

Designation:

new

“Hycocon VTZ”
 “Hycocon ATZ”
 “Hycocon ETZ”
 “Hycocon HTZ”

old

“Hycocon V”
 “Hycocon A”
 “Hycocon T”
 “Hycocon TM”

Double regulating and commissioning valve “Hycocon VTZ/VPZ”

“eco” measuring technique

Oventrop double regulating and commissioning valves “Hycocon VTZ/VPZ” 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 chapter presetting). The Oventrop double regulating and commissioning valves have two integrated pressure test points and drain valves which may be equipped with a fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure. The double regulating and commissioning valves are delivered with mounted pressure test points, drain valves and caps.

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 in the upstream side.

The pipework has to be flushed thoroughly before installing the valve. The installation of an Oventrop strainer is recommended.

The flow charts are valid for installation of the double regulating and commissioning valves 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. When using the flow-meter “OV-DMC 2”, the percentage of the water and glycol mixture has to be entered. The conversion is carried out by the computer. The universal bonnet connection (M 30 x 1.5) does not only allow a conversion of the double regulating and commissioning valve to thermostatic operation (e.g. “Uni XH”) but it may also be equipped with an actuator. For use with chilled ceiling elements, electromotive actuators for the direct connection to the European installation bus control system or the LonWorks network (EIB/LON) may also be used.

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
- supplied with mounted pressure test points and drain valves
- infinitely adjustable presetting, exact measurement of pressure loss and flow via the pressure test points
- female 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 or flat sealing with male threads and collar nut or press connection
- easy filling and draining by screwing a separate tool (accessory) onto the measuring nipples



Double regulating and commissioning valve PN 16 “Hycocon VTZ”



Possible combinations “Hycocon VTZ”, “Hycocon ATZ” and “Hycocon DTZ” for hydronic balancing



Other possible combinations “Hycocon ETZ” and “Hycocon HZT” with valve inserts and actuators or thermostats

Double regulating and commissioning valve
"Hycoccon VTZ/VPZ"
"eco" measuring technique

Tender specification:

Double regulating and commissioning valve PN 16 for hot water central heating and cooling systems. Straight pattern model 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 other parts coming into contact with the fluid made of brass resistant to de-zincification (DZR), disc with PTFE soft seal, maintenance-free stem seal due to double O-ring, all functioning components on one level, with two integrated pressure test points, drain valves and caps, installation in the supply or the return pipe.

Connection thread M 30 x 1.5.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB/LON") and a differential pressure regulator bonnet under working conditions (conversion of DN 15, DN 20 and DN 25 with the help of the "Demo-Bloc"). The valves are supplied with an insulation for temperatures up to 80°C (as packaging). Moreover, Oventrop offers a separate insulation for temperatures up to 120°C. When equipped with additional polystyrene shells, both insulations may be used for cooling systems.

Double regulating and commissioning valves with integrated pressure test points and drain valves (with captive caps)

Max. operating temperature t_s : 120 °C
 Min. operating temperature t_s : -10 °C
 Max. operating pressure p_s : 16 bar (PN 16)

"Hycoccon VTZ":

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

Size	k_{VS} -value	Item no.
DN 15	1.7	106 17 04
DN 20	2.7	106 17 06
DN 25	3.6	106 17 08
DN 32	6.8	106 17 10
DN 40	10.0	106 17 12
DN 50	17.0	106 17 16

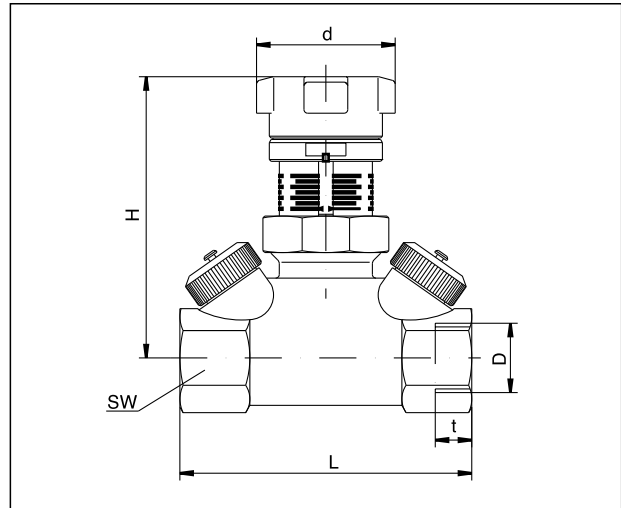
"Hycoccon VPZ":

both ports bronze press connection

Size	k_{VS} -value		Item no.
DN 15	1.7	15 mm	106 17 51
DN 15	1.7	18 mm	106 17 52
DN 20	2.7	22 mm	106 17 54
DN 25	3.6	25 mm	106 17 56
DN 32	6.8	35 mm	106 17 58
DN 40	10.0	42 mm	106 17 60

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

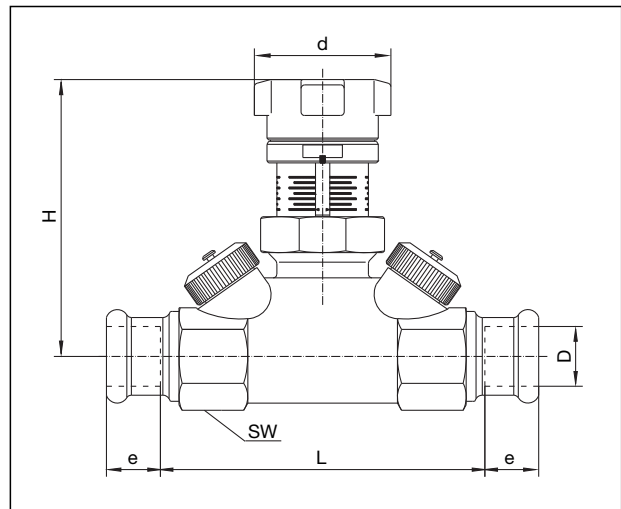
Dimensions:



DN	D EN 10226	t	SW*	L	H	d
15	Rp 1/2	13.2	27	80	77	38
20	Rp 3/4	14.5	32	82	79	38
25	Rp 1	16.8	41	92	81	38
32	Rp 1 1/4	19.1	50	115	91	50
40	Rp 1 1/2	19.1	55	130	100	50
50	Rp 2	25.7	70	140	104	50

"Hycoccon VTZ"

* SW = spanner size



DN	D	e	SW*	L	H	d
15	15	18	27	85	77	38
15	18	20	27	85	77	38
20	22	24	32	89	79	38
25	28	27	41	99	81	38
32	35	32	50	124	91	50
40	42	37,5	55	139	100	50

"Hycoccon VPZ"

* SW = spanner size

"Hycocon VTZ":

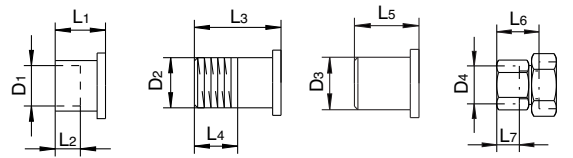
both ports with male thread and collar nut

	k_{VS} -value	Item no.
DN 15	1.7	106 18 04
DN 20	2.7	106 18 06
DN 25	3.6	106 18 08
DN 32	6.8	106 18 10
DN 40	10.0	106 18 12
DN 50	17.0	106 18 16

Accessories:

Fill and drain tool	106 17 91
Locking pin	106 17 92

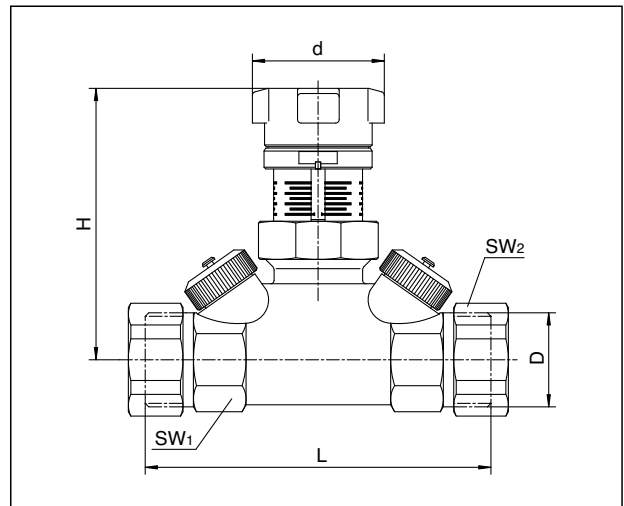
Dimensions:



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
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	-	-	-

Presetting:

- The value of presetting of the valve is set by turning the handwheel.
 - 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.
 - 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.
- Limitation of the set value of presetting by turning the inner adjustment stem clockwise up to the limit stop. This can be done by using a screwdriver with a bezel of about 3 to 4 mm.
- The value of presetting may be locked by using the locking pin (accessory).



DN	D ISO 228	L	H	SW ₁ *	SW ₂ *	d
15	G 3/4	95	77	27	30	38
20	G 1	98	79	32	37	38
25	G 1 1/4	105	81	41	46	38
32	G 1 1/2	129	91	50	52	50
40	G 1 3/4	145	100	55	58	50
50	G 2	148	104	70	75	50

Tailpipe sets:

2 weldable tailpipes

	Item no.
for valve DN 15	106 05 92
for valve DN 20	106 05 93
for valve DN 25	106 05 94
for valve DN 32	106 05 95
for valve DN 40	106 05 96
for valve DN 50	106 05 97

2 solder tailpipes

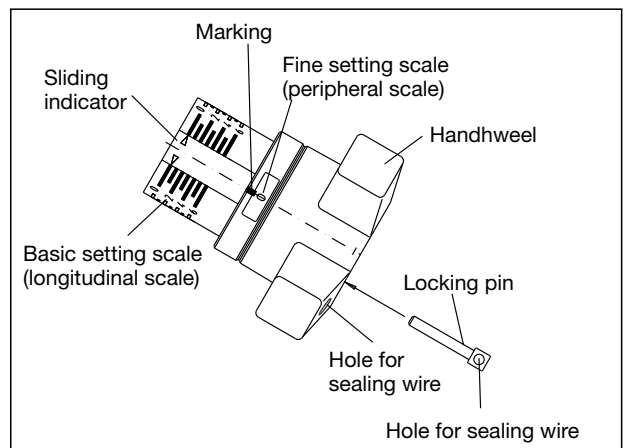
15 mm	for valve DN 15	106 10 92
18 mm	for valve DN 20	106 10 93
22 mm	for valve DN 20	106 10 94
28 mm	for valve DN 25	106 10 95
35 mm	for valve DN 32	106 10 96
42 mm	for valve DN 40	106 10 97
54 mm	for valve DN 50	106 10 98

2 tailpipes with male thread

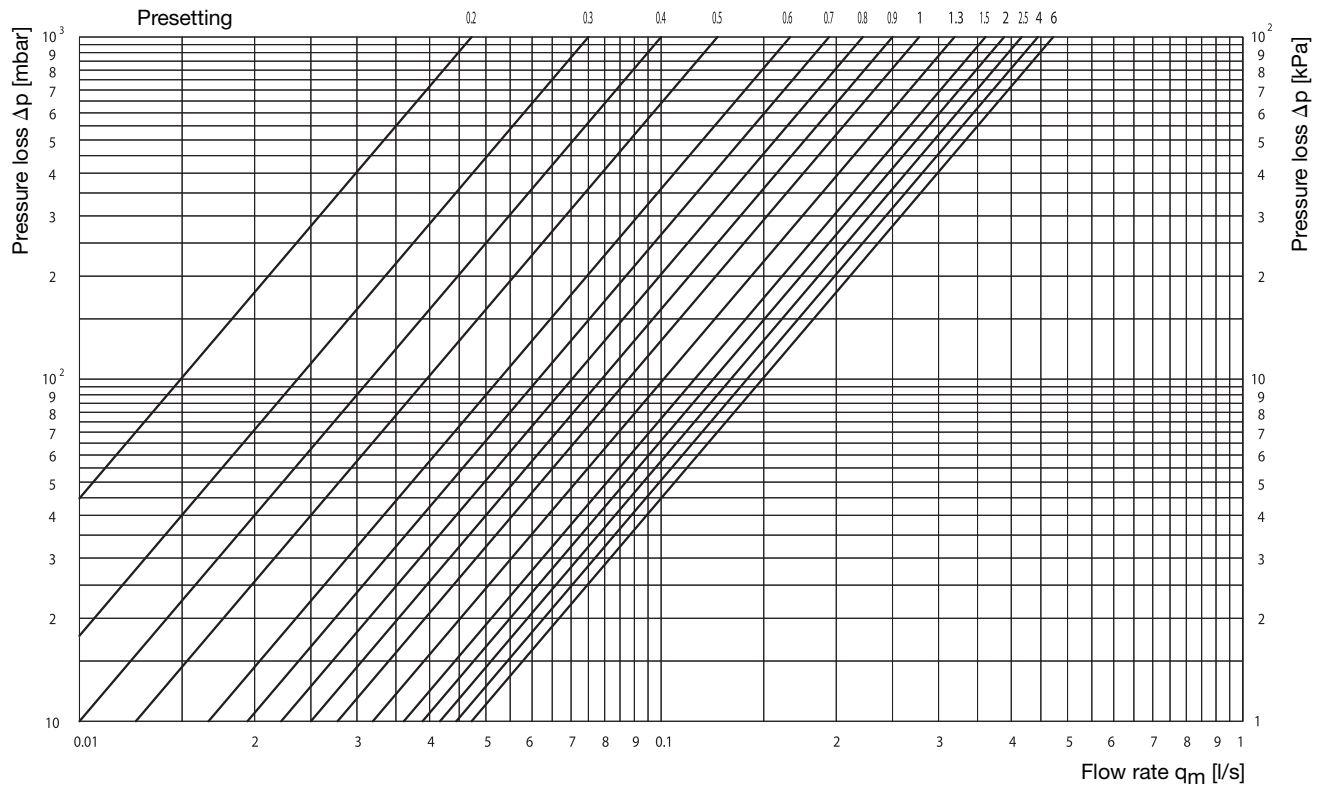
R 1/2	for valve DN 15	106 14 92
R 3/4	for valve DN 20	106 14 93
R 1	for valve DN 25	106 14 94
R 1 1/4	for valve DN 32	106 14 95
R 1 1/2	for valve DN 40	106 14 96
R 2	for valve DN 50	106 14 97

2 tailpipes with female thread

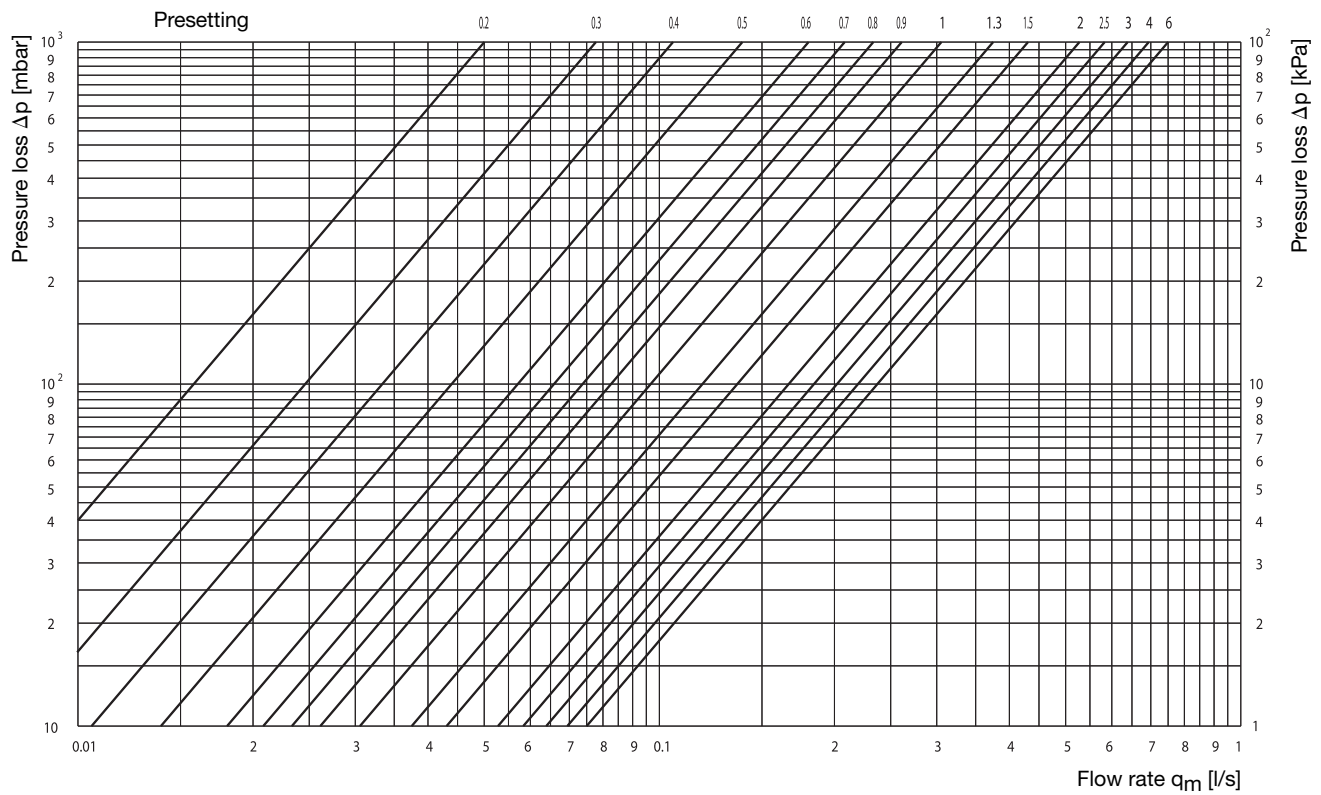
Rp 1/2	for valve DN 15	101 93 64
Rp 3/4	for valve DN 20	101 93 66
Rp 1	for valve DN 25	106 13 94
Rp 1 1/4	for valve DN 32	106 13 95



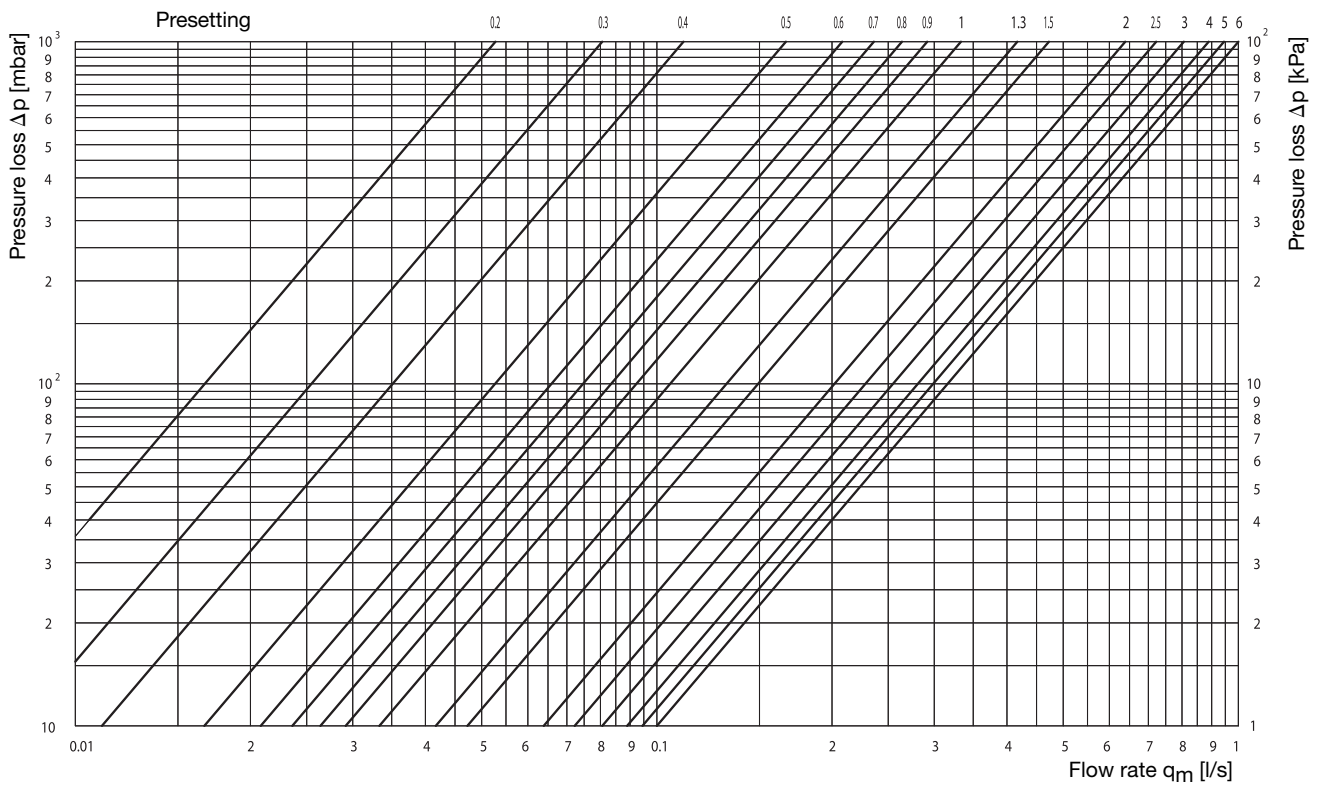
DN 15



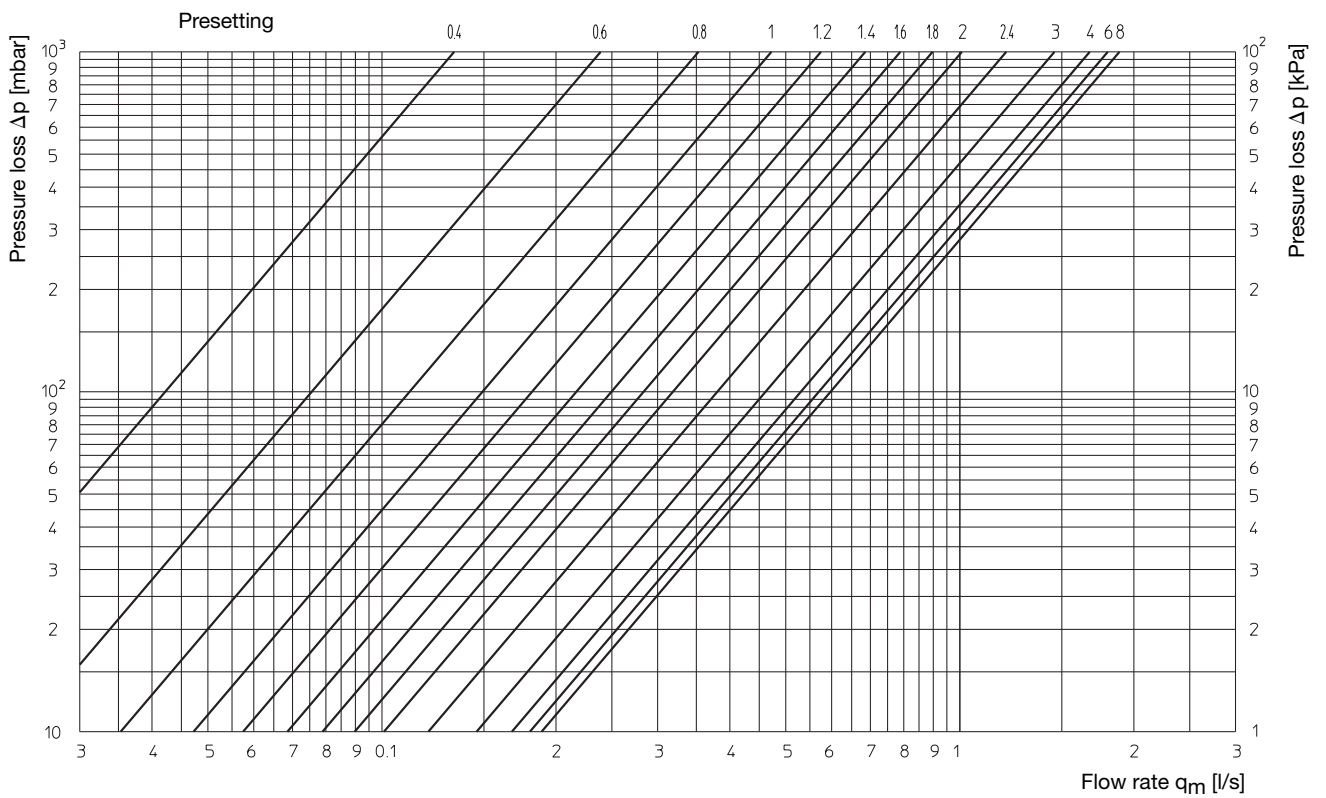
DN 20



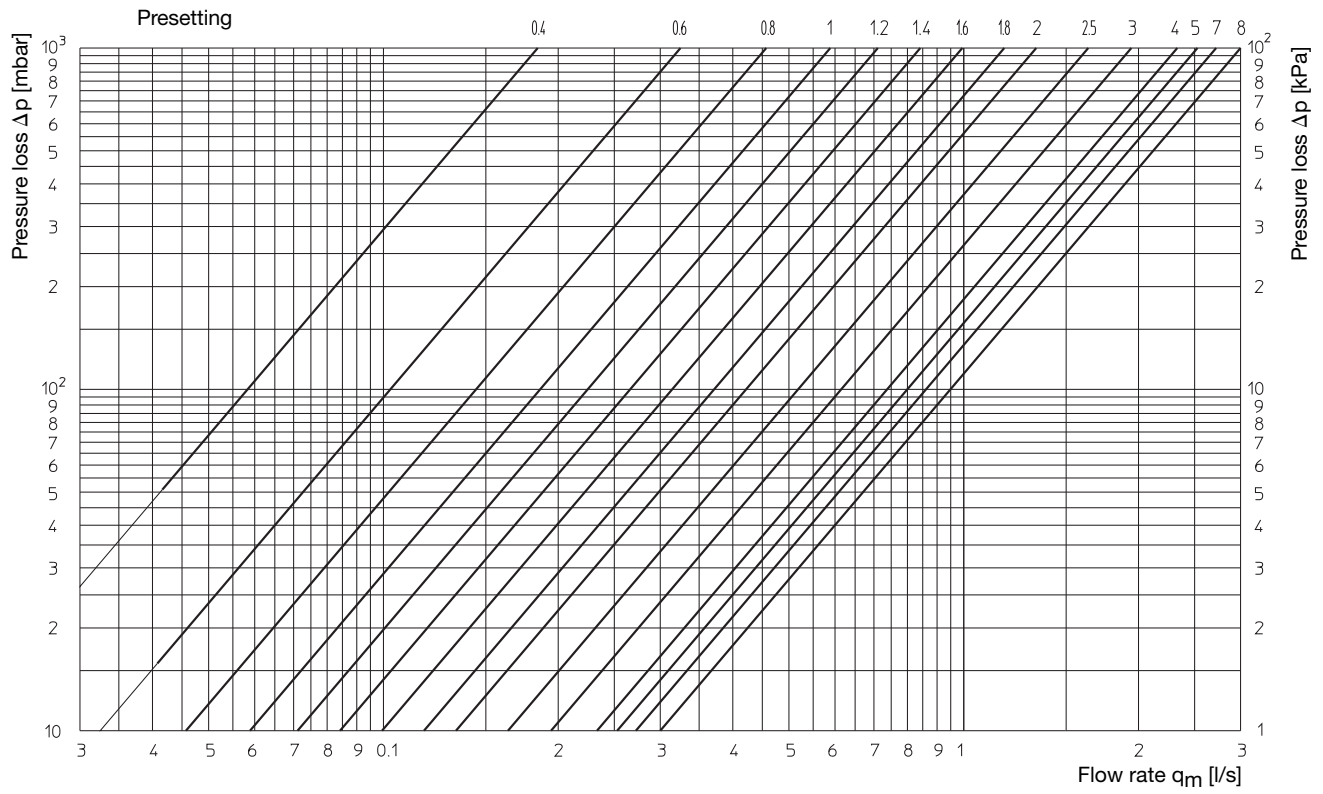
DN 25



DN 32



DN 40



DN 50

Chart in preparation

Performance data:

“Hycoccon VTZ/VPZ”	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	Presetting	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value
0.3	0.11	8352	0.13	19863	0.16	32973						
0.4	0.23	1910	0.25	5371	0.27	11579	0.48	11118	0.67	10488		
0.5	0.34	874	0.36	2590	0.39	5550	0.70	5228	0.95	5216		
0.6	0.45	499	0.48	1457	0.51	3245	0.85	3545	1.17	3439		
0.7	0.55	334	0.6	932	0.63	2127	1.10	2117	1.41	2368		
0.8	0.66	232	0.72	648	0.75	1501	1.30	1516	1.65	1729		
0.9	0.76	175	0.84	476	0.87	1115	1.52	1109	1.88	1332		
1.0	0.86	137	0.94	380	1.00	844	1.70	886	2.10	1068		
1.1	0.97	107	1.02	323	1.10	698	1.90	710	2.33	867		
1.2	1.03	95	1.10	277	1.20	586	2.10	581	2.56	718		
1.3	1.10	84	1.20	233	1.30	499	2.30	484	2.80	600		
1.4	1.16	75	1.30	199	1.40	431	2.50	410	3.05	506		
1.5	1.22	68	1.40	171	1.50	375	2.70	351	3.30	432		
1.6	1.26	64	1.51	147	1.60	330	2.85	315	3.57	369		
1.7	1.31	59	1.62	128	1.70	292	3.01	283	3.90	310		
1.8	1.36	55	1.68	119	1.80	261	3.20	250	4.25	261		
1.9	1.41	51	1.74	111	1.90	234	3.40	222	4.55	227		
2.0	1.46	47	1.80	104	2.0	211	3.60	198	4.80	204		
2.1	1.50	45	1.86	97	2.10	191	3.81	176	5.01	188		
2.2	1.53	43	1.93	90	2.21	173	4.02	159	5.20	174		
2.3	1.55	42	1.99	85	2.31	158	4.22	144	5.41	161		
2.4	1.57	41	2.05	80	2.41	145	4.33	137	5.65	147		
2.5	1.58	40	2.10	76	2.50	135	4.60	121	5.90	135		
2.6	1.59	40	2.14	73	2.58	127	4.76	113	6.15	124		
2.7	1.60	39	2.18	71	2.64	121	4.90	107	6.38	116		
2.8	1.61	39	2.21	69	2.70	116	5.00	102	6.60	108		
2.9	1.62	39	2.23	68	2.75	112	5.15	97	6.80	102		
3.0	1.63	38	2.25	66	2.80	108	5.25	93	7.00	96		
3.5	1.65	37	2.33	62	2.98	95	5.69	79	7.85	76		
4.0	1.66	37	2.40	58	3.10	88	6.00	71	8.40	67		
4.5	1.67	36	2.47	55	3.20	82	6.18	67	8.80	61		
5.0	1.68	36	2.55	52	3.30	78	6.30	65	9.10	57		
5.5	1.69	35	2.63	49	3.43	72	6.40	63	9.35	54		
6.0	1.70	35	2.70	46	3.60	65	6.50	61	9.50	52		
6.5							6.58	59	9.65	51		
7.0							6.65	58	9.80	49		
7.5							6.72	57	9.90	48		
8.0							6.80	55	10.00	47		

in preparation

**Isolating and orifice valve "Hycococon ATZ/APZ"
"eco" measuring technique**

Oventrop isolating and orifice valves "Hycococon ATZ/APZ" are installed in the pipework of hot water central heating systems and cooling systems and serve to achieve an isolation of the pipe-work.

The Oventrop isolating and orifice valves have two integrated pressure test points and drain valves which may be equipped with a fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure.

The isolating and orifice valves may be installed in either the supply or the return pipe.

Conversion to double regulating and commissioning valves is possible by replacing the handwheel group.

Moreover, the inserts of the sizes DN 15 to DN 25 can be replaced under working conditions with the help of the "Demo-Bloc" and can be converted to receive an actuator or a differential pressure regulator bonnet.

Tender specification:

Isolating and orifice valve PN 16 for hot water central heating and cooling systems. Straight pattern model. Valve body, bonnet and other parts coming into contact with the fluid made of brass resistant to de-zincification (DZR), disc with PTFE soft seal, maintenance-free stem seal due to double O-ring. Installation in the supply or the return pipe. With two integrated pressure test points, drain valves and caps.

Connection thread M 30 x 1.5.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB/LON") and a differential pressure regulator bonnet. To do so, the bonnet has to be replaced (by using the "Demo-Bloc" 118 80 51 or draining the system).

The valves are supplied with an insulation for temperatures up to 80°C (as packaging). Moreover, Oventrop offers a separate insulation for temperatures up to 120°C. When equipped with additional polystyrene shells, both insulations may be used for cooling systems.

Max. operating temperature t_s : 120 °C
 Min. operating temperature t_s : -10 °C
 Max. operating pressure p_s : 16 bar

"Hycococon ATZ":

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

Size	k_{VS} -value	Item no.
DN 15	1.7	106 73 04
DN 20	2.7	106 73 06
DN 25	3.6	106 73 08
DN 32	6.8	106 73 10
DN 40	10.0	106 73 12
DN 50	17.0	106 73 16

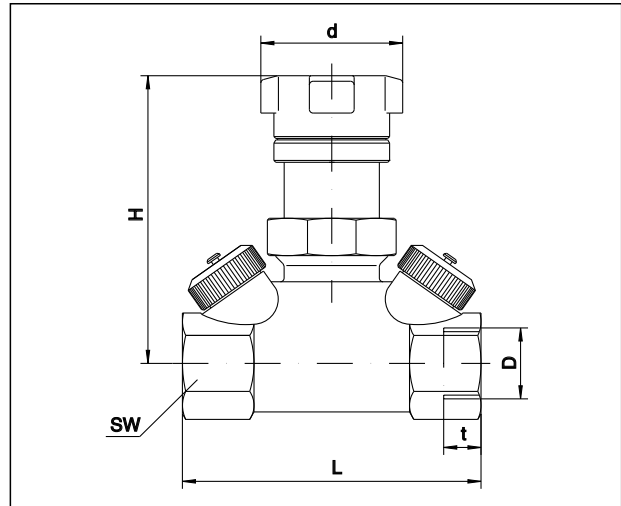
"Hycococon APZ":

both ports bronze press connection

Size	k_{VS} -value		Item no.
DN 15	1.7	15 mm	106 73 51
DN 15	1.7	18 mm	106 73 52
DN 20	2.7	22 mm	106 73 54
DN 25	3.6	25 mm	106 73 56
DN 32	6.8	35 mm	106 73 58
DN 40	10.0	42 mm	106 73 60

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

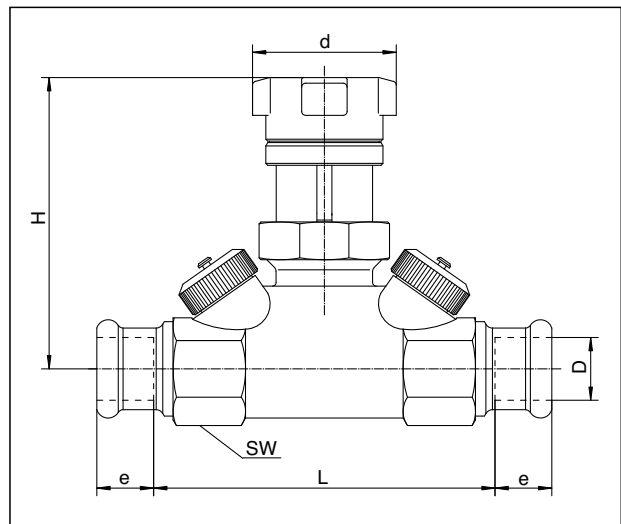
Dimensions:



DN	D EN 10226	t	SW*	L	H	d
15	Rp 1/2	13.2	27	80	77	38
20	Rp 3/4	14.5	32	82	79	38
25	Rp 1	16.8	41	92	81	38
32	Rp 1 1/4	19.1	50	115	91	50
40	Rp 1 1/2	19.1	54	130	100	50
50	Rp 2	25.7	70	140	104	50

"Hycococon ATZ"

* SW = spanner size



DN	D	e	SW*	L	H	d
15	15	18	27	85	77	38
15	18	20	27	85	77	38
20	22	24	32	89	79	38
25	28	27	41	99	81	38
32	35	32	50	124	91	50
40	42	37.5	54	139	100	50

"Hycococon APZ"

* SW = spanner size

**Isolating and orifice valve "Hycoccon ATZ/APZ"
"eco" measuring technique**

both ports male thread and collar nut

Size	k _{VS} -value	Item no.
DN 15	1,7	106 74 04
DN 20	2,7	106 74 06
DN 25	3,6	106 74 08
DN 32	6,8	106 74 10
DN 40	10,0	106 74 12
DN 50	17,0	106 74 16

Accessory:

Fill and drain tool 106 17 91

Tailpipe sets:

2 weldable tailpipes

for valve DN 15	106 05 92
for valve DN 20	106 05 93
for valve DN 25	106 05 94
for valve DN 32	106 05 95
for valve DN 40	106 05 96
for valve DN 50	106 05 97

2 solder tailpipes

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

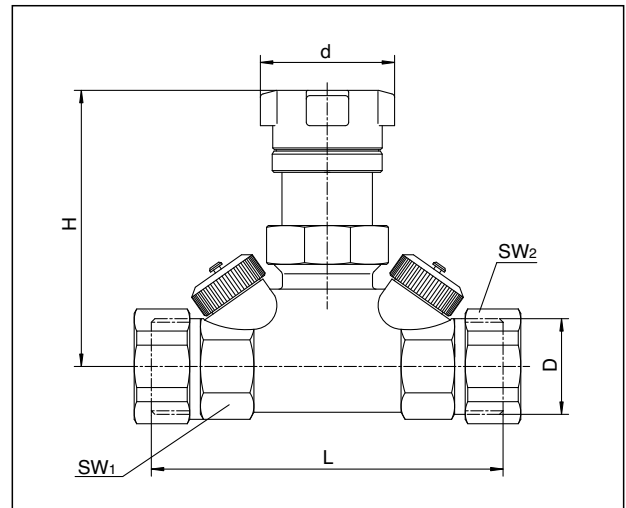
2 tailpipes with male thread

R 1/2 for valve DN 15	106 14 92
R 3/4 for valve DN 20	106 14 93
R 1 for valve DN 25	106 14 94
R 1 1/4 for valve DN 32	106 14 95
R 1 1/2 for valve DN 40	106 14 96
R 2 for valve DN 50	106 14 97

2 tailpipes with female thread

Rp 1/2 for valve DN 15	101 93 64
Rp 3/4 for valve DN 20	101 93 66
Rp 1 for valve DN 25	106 13 94
Rp 1 1/4 for valve DN 32	106 13 95

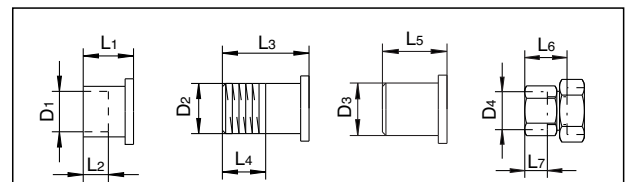
Dimensions:



DN	D ISO 228	L	H	SW ₁ *	SW ₂ *	d
15	G 3/4	95	77	27	30	38
20	G 1	98	79	32	37	38
25	G 1 1/4	105	81	41	46	38
32	G 1 1/2	129	91	50	52	50
40	G 1 3/4	145	100	55	58	50
50	G 2	148	104	70	75	50

* SW = spanner size

Dimensions:



DN	D ₁	L ₁	L ₂	D ₂ DIN EN 10226	L ₃	L ₄	D ₃	L ₅	D ₄ DIN EN 10226	L ₆	L ₇
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	-	-	-

Regulating valves "Hyocon ETZ" and "Hyocon HTZ" for subsequent conversion to thermostatic operation "eco" measuring technique

Function:

Oventrop regulating valves "Hyocon ETZ" and "Hyocon HTZ" 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 systems. They can also be combined with thermostatic or electric actuators.

The balance is achieved by a presetting with memory position. The required values of presetting can be obtained from the flow charts. Presetting is carried out by using a presetting key ("Hyocon ETZ": item no. 118 39 61 / "Hyocon HTZ": item no. 106 85 85).

The Oventrop regulating valves have two integrated pressure test points and drain valves which may be equipped with a fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure.

The regulating valves by be installed in either the supply or the return pipe.

The pipework has to be flushed thoroughly before installing the valve. The installation of an Oventrop strainer is recommended.

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

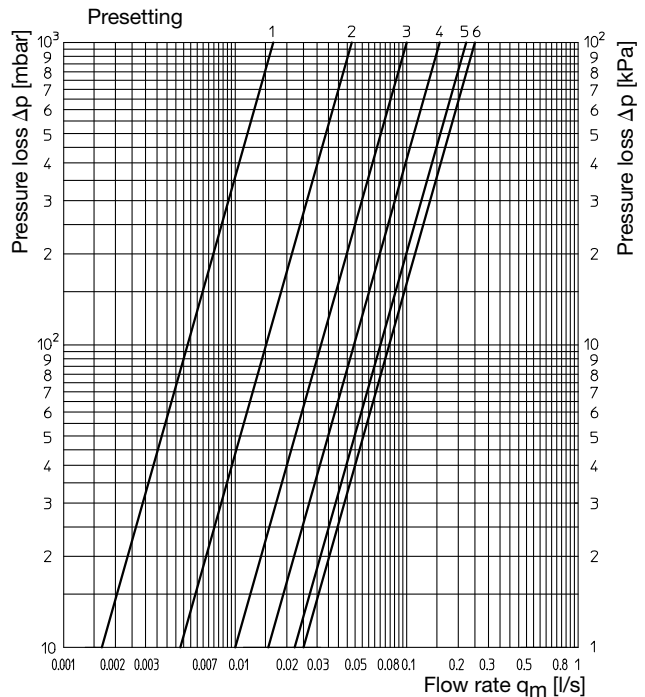
In cooling systems using mixtures of water and glycol, the correction factors related to the indicated chart values have to be taken into consideration. When using the flow-meter "OV-DMC 2" (kv-value method), the percentage of the water and glycol mixture has to be entered. The conversion is carried out by the computer. The universal bonnet connection (M 30 x 1.5) does not only allow a conversion of the regulating valves to thermostatic operation (e.g. "Uni XH") but it may also be equipped with an electrothermal or electromotive actuator. Electromotive actuators for the direct connection to the European installation bus control system or the LonWorks network (EIB/LON) may also be used.

Conversion of the regulating valves "Hyocon HTZ" to differential pressure regulators is possible under working conditions without draining the system.

Performance data (k_{VS} 0.9):

Presetting	1	2	3	4	5	6
k _V value at 1 K P-deviation	0.055	0.141	0.221	0.247	0.28	0.32
k _V value at 1.5 K P-deviation	0.055	0.170	0.296	0.370	0.42	0.49
k _V value at 2 K P-deviation	0.055	0.170	0.313	0.446	0.56	0.65
k _{VS}	0.06	0.17	0.36	0.56	0.8	0.9

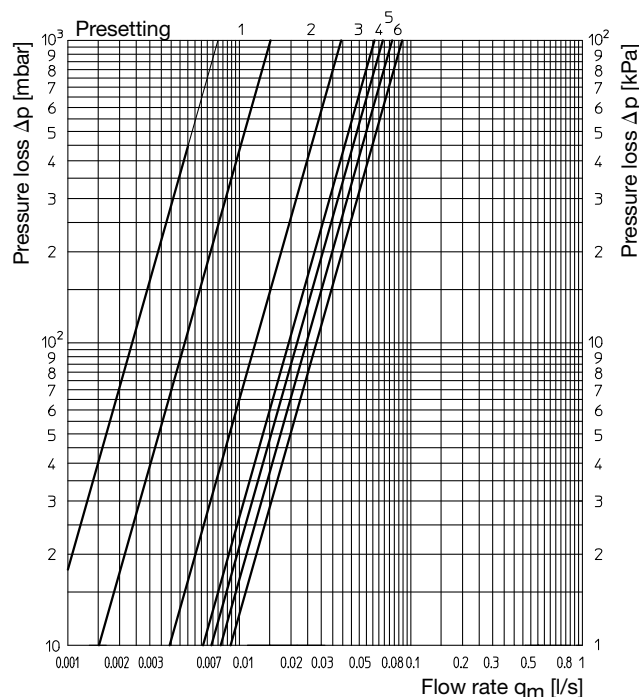
All patterns and sized, k_{VS} values



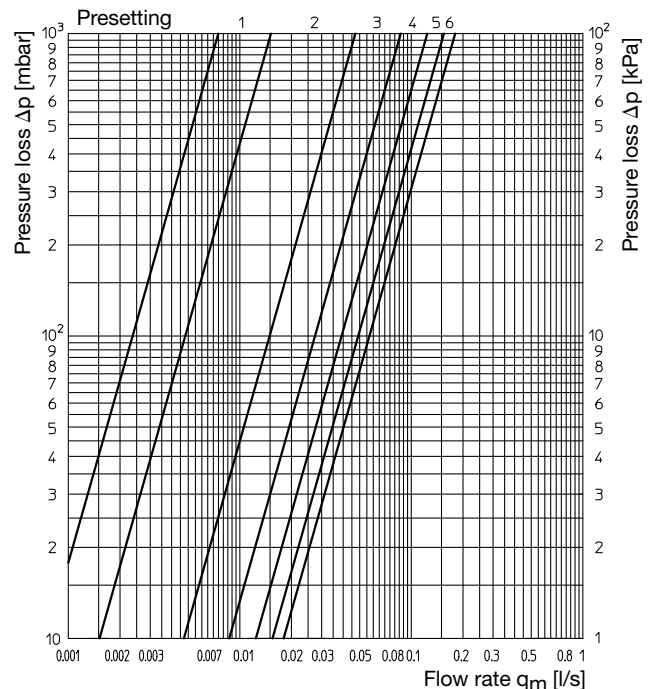
Flow charts and performance data for "Hyocon ETZ" DN 15 - DN 25 (k_{VS} 0.9)

with valve insert "Series AV 6".

All patterns and sizes up to 1 K P-deviation



All patterns and sizes up to 2 K P-deviation



Regulating valves "Hycococon ETZ" and "Hycococon HTZ" with female thread according to EN 10226 (BS 21) "eco" measuring technique

Tender specification:

Regulating valve PN 16, both ports with female thread according to EN 10226 (BS 21), for hot water central heating and cooling systems. Straight pattern model with presetting; valve body made of brass resistant to de-zincification (DZR), maintenance-free stem seal due to double O-ring, all functioning components on one level, with two integrated pressure test points, drain valves and caps, installation in the supply or the return pipe.

Max. operating temperature t_s : 120 °C
 Min. operating temperature t_s : -10 °C
 Max. operating pressure p_s : 16 bar
 Max. differential pressure: "Hycococon ETZ": 1 bar
 "Hycococon HTZ" (bonnet pressure balanced):
 DN 15 – DN 25: 5 bar
 DN 32: 3 bar
 DN 40: 2 bar

Connection thread M 30 x 1.5.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB/LON"). Bonnet (DN 15 – DN 25) replaceable under working conditions with the help of the "Demo-Bloc".

Effective piston stroke: "Hycococon ETZ": 2.5 mm
 "Hycococon HTZ":
 DN 15 – DN 25: 3 mm
 DN 32/DN 40: 4 mm

Oventrop offers a separate insulation for temperatures up to 120°C.

Regulating valves both ports with female thread according to EN 10226 (BS 21), with integrated pressure test points and drain valves (with captive caps)

"Hycococon ETZ"

		k_v 1 K P	k_v 2 K P	k_{VS} -value	Item no.
DN 15	1/2"	0.32	0.65	0.9	106 83 64
DN 20	3/4"	0.32	0.65	0.9	106 83 66
DN 25	1"	0.32	0.65	0.9	106 83 68

"Hycococon HTZ"

		k_v 1 K P	k_v 2 K P	k_{VS} -value	Item no.
DN 15	1/2"	0.52	0.95	1.7	106 85 64
DN 20	3/4"	0.52	1.04	2.7	106 85 66
DN 25	1"	0.52	1.08	3.6	106 85 68
DN 32	1 1/4"	0.70	1.39	6.8	106 85 70
DN 40	1 1/2"	0.84	1.58	10.0	106 85 72

Accessory:

Fill and drain tool 106 17 91

Regulating valves "Hycococon ETZ" and "Hycococon HTZ" with male thread and collar nut "eco" measuring technique

Tender specification:

Regulating valve PN 16 both ports with male thread and collar nut for weldable, solder and threaded tailpipes, flat sealing, not suitable for steam. Straight pattern model with presetting; body made of brass resistant to de-zincification (DZR) (106 86 67: bronze body). Maintenance-free stem seal due to double O-ring, all functioning components on one level, with two integrated pressure test points, drain valves and caps, installation in the supply or the return pipe.

Max. operating temperature t_s : 120 °C
 Min. operating temperature t_s : -10 °C
 Max. operating pressure p_s : 16 bar
 Max. differential pressure: "Hycococon ETZ": 1 bar
 "Hycococon HTZ" (bonnet pressure balanced):
 DN 15 – DN 25: 5 bar
 DN 32: 3 bar
 DN 40: 2 bar

Connection thread M 30 x 1.5.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB/LON"). Bonnet (DN 15 – DN 25) replaceable under working conditions with the help of the "Demo-Bloc".

Effective piston stroke: "Hycococon ETZ": 2.2 mm
 "Hycococon HTZ":
 DN 15 – DN 25: 3 mm
 DN 32/DN 40: 4 mm

Oventrop offers a separate insulation for temperatures up to 120°C (except for 106 86 67).

Regulating valves both ports with male thread and collar nut, with integrated pressure test points and drain valves (with captive caps)

"Hycococon ETZ"

		k_v 1 K P	k_v 2 K P	k_{VS} -value	Item no.
DN 15	1/2"	0.32	0.65	0.9	106 84 64
DN 20	3/4"	0.32	0.65	0.9	106 84 66
DN 25	1"	0.32	0.65	0.9	106 84 68

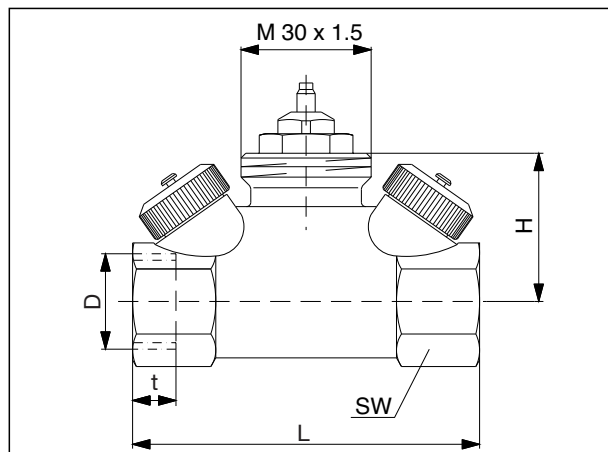
"Hycococon HTZ"

		k_v 1 K P	k_v 2 K P	k_{VS} -value	Item no.
DN 15	1/2"	0.52	0.95	1.7	106 86 64
DN 20	3/4"	0.52	1.04	2.7	106 86 66
DN 25	1"	0.63	1.30	5.0	106 86 67
DN 25	1"	0.52	1.08	3.6	106 86 68
DN 32	1 1/4"	0.70	1.39	6.8	106 86 70
DN 40	1 1/2"	0.84	1.58	10.0	106 86 72

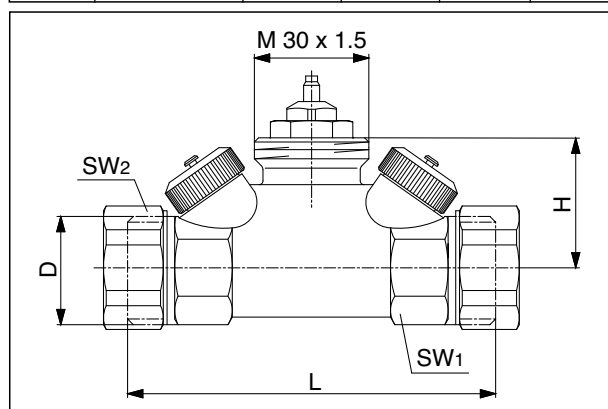
Accessory:

Fill and drain tool 106 17 91

Dimensions:



DN	D EN 10226	t	SW*	L	H
15	Rp 1/2	13.2	27	80	33
20	Rp 3/4	14.5	32	82	35
25	Rp 1	16.8	41	92	37
32	Rp 1 1/4	19.1	50	115	48
40	Rp 1 1/2	19.1	55	130	55



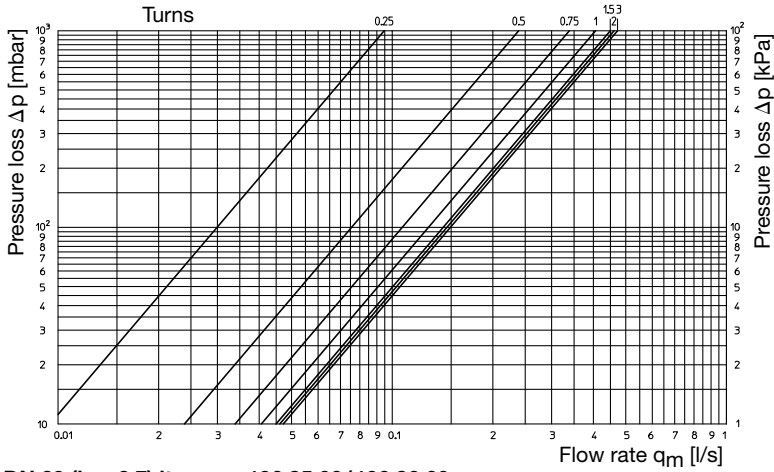
DN	D ISO 228	L	H	SW1*	SW2*
15	G 3/4	95	33	27	30
20	G 1	98	35	32	37
25	G 1 1/4	105	37	41	46
32	G 1 1/2	129	48	50	52
40	G 1 3/4	145	55	55	58

"Hycococon HTZ" DN 20 3/4" k_{VS} -value 5.0 item no. 106 86 67

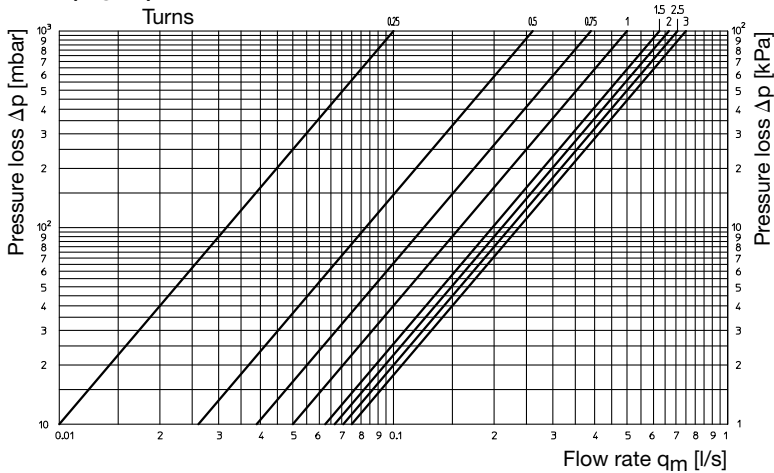
DN	D ISO 228	L	H	SW1*	SW2*
20	G 1	106	42	32	37

* SW = spanner size

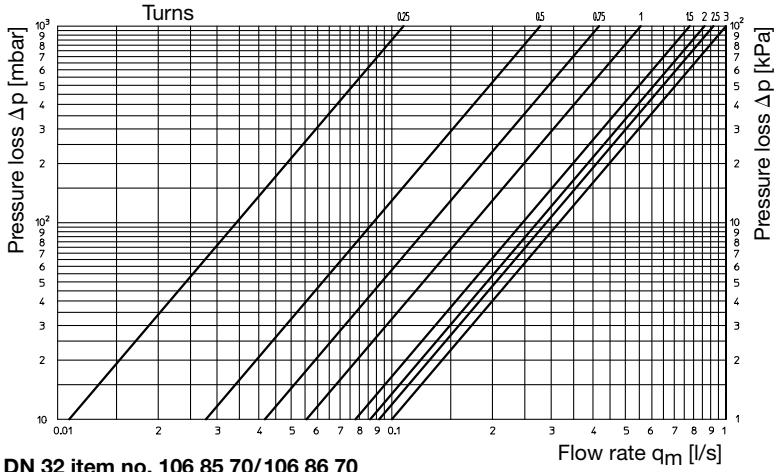
Flow charts for "Hycoccon HTZ"
DN 15 item no. 106 85 64/106 86 64



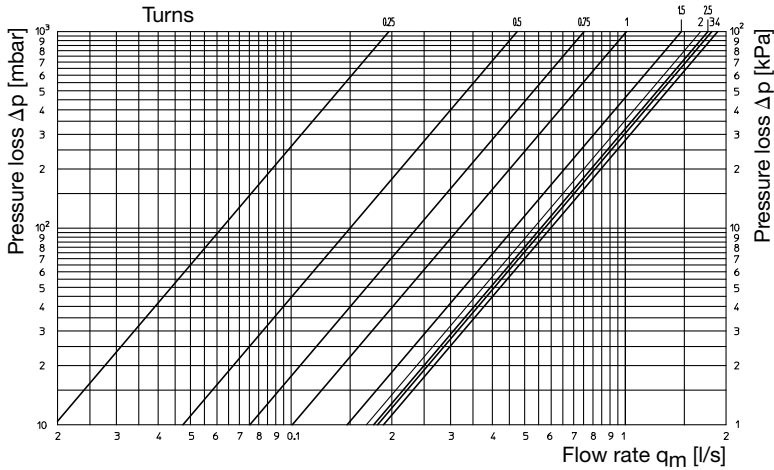
DN 20 (kvs 2.7) item no. 106 85 66/106 86 66



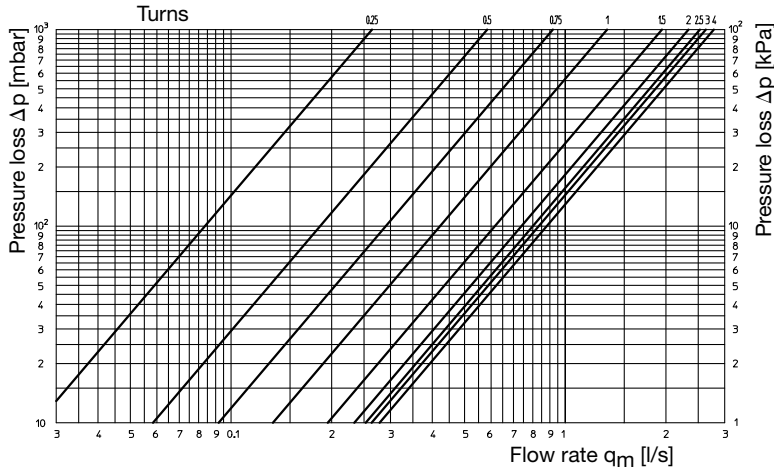
DN 25 item no. 106 85 68/106 86 68



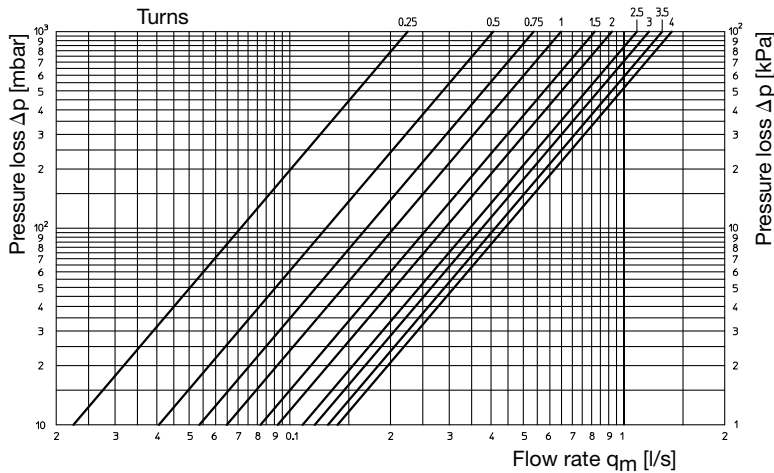
DN 32 item no. 106 85 70/106 86 70



DN 40 item no. 106 85 72/106 86 72



DN 20 (kvs 5.0) item no. 106 86 67



Dimensions:

DN	D1	L1	L2	D2 DIN EN 10226	L3	L4	D3	L5 DIN EN 10226	D4	L6	L7
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	-	-	-

Tailpipe sets:

2 weldable tailpipes	Item no.
for valve DN 15	106 05 92
for valve DN 20	106 05 93
for valve DN 25	106 05 94
for valve DN 32	106 05 95
for valve DN 40	106 05 96
2 solder tailpipes	
15 mm for valve DN 15	106 10 92
18 mm for valve DN 20	106 10 93
22 mm for valve DN 20	106 10 94
28 mm for valve DN 25	106 10 95
35 mm for valve DN 32	106 10 96
42 mm for valve DN 40	106 10 97
2 tailpipes with male thread	
R 1/2 for valve DN 15	106 14 92
R 3/4 for valve DN 20	106 14 93
R 1 for valve DN 25	106 14 94
R 1 1/4 for valve DN 32	106 14 95
R 1 1/2 for valve DN 40	106 14 96
2 tailpipes with female thread	
Rp 1/2 for valve DN 15	101 93 64
Rp 3/4 for valve DN 20	101 93 66
Rp 1 for valve DN 25	106 13 94
Rp 1 1/4 for valve DN 32	106 13 95

**Valve inserts suitable for "Hycoccon" valves
Sizes DN 15 - DN 25**

(except for item o. 106 86 67)

Item no.



"Series A"

118 70 69



"Series F"

118 73 52



"Series ADV 6"

118 60 01



"Series PTB"

P1 118 60 52



P2 118 60 53



P3 118 60 54



"Series KTB"

for chilled water circuits

114 71 69



with stainless steel seat
(especially for steam installations)

118 62 00



"Series AZ"

118 70 60



Special insert for reversed
supply and return pipe

118 70 70



Return temperature limitation

102 69 81

k_v- and Zeta-values

"Series A"

Size	k _v at P-deviation			k _{vS}	Zeta at P-deviation			
	1 K	2 K	3 K		1K	2K	3 K	open
DN 15	0.50	0.95	1.25	1.35	404	112	65	55
DN 20	0.50	0.95	1.25	1.35	1343	372	215	184
DN 25	0.50	0.95	1.25	1.35	3380	935	540	463

"Series F" (with fine presetting)

Size	k _v at P-deviation			k _{vS}	Zeta at P-deviation			
	1 K	2 K	3 K		1K	2K	3 K	open
DN 15	0.20	0.32	0.35	0.37	2570	1004	839	751
DN 20	0.20	0.32	0.35	0.37	8535	3330	2790	2490
DN 25	0.20	0.32	0.35	0.37	21100	8240	6890	6166

"Series ADV 6" (with double function and presetting)

Size	k _v at P-deviation			Zeta at P-deviation		
	1 K	2 K	3 K	1K	2K	3 K
DN 15	0.32	0.65	0.8	1004	239	158
DN 20	0.32	0.65	0.8	3330	795	525
DN 25	0.32	0.65	0.8	8240	2000	1320

"Series PTB"

Size	k _{vS}	Zeta
DN 15 „P 1“	0.45	499
DN 15 „P 2“	1.00	101
DN 15 „P 3“	1.8	31
DN 20 „P 1“	0.45	1658
DN 20 „P 2“	1.00	335
DN 20 „P 3“	1.8	104
DN 25 „P 1“	0.45	4170
DN 25 „P 2“	1.00	844
DN 25 „P 3“	1.8	261

"Series KTB" k_{vS} = 1.0

Size	k _v	Zeta
DN 15	0.5	150
DN 20	0.5	404
DN 25	0.5	1340

"Series AZ" (for zone control), all patterns k_v = 1.1

Size	k _{vS}	Zeta
DN 15	1,8	31
DN 20	2,8	43
DN 25	3,5	69

Zeta values related to the inner pipe diameter according to DIN 2440.



"Combi LR" with cap

Item no.
118 70 71



for "Hycocon ETZ" ("Series AV 3")

118 70 57

"Series AV 6"

Size	k _v at P-deviation			k _{vs}	Zeta at P-deviation			
	1 K	2 K	3 K		1K	2K	3 K	open
DN 15	0.32	0.65	0.8	0.9	1004	239	158	125
DN 20	0.32	0.65	0.8	0.9	3330	795	525	414
DN 25	0.32	0.65	0.8	0.9	8240	2000	1320	1042



for "Hycocon HTZ"
DN 15 - DN 25

106 70 85



for "Hycocon VTZ/VPZ" and
"Hycocon ATZ/APZ"
DN 15 - DN 25

106 70 65

Sizes DN 32 and DN 40



for "Hycocon VTZ/VPZ" and "Hycocon HTZ"

DN 32
DN 40

106 70 66
106 70 67



for "Hycocon ATZ/APZ"
DN 32
DN 40

106 70 68
106 70 69



Measuring and draining unit
DN 15- DN 40

106 17 90

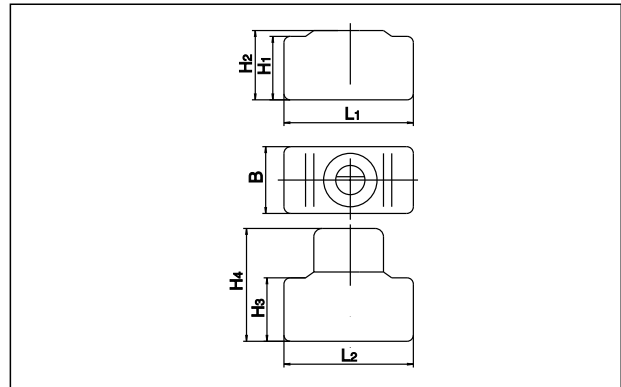


Plug
DN 15 - DN 40

106 17 98

Insulation:

1. Type I for use in heating systems up to 80°C.
This insulation made of expanded polystyrene (EPS) also serves as packaging and is supplied with each double regulating and commissioning valve (or isolating and orifice valve) together with the corresponding clamping rings. The handwheel and the presetting scale remain accessible.
2. Type II (item no. 106 17 71-75) for use in heating systems up to 120°C.
High quality insulation made of polyurethane (PUR) as accessory, consisting of 2 shells held together by clamping rings (dimensions as type I). The handwheel and the presetting scale remain accessible.
3. Type III (item no. 106 17 81-85) for use in cooling systems for a diffusion tight insulation in combination with type I or II. This accessory consists of two shells made of polystyrene (PS) integrating the insulation type I or II. Here, the handwheel and the presetting scale are insulated, too. To improve the insulation, the shells may be cohered by using a sealing material.



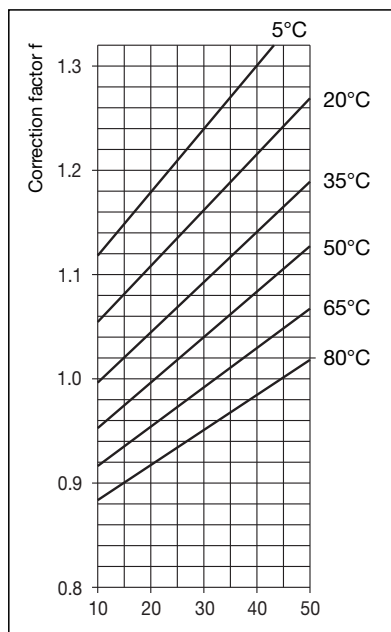
DN	H ₁	H ₂	H ₃	H ₄	L ₁	L ₂	B
15	82	89	87	93	155	160	76
20	82	89	87	93	155	160	76
25	88	95	93	100	155	160	84
32	94	108	99	122	178	183	96
40	104	120	110	130	197	203	110

The insulations cannot be used for item no. 106 86 67.

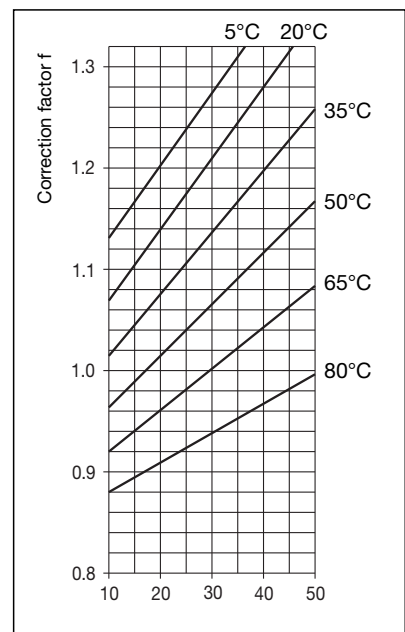
Correction factor for mixtures of water and glycol:

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

When using the flow-meter "OV-DMC 2", the correction factor is converted automatically. To do so, the temperature of the mixture of water and glycol has to be entered and the percentage of glycol is selected in the flow-meter.



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 in m³/h, l/s, l/min, 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 value of presetting 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.)

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).

Subject to technical modification without notice.

Product range 3
ti 128-1/20/MW
Edition 2011

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