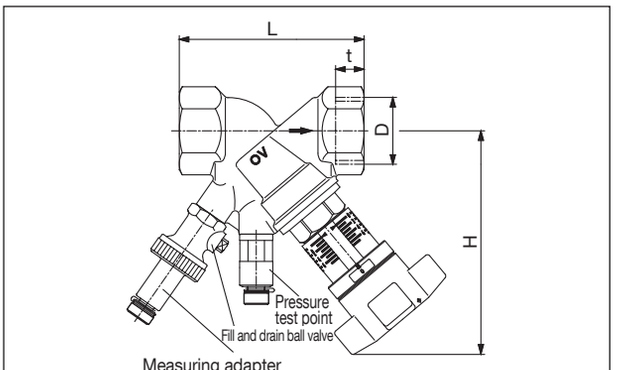
16887..: Type approval for shipbuilding (DNV-GL).

both ports female thread according to EN 10226, item no. 10603..



both ports female thread according to EN 10226, item no. 10602..

both ports female thread according to EN 10226, item no. 10601..



Measuring adapter

DN	D EN 10226	t	L	H
10	Rp ⅜	10.1	73	114
15	Rp ½	13.2	80	114
20	Rp ¾	14.5	84	116
25	Rp 1	16.8	97.5	119
32	Rp 1¼	19.1	110	136
40	Rp 1½	19.1	120	138
50	Rp 2	25.7	150	148
65	Rp 2½	19.5	151	186

Dimensions “Hydrocontrol VTR” both ports female thread according to EN 10226

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

Tender specification:

Double regulating and commissioning valve PN 16 (PN 20 for cold water, pH value 6.5-10) both ports male thread for flat sealing weldable, solder and threaded tailpipes. –20 °C up to +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 return pipe.

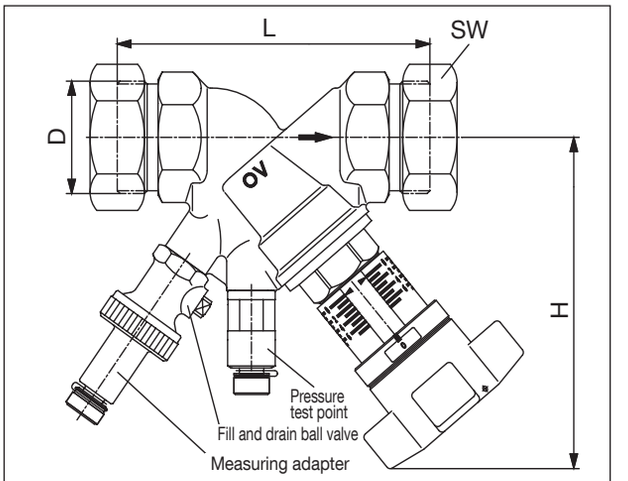
(Pressure loss charts as well as kv and Zeta values see following pages)

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

Size:	**Item no.**
DN 10	1060503
DN 15	1060504
DN 20	1060506
DN 25	1060508
DN 32	1060510
DN 40	1060512
DN 50	1060516

Accessories:

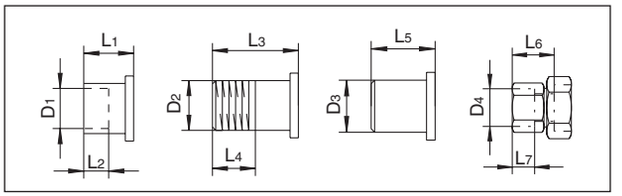
	Item no.
1 fill and drain ball valve	1060191
2 pressure test points	1060281
1 pressure test point and 1 fill and drain ball valve	1060381
1 pressure test point extension (80 mm)	1060295
1 pressure test point extension (40 mm)	1688295
1 measuring adapter	1060298
1 stem extension (DN 10 up to DN 50, 35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



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” both ports male thread with collar nut

*SW = Spanner size



DN	D_1	L_1	L_2	D_2 EN 10226	L_3	L_4	D_3	L_5	D_4 EN 10226	L_6	L_7
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	38	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

Tailpipe sets:

2 weldable tailpipes	Item no.
for valve DN 10	1060591
for valve DN 15	1060592
for valve DN 20	1060593
for valve DN 25	1060594
for valve DN 32	1060595
for valve DN 40	1060596
for valve DN 50	1060597

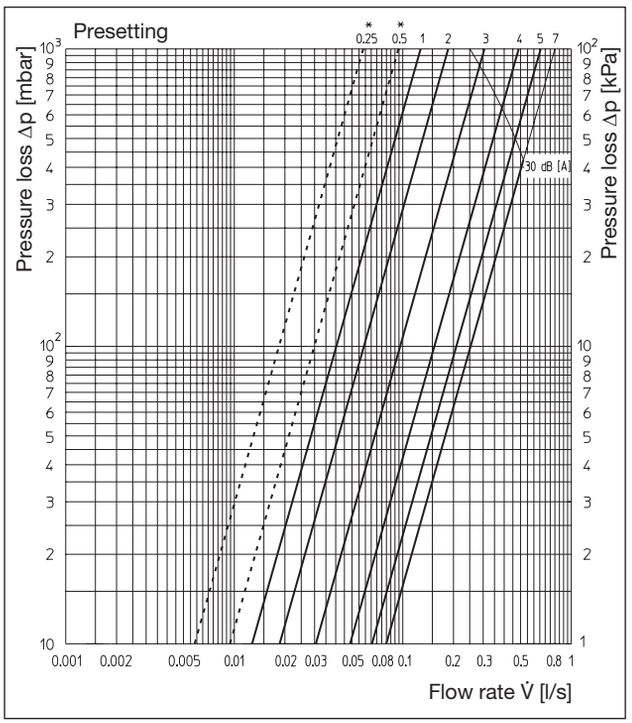
2 solder tailpipes		
15 mm	for valve DN 15	1061092
18 mm	for valve DN 20	1061093
22 mm	for valve DN 20	1061094
28 mm	for valve DN 25	1061095
35 mm	for valve DN 32	1061096
42 mm	for valve DN 40	1061097
54 mm	for valve DN 50	1061098

2 male threaded tailpipes		
R 3/8	for valve DN 10	1061491
R 1/2	for valve DN 15	1061492
R 3/4	for valve DN 20	1061493
R 1	for valve DN 25	1061494
R 1 1/4	for valve DN 32	1061495
R 1 1/2	for valve DN 40	1061496
R 2	for valve DN 50	1061497

2 female threaded tailpipes		
R 1/2	for valve DN 15	1019364
Rp 3/4	for valve DN 20	1019366
Rp 1	for valve DN 25	1061394
Rp 1 1/4	for valve DN 32	1061395

Flow charts for double regulating and commissioning valves

DN 10

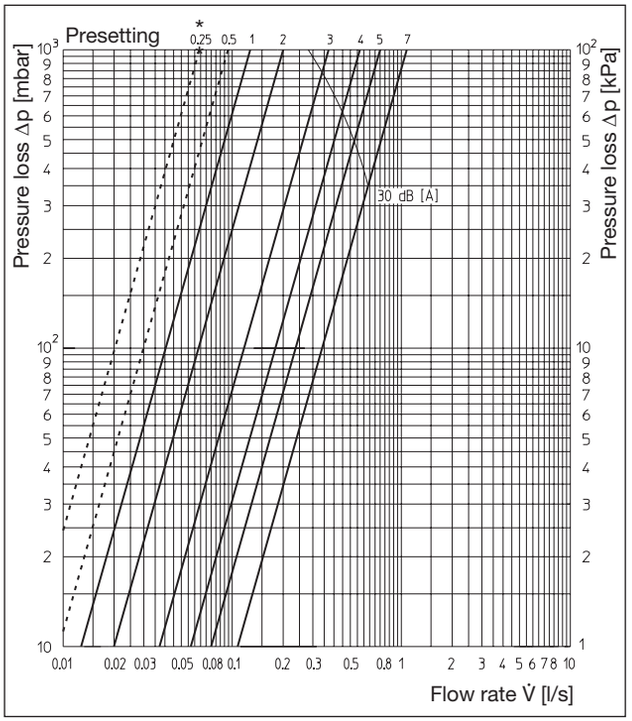


* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turns	k_V value	Zeta value	Turns	k_V 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

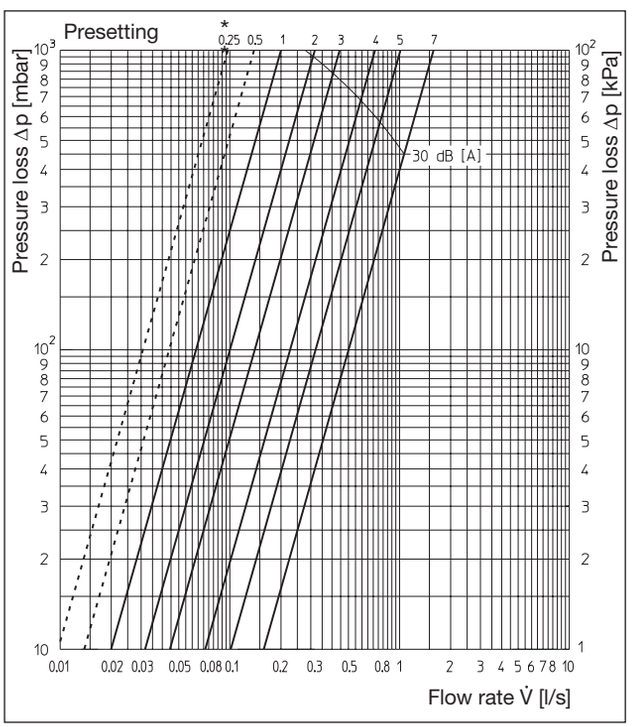
DN 15



* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turs	k_V value	Zeta value	Turns	k_V value	Zeta
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	155	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

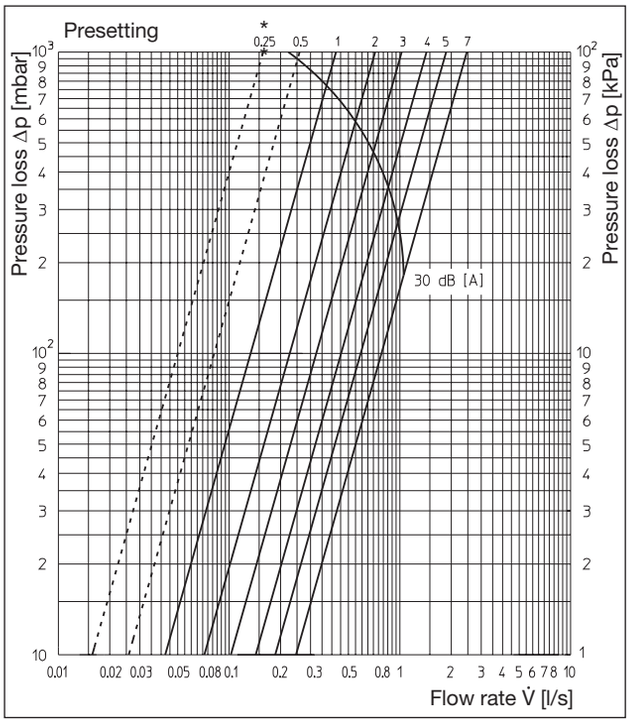


* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turns	k_V value	Zeta value	Turns	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

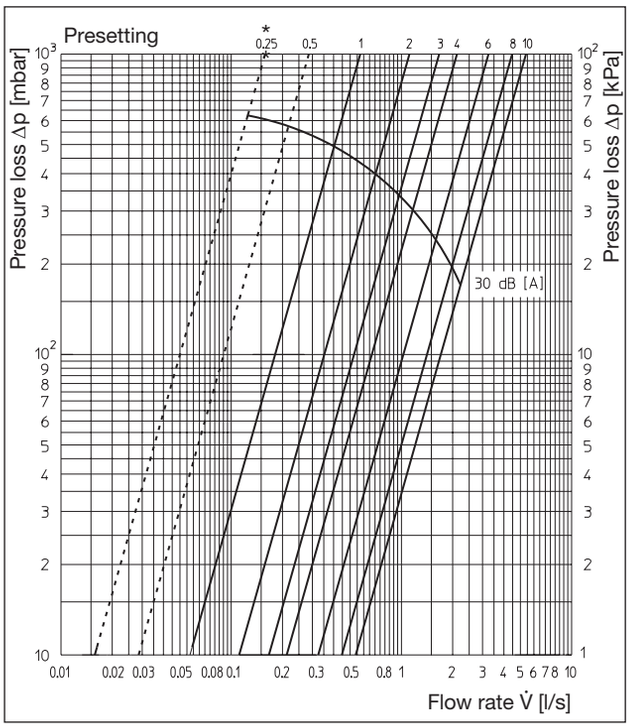
DN 25



* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turns	k_V value	Zeta value	Turns	k_V value	Zeta value
0.25	0.57	2774						
0.5	0.93	1042						
0.75	1.22	605						
1.	1.52	390	5.	6.72	20			
1.1	1.64	335	5.1	6.84	19			
1.2	1.76	291	5.2	6.96	19			
1.3	1.87	258	5.3	7.08	18			
1.4	1.98	230	5.4	7.20	17			
1.5	2.08	208	5.5	7.32	17			
1.6	2.18	190	5.6	7.44	16			
1.7	2.28	173	5.7	7.56	16			
1.8	2.38	159	5.8	7.68	15			
1.9	2.48	147	5.9	7.80	15			
2.	2.58	135	6.	7.91	14			
2.1	2.67	126	6.1	8.02	14			
2.2	2.77	117	6.2	8.12	14			
2.3	2.87	109	6.3	8.22	13			
2.4	2.98	101	6.4	8.31	13			
2.5	3.09	94	6.5	8.41	13			
2.6	3.20	88	6.6	8.51	12			
2.7	3.31	82	6.7	8.61	12			
2.8	3.43	77	6.8	8.71	12			
2.9	3.56	71	6.9	8.80	12			
3.	3.69	66	7.	8.89	11			
3.1	3.82	62						
3.2	3.96	57						
3.3	4.11	53						
3.4	4.26	50						
3.5	4.42	46						
3.6	4.57	43						
3.7	4.72	40						
3.8	4.87	38						
3.9	5.02	36						
4.	5.16	34						
4.1	5.32	32						
4.2	5.47	30						
4.3	5.63	28						
4.4	5.79	27						
4.5	5.95	25						
4.6	6.10	24						
4.7	6.26	23						
4.8	6.42	22						
4.9	6.57	21						

DN 32

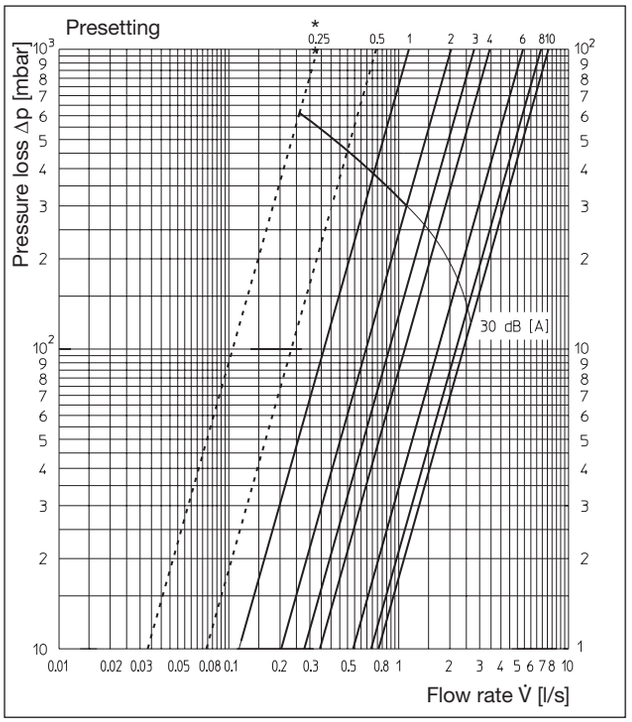


* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turns	k_V value	Zeta value	Turns	k_V value	Zeta value
0.25	0.57	8174						
0.5	1.03	2503						
0.75	1.53	1135						
1.	2.06	626	5.	9.69	28	9	18.18	8.0
1.1	2.20	549	5.1	9.90	27	9.1	18.35	7.9
1.2	2.35	481	5.2	10.10	26	9.2	18.50	7.8
1.3	2.52	418	5.3	10.30	25	9.3	18.65	7.6
1.4	2.70	364	5.4	10.50	24	9.4	18.80	7.5
1.5	2.90	316	5.5	10.70	23	9.5	18.93	7.4
1.6	3.10	276	5.6	10.90	22	9.6	19.05	7.3
1.7	3.32	241	5.7	11.10	22	9.7	19.15	7.2
1.8	3.55	211	5.8	11.30	21	9.8	19.25	7.2
1.9	3.78	186	5.9	11.50	20	9.9	19.35	7.1
2.	4.02	164	6.	11.70	19	10.	19.45	7.0
2.1	4.25	147	6.1	11.90	19			
2.2	4.48	132	6.2	12.12	18			
2.3	4.68	121	6.3	12.35	17			
2.4	4.88	112	6.4	12.57	17			
2.5	5.08	103	6.5	12.80	16			
2.6	5.25	96	6.6	13.00	16			
2.7	5.45	89	6.7	13.22	15			
2.8	5.65	83	6.8	13.45	15			
2.9	5.83	78	6.9	13.68	14			
3.	600	74	7.	13.91	14			
3.1	6.17	70	7.1	14.13	13			
3.2	6.35	66	7.2	14.35	13			
3.3	6.52	62	7.3	14.57	13			
3.4	6.70	59	7.4	14.80	12			
3.5	6.85	57	7.5	15.02	12			
3.6	7.00	54	7.6	15.24	11			
3.7	7.16	52	7.7	15.46	11			
3.8	7.33	49	7.8	15.68	11			
3.9	7.49	47	7.9	15.90	11			
4.	7.64	45	8.	16.11	10			
4.1	7.85	43	8.1	16.33	10			
4.2	8.05	41	8.2	16.55	9.7			
4.3	8.25	39	8.3	16.77	9.4			
4.4	8.45	37	8.4	16.98	9.2			
4.5	8.65	35	8.5	17.17	9.0			
4.6	8.85	34	8.6	17.36	8.8			
4.7	9.05	32	8.7	17.57	8.6			
4.8	9.25	31	8.8	17.78	8.4			
4.9	9.47	30	8.9	17.98	8.2			

Flow charts for double regulating and commissioning valves

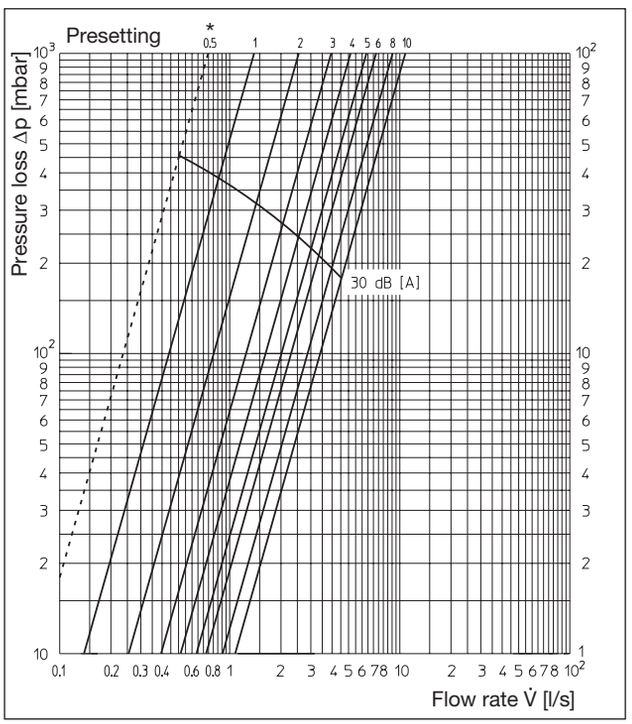
DN 40



* Avoid presettings < 1, see tolerance curve on page 9.

Turns	k_V value	Zeta value	Turns	k_V value	Zeta value	Turns	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

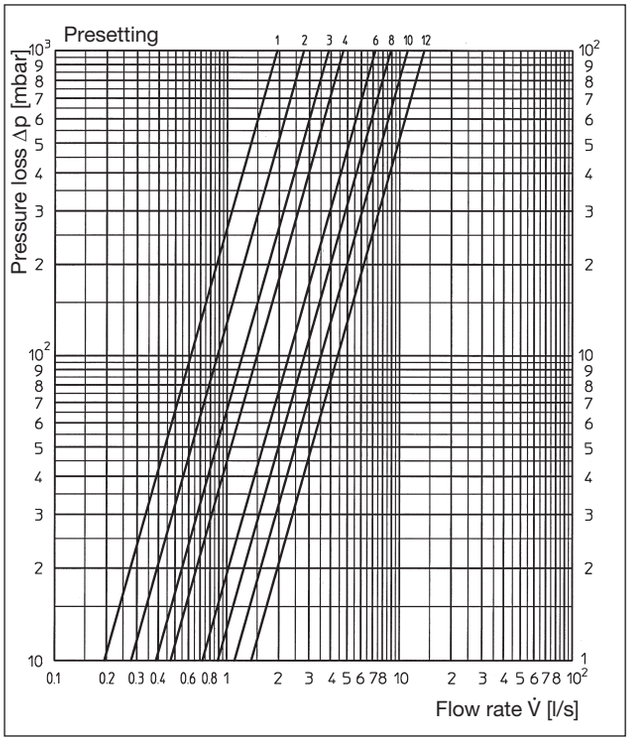


* Avoid presettings < 1, see tolerance curve on page 9.

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

Flow charts for double regulating and commissioning valves

DN 65



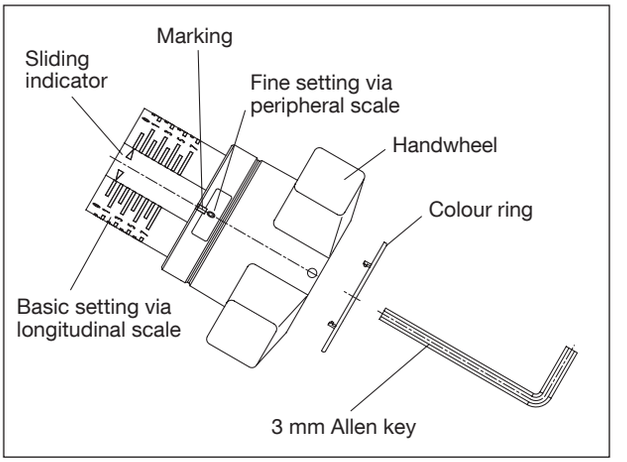
Turns	k_V value	Zeta value	Turns	k_V- value	Zeta value	Turns	k_V value	Zeta value
1.	7.00	705	5.	22.00	71	9.	35.00	28
1.1	7.30	648	5.1	22.40	69	9.1	35.50	27
1.2	7.60	598	5.2	22.80	66	9.2	36.00	27
1.3	7.90	554	5.3	23.20	64	9.3	36.50	26
1.4	8.20	514	5.4	23.60	62	9.4	37.00	25
1.5	8.50	478	5.5	24.00	60	9.5	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			

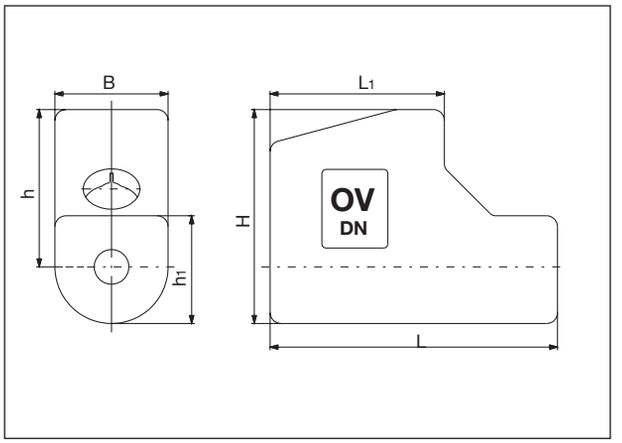
Presetting:

1. The presetting value of the valve is set by turning the handwheel.
   a. The 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.

Marking of the flow and return pipe:

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





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_1	H	h	h_1
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

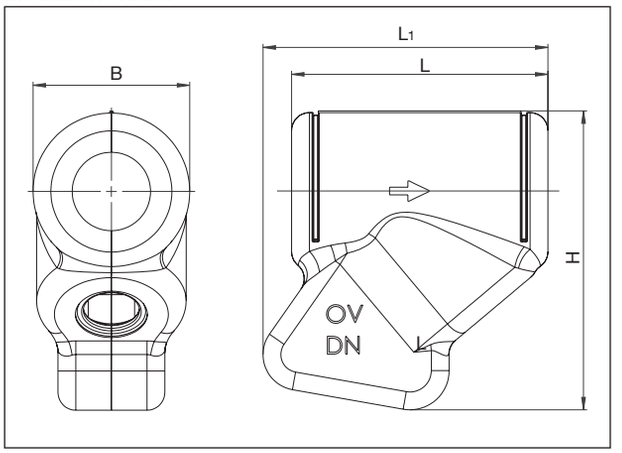
Dimensions insulation shells item no. 1060081-86

Tender specification:

Insulation shells made of polyurethane, consisting of two 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_1	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 insulation shells item no. 1060481-86

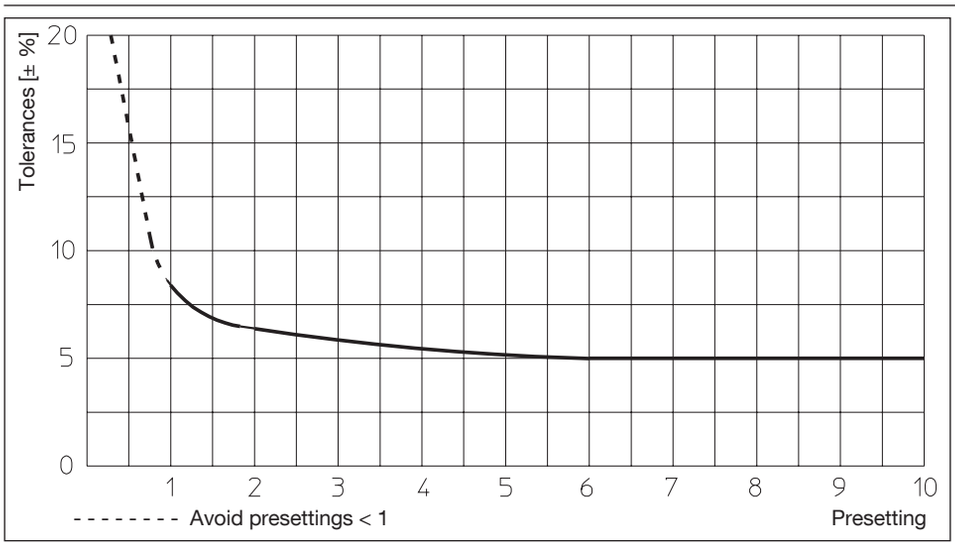
Tender specification:

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:

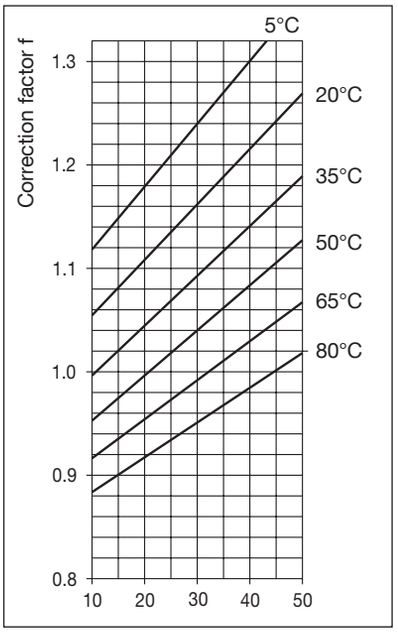
Oventrop double regulating and commissioning valves serve to achieve the hydronic balance between the various circuits of a system. The direction of flow always has to conform to the arrow on the valve body. The flow tolerances are ± 5%. If installed against the flow, an increase of the flow tolerance of 1-3%, related to the chart value, must be considered.



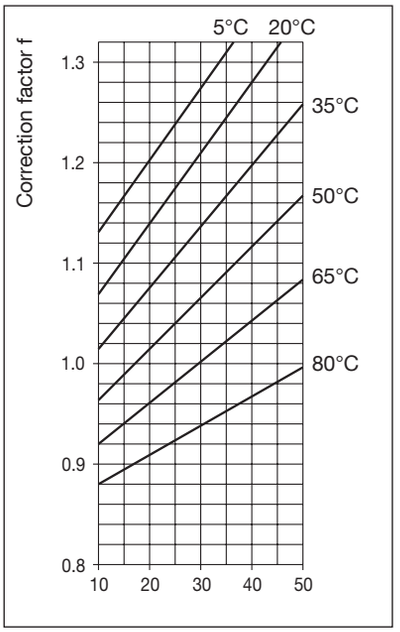
Flow tolerances depending on the presetting for item no. 10601/02/03/05, DN 10 up to DN 50

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 [%]

Measurement and regulation

Oventrop measuring system “OV-DMC 3”
featuring numerous functions and a wide range of applications:

- Display of the flow rate (display in m^3/h, l/s, l/min. and gal/min.)
- Differential pressure measurement (display in mbar, PSI or kPa)
- Temperature measurement (display in °C or °F)
- Presetting Determination of the presetting value based on the measured differential pressure, given flow rate and valve size.

The characteristic lines of all Oventrop double regulating and commissioning valves are memorised in the device.

When entering the respective k_V value, it is possible to carry out measurements on valves of other manufacturers.

Measuring system “OV-DMC 3” item no. 1069278
with double regulating and commissioning valve
“Hydrocontrol VTR”

Subject to technical modifications without notice.

Product range 2.1
ti 19-EN/10/MW
Edition 2020