The Oventrop Quality Management System is certified to DIN-EN-ISO 9001

Bronze double regulating and commissioning valves PN 16/PN 25 ”Hydrocontrol R”

Technical information

Function:

Oventrop double regulating and commissioning valves are installed in the pipework of hot water central heating systems 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 position.

The required values of presetting 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 are delivered with 2 blind plugs.

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 3 D (3 x nominal pipe diameter) of straight pipe at the valve inlet and of 2 D (2 x nominal pipe diameter) of straight pipe at the valve outlet.

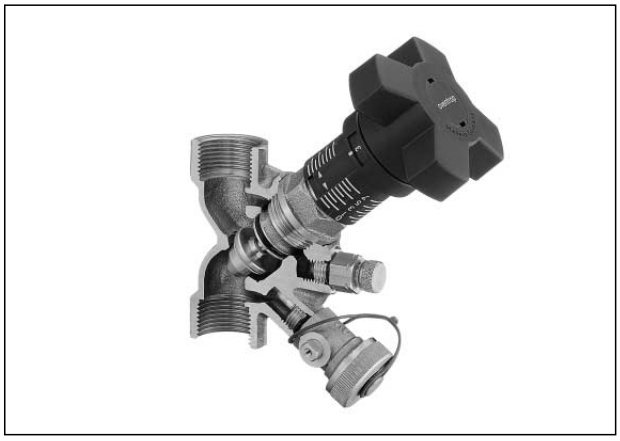
The flow charts are valid for both, installation in the supply or the return pipe, provided the direction of flow conforms to the arrow embossed on the valve body.

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

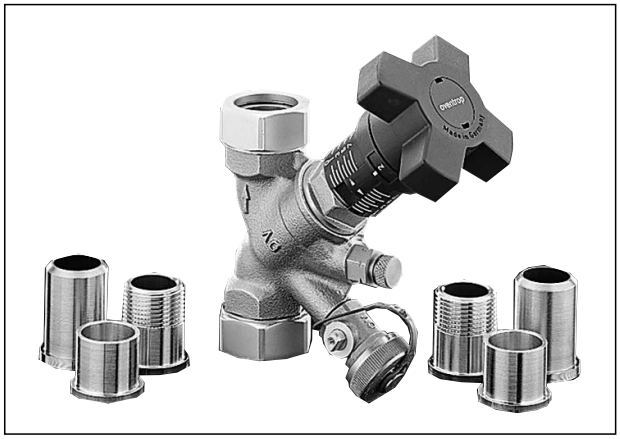
Advantages:

- the location of the functioning components on one level 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 (102 71 51-58) for copper pipes with a max. diameter of 22 mm and the Oventrop composition pipe “Copipe” 14 and 16 mm
- 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)

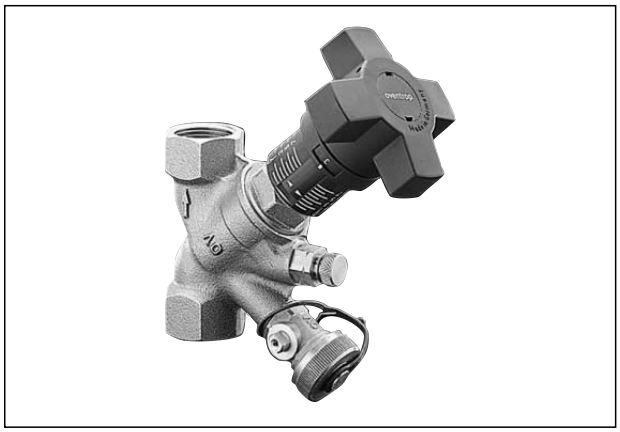


Bronze double regulating and commissioning valve PN 16
”Hydrocontrol R”



Male threads for weldable steel tailpipes
DN 10 up to DN 50
or:
. . . for solder tailpipes 15 mm ∅ up to 42 mm ∅

or:
. . . for threaded tailpipes DN 10 up to DN 40



Female thread according to EN 10226 (BS 21)
DN 10 to DN 65

Double regulating and commissioning valve "Hydrocontrol R" both ports with female thread according to EN 10226 (BS 21) Measuring technic "classis"

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 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 functioning components on one level, pressure test point and fill and drain ball valve interchangeable, installation in the supply or the return pipe. SVGW tested and registered.

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

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

Max. working temperature t_S: 150°C
Min. working temperature t_S: -20°C
Max. working pressure p_S: 25 bar (PN 25)
(female thread, DN 10-DN 50)
Max. working pressure p_S: PN 16 (16 bar)
(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)

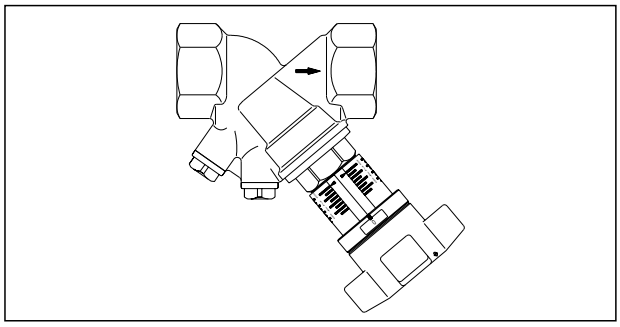
		Item no.
DN 10	⅜"	106 01 03
DN 15	½"	106 01 04
DN 20	¾"	106 01 06
DN 25	1"	106 01 08
DN 32	1¼"	106 01 10
DN 40	1½"	106 01 12
DN 50	2"	106 01 16
DN 65	2½"	106 01 20

both ports female thread according to EN 10226 (BS 21)
with mounted accessories set no. 2 = 2 pressure test points ¼"

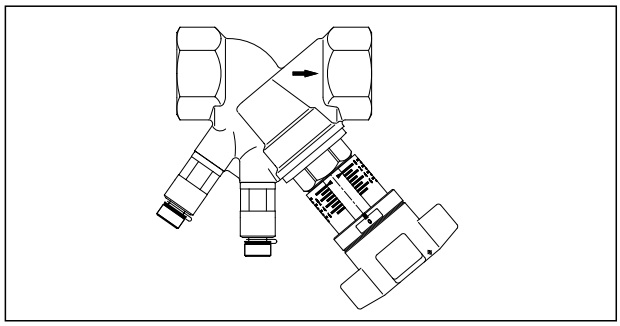
		Item no.
DN 10	⅜"	106 02 03
DN 15	½"	106 02 04
DN 20	¾"	106 02 06
DN 25	1"	106 02 08
DN 32	1¼"	106 02 10
DN 40	1½"	106 02 12
DN 50	2"	106 02 16

both ports female thread according to EN 10226 (BS 21)
with mounted accessories set no. 3 = 1 pressure test point ¼"
and 1 fill and drain ball valve ¼"

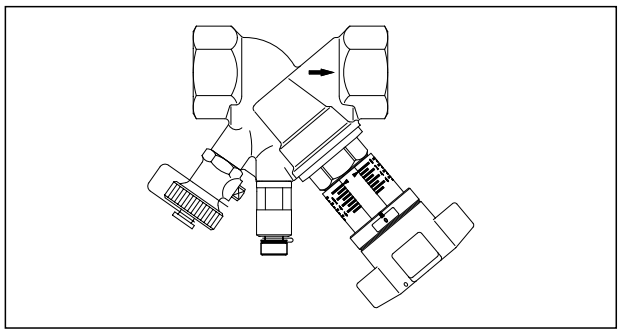
		Item no.
DN 10	⅜"	106 03 03
DN 15	½"	106 03 04
DN 20	¾"	106 03 06
DN 25	1"	106 03 08
DN 32	1¼"	106 03 10
DN 40	1½"	106 03 12
DN 50	2"	106 03 16



both ports female thread according to EN 10226 (BS 21),
item no. Nr. 106 01 . .

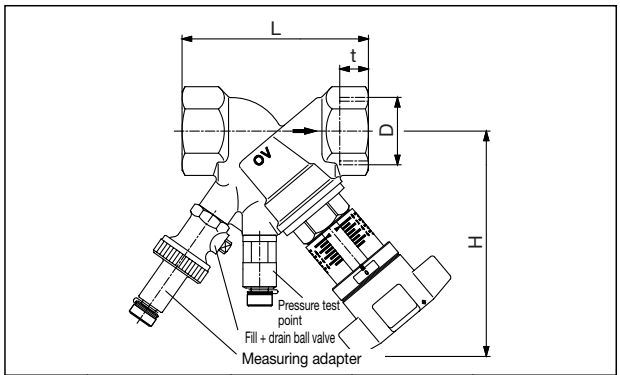


both ports female thread according to EN 10226 (BS 21),
item no. 106 02 . .



both ports female thread according to EN 10226 (BS 21),
item no. 106 03 . .

Dimensions:



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	20.0	151	186

both ports press connection

	k_{VS} value		Item no.
DN 15	2.88	15 mm	106 01 51
DN 15	3.88	18 mm	106 01 52
DN 20	5.71	22 mm	106 01 54
DN 25	8.89	25 mm	106 01 56
DN 32	19.45	35 mm	106 01 58
DN 40	27.51	42 mm	106 01 60
DN 50	38.78	54 mm	106 01 62

Press connection:
For the direct connection of copper pipes according to EN 1057 or stainless steel pipes "NiroSan".
Pressing must be carried out to tighten the connection.
Suitable for use with SANHA, Geberit-Mapress or Viega press fitting jaws.

Accessories sets:

1 fill and drain ball valve	106 01 91
2 pressure test points	106 02 81
1 pressure test point	
1 fill and drain ball valve	106 03 81
1 extension for accessories sets (80 mm)	106 02 95
1 extension for accessories sets (40 mm)	168 82 95
1 measuring adapter	106 02 98
1 stem extension (DN 10 – DN 50, 35 mm)	168 82 96
Lead sealing set (10-fold)	108 90 91
Locking set (1-fold)	106 01 80

Double regulating and commissioning valve "Hydrocontrol R" both ports with male thread and collar nut
Measuring technic "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 functioning components on one level, pressure test point and fill and drain ball valve interchangeable, installation in the supply or the return pipe.
DN 15 to DN 32 SVGW tested and registered.
DN 10 to DN 50 with type approval certificate for shipbuilding.
(Pressure loss charts, kv and Zeta values, see following pages)

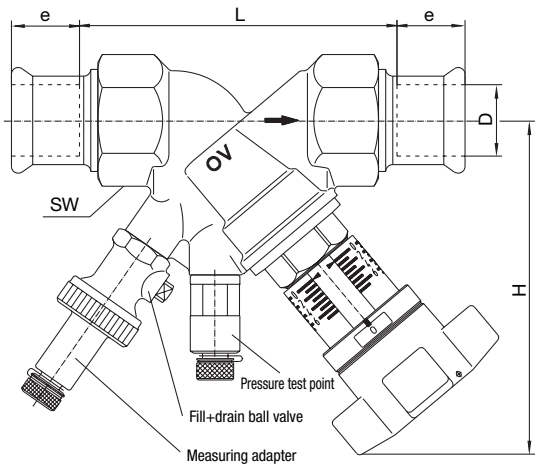
Double regulating and commissioning valves both ports male thread and collar nut, with threaded ports for accessories sets (closed with blind plugs)

		Item no.
DN 10	3/8"	106 05 03
DN 15	1/2"	106 05 04
DN 20	3/4"	106 05 06
DN 25	1"	106 05 08
DN 32	1 1/4"	106 05 10
DN 40	1 1/2"	106 05 12
DN 50	2"	106 05 16

Accessories sets:

1 fill and drain ball valve	106 01 91
2 pressure test points	106 02 81
1 pressure test point	
1 fill and drain ball valve	106 03 81
1 extension for accessories sets (80 mm)	106 02 95
1 extension for accessories sets (40 mm)	168 82 95
1 measuring adapter	106 02 98
1 stem extension (DN 20 to DN 50, 35 mm)	168 82 96
Lead sealing set (10-fold)	108 90 91
Locking set (1-fold)	106 01 80

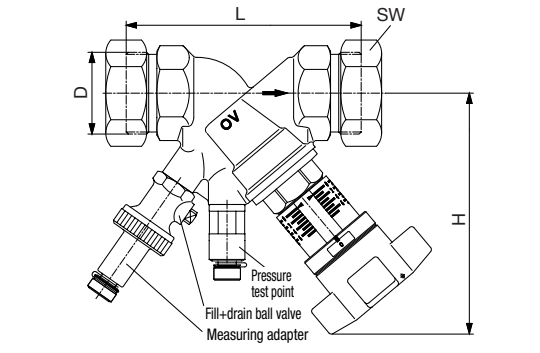
Dimensions:



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

*SW = spanner size

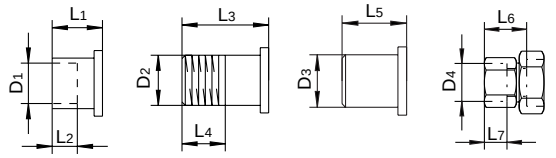
Dimensions:



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

*SW = spanner size

Dimensions:



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 ⅜	25	10.1	16	50	–	–	–
15	15	18	12	R ½	31	13.2	20.5	50	Rp ½	37	13.2
20	18	23	15	R ¾	34	14.5	26	50	Rp ¾	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 1¼	46	19.1	41	60	Rp 1¼	55	19.1
40	42	37	29	R 1½	49	19.1	47.5	65	–	–	–
50	54	50	40	–	–	–	60	65	–	–	–

Tailpipe sets:

2 weldable pipes

⅜"	106 05 91
½"	106 05 92
¾"	106 05 93
1"	106 05 94
1¼"	106 05 95
1½"	106 05 96
2"	106 05 97

2 solder tailpipes

15 mm	DN 15	106 10 92
18 mm	DN 20	106 10 93
22 mm	DN 20	106 10 94
28 mm	DN 25	106 10 95
35 mm	DN 32	106 10 96
42 mm	DN 40	106 10 97
54 mm	DN 50	106 10 98

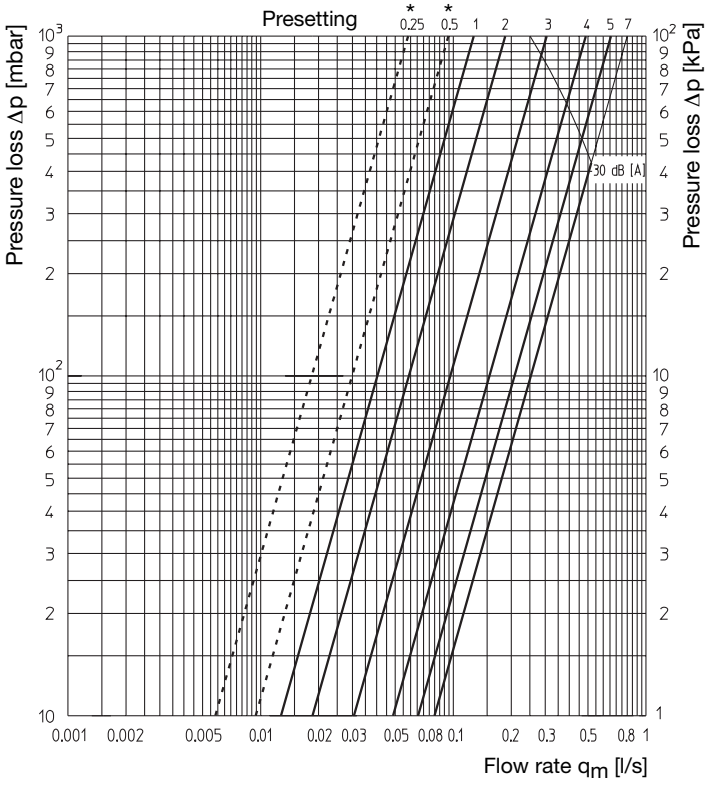
2 tailpipes with male thread

⅜"	106 14 91
½"	106 14 92
¾"	106 14 93
1"	106 14 94
1¼"	106 14 95
1½"	106 14 96

2 tailpipes with female thread

½"	101 93 64
¾"	101 93 66
1"	106 13 94
1¼"	106 13 95

Flow charts for double regulating and commissioning valves:

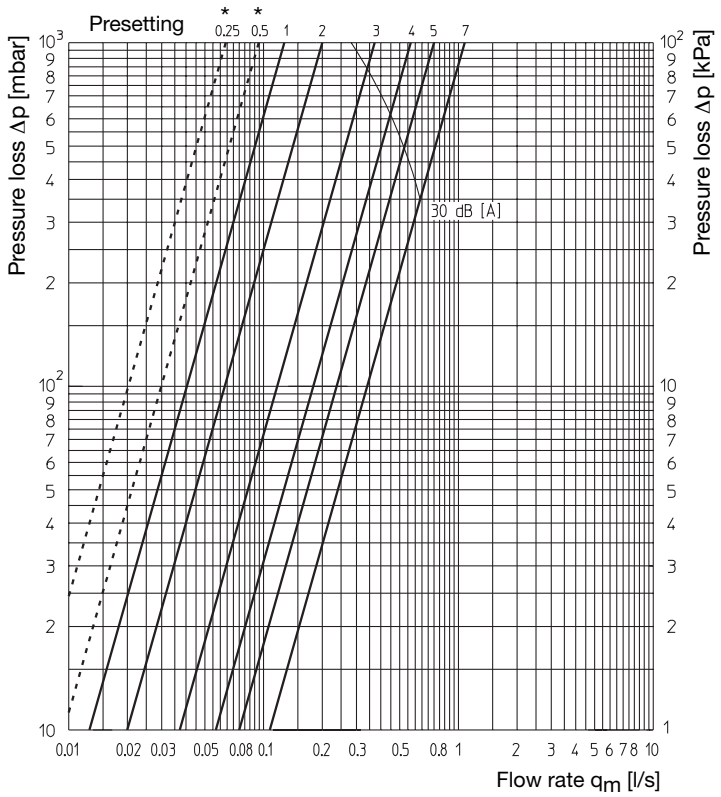


* Avoid presetting < 1, see tolerance curve page 9.

Turn	k_V-value	Zeta-value	Turn	k_V-value	Zeta-value	Turn	k_V-value	Zeta-value
0.25	0.21	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:

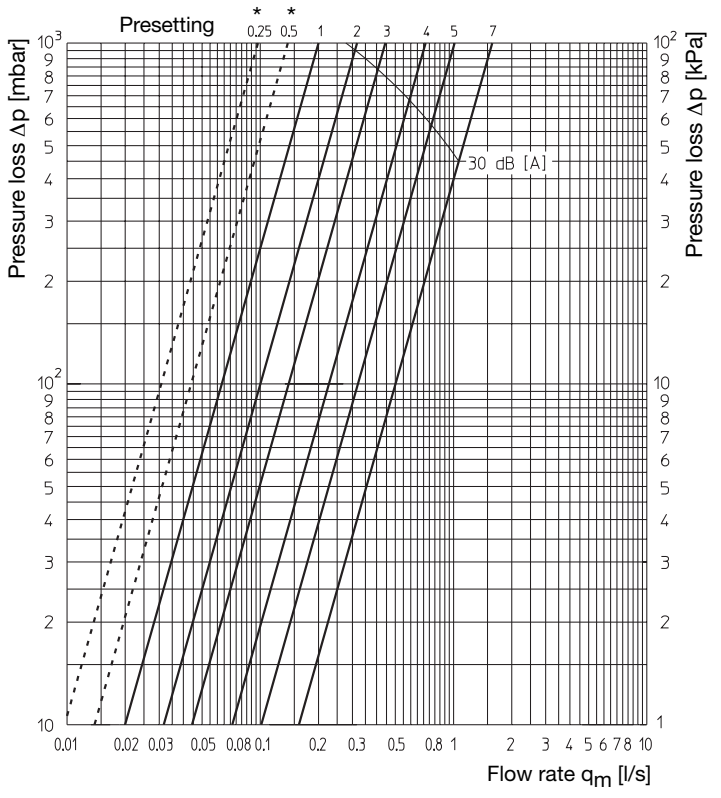
DN 15



* 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

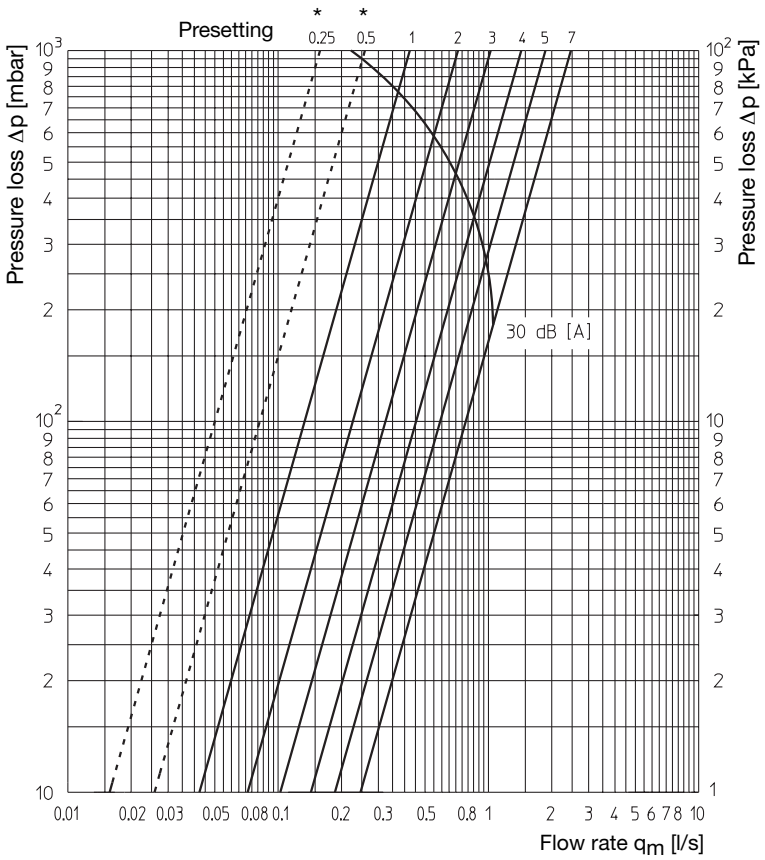


* Avoid presetting < 1, see tolerance curve page 9.

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:

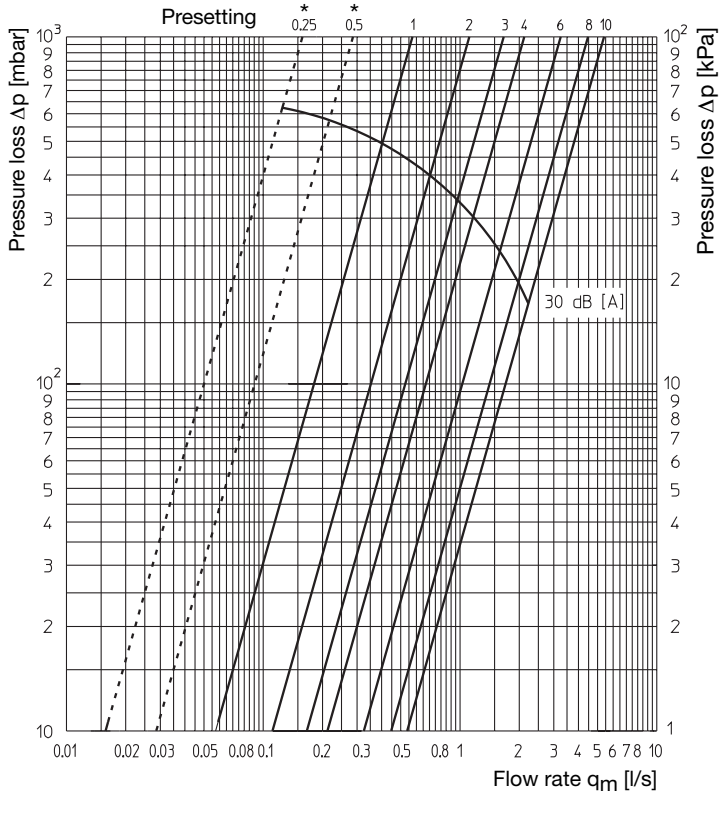
DN 25



Turn	k_V-value	Zeta-value	Turn	k_V-value	Zeta-value	Turn	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						

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

DN 32

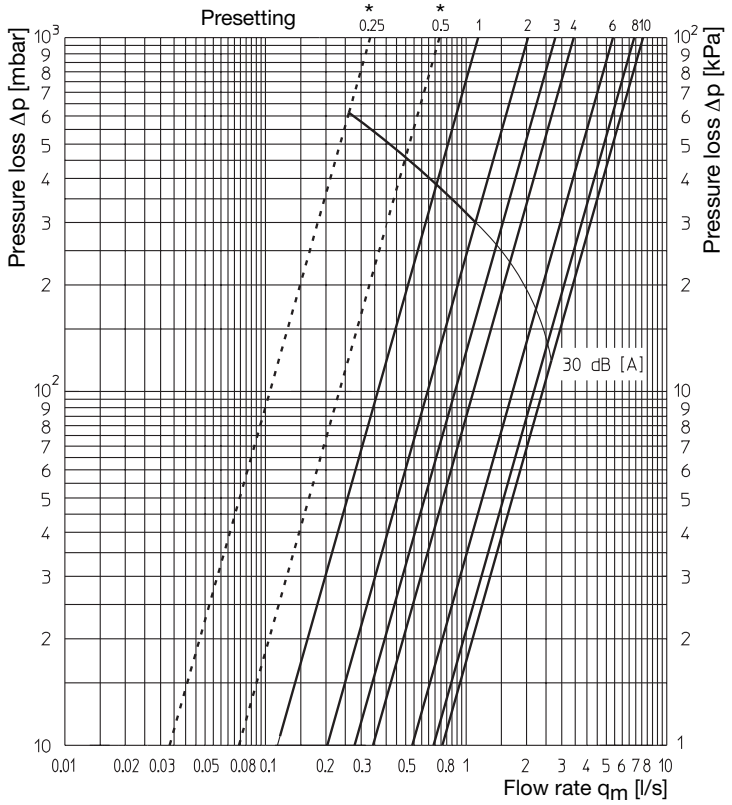


Turn	k_V-value	Zeta-value	Turn	k_V-value	Zeta-value	Turn	k_V-value	Zeta-value
0.25	0.57	8174						
0.5	1.03	2503						
0.75	1.53	1135						
1.	2.06	626	5.	9.69	28	9	18.18	8.0
1.1	2.20	549	5.1	9.90	27	9.1	18.35	7.9
1.2	2.35	481	5.2	10.10	26	9.2	18.50	7.8
1.3	2.52	418	5.3	10.30	25	9.3	18.65	7.6
1.4	2.70	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.	6.00	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			

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

Flow charts for double regulating and commissioning valves:

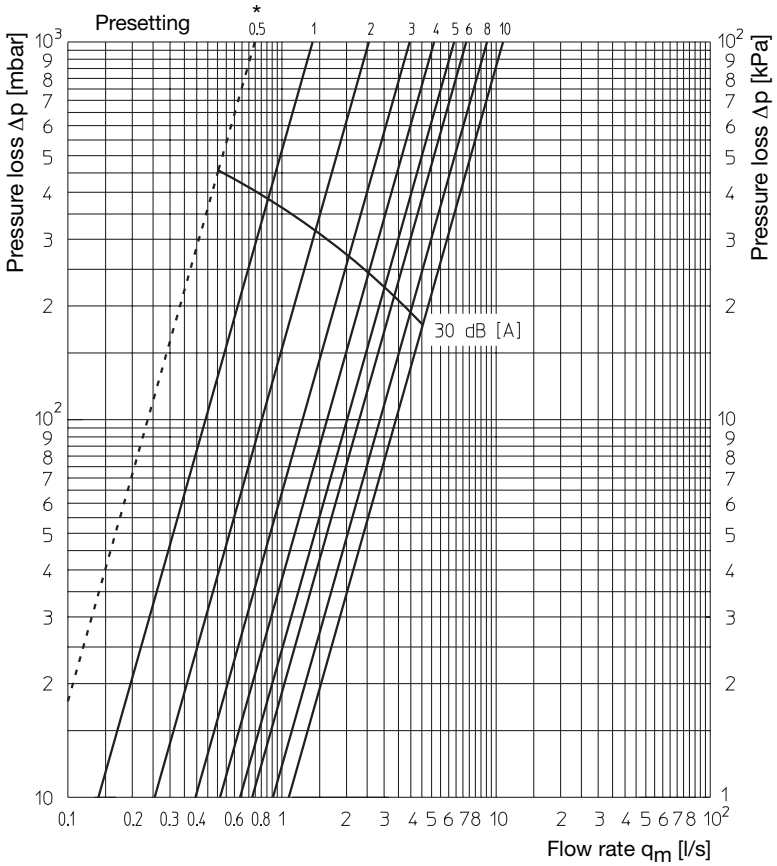
DN 40



* 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

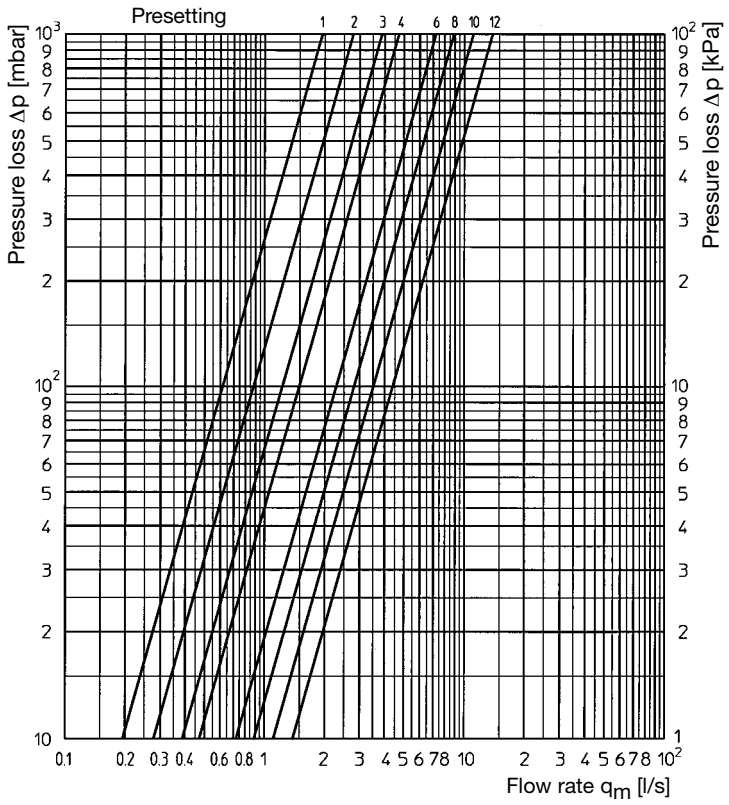


* Avoid presetting < 1, see tolerance curve page 9.

Trun	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	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



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:

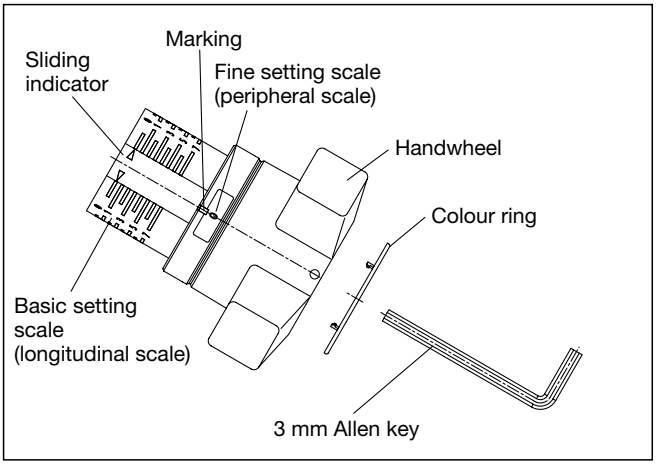
1. The value of presetting of the valve is set by turning the handwheel.

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.

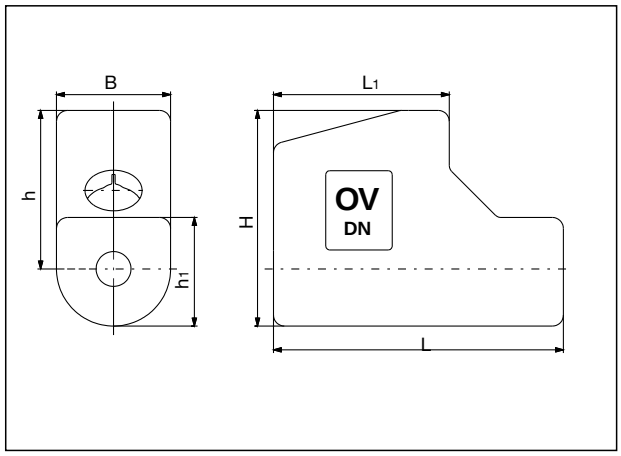
b. The display of the fine setting is shown by the peripheral scale on the handwheel together with the marking. The subdivisions of the peripheral scale correspond to 1/10th of a turn of the handwheel.

3. Limitation of the set value of presetting 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 nos.:
DN 10	106 00 81
DN 15	106 00 81
DN 20	106 00 82
DN 25	106 00 83
DN 32	106 00 84
DN 40	106 00 85
DN 50	106 00 86

Dimensions:

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

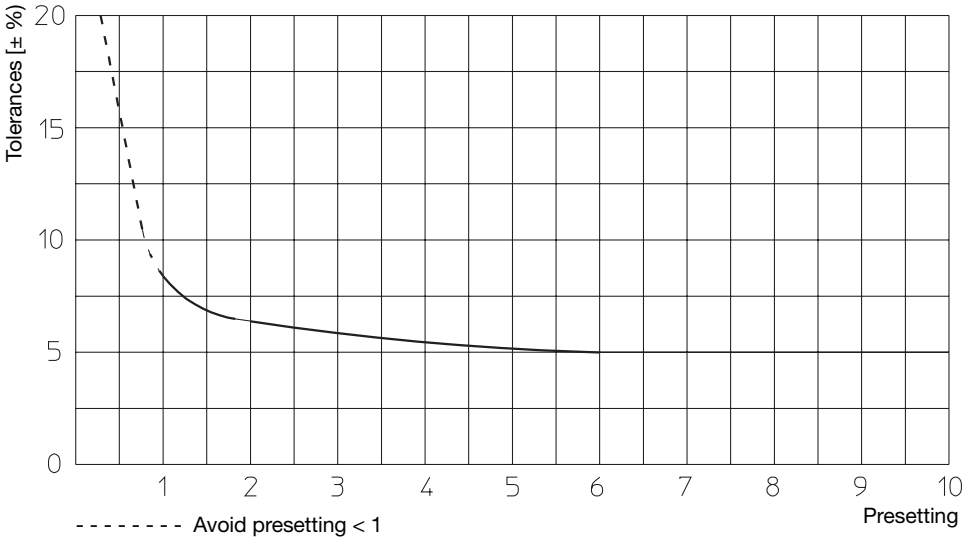
Tender specification:

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

Installation advice:

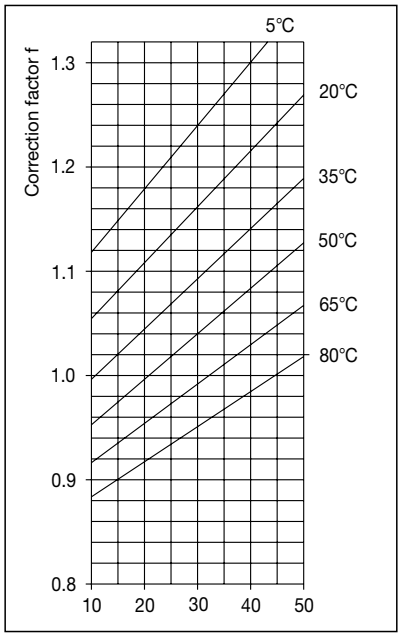
Oventrop double regulating and commissioning valves serve to achieve the hydronic balance between the various circuits of a system. It is therefore to be observed that the direction of flow conforms to the arrow on the valve body. The flow tolerance is ± 5%. If installed against the flow, an increase in the flow rate of 1-3%, related to the chart value, must be considered.

Flow tolerances depending on the presetting for DN 15-DN 50:

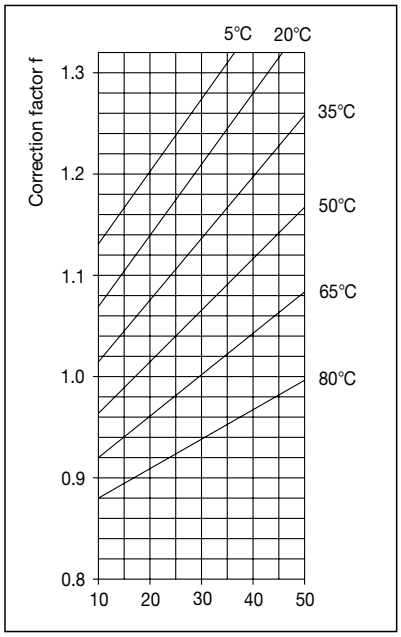


Correction factor for mixtures of water and glycol:

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 flow-meter ”OV-DMC 2”
(with memory and microprocessor)

featuring numerous functions and a wide range of applications:

– flow rate indication (indication in m^3/h, l/s, l/min, l/h, gal/min)

– differential pressure measuring (indication in mbar, kPa, PSI, mm WG, m WG)

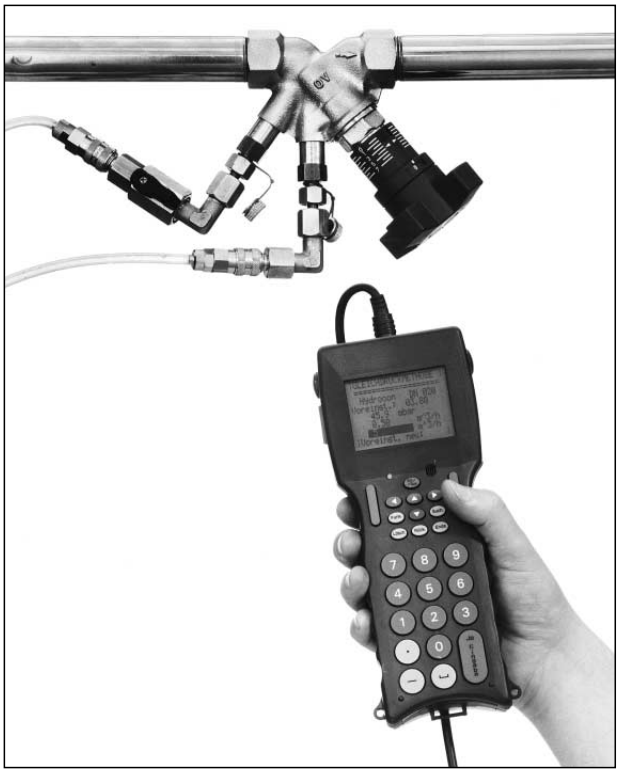
– temperature measuring (indication in °C or °F)

– 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 kv 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.)



Flow meter “OV-DMC 2”, item no. 106 91 77 with “Hydrocontrol R”

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For an overview of our global presence visit www.oventrop.de.

Product group 3
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Edition 2008

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