



HYDROFIRE ΕΠΕ

Buildings - Industry - Marine – Waterworks
END OF AG. PANTELEIMONOS Str. (ELEONAS)
GR-12241 EGALEO,

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www.hydrofire.gr, email: info@hydrofire.gr



oventrop

“Hycococon”

Technical information

Double regulating and commissioning valves “Hycococon VTZ/VPZ” “eco” measuring technique

Oventrop double regulating and commissioning valves “Hycococon 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 lock.

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 “y” type 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 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, bus application electromotive actuators (“Uni EIB/LON”) may also be used. Size DN 50 can be converted to receive a differential pressure regulator bonnet. The system has to be drained for this purpose.

Advantages:

- the location of the functional components in one plane allows a simple assembly and easy operation
- only one valve for 5 functions
 - presetting
 - measuring
 - isolating
 - filling
 - draining
- supplied with mounted pressure test points and drain valves
- infinitely adjustable, reproducible, lockable and lead sealable 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 (1027151-58) 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



“Hycococon VTZ”



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



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



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“Hycoccon”

Double regulating and commissioning valves “Hycoccon VTZ/VPZ”

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 functional components in one plane, 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 without draining the system (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). For the sizes DN 15 up to DN 40, 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)

Technical data:

Max. operating temperature t_s : +120 °C

Min. operating temperature t_s : -10 °C

Max. operating pressure p_s : 16 bar (PN 16)

Models:

“Hycoccon VTZ”:

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

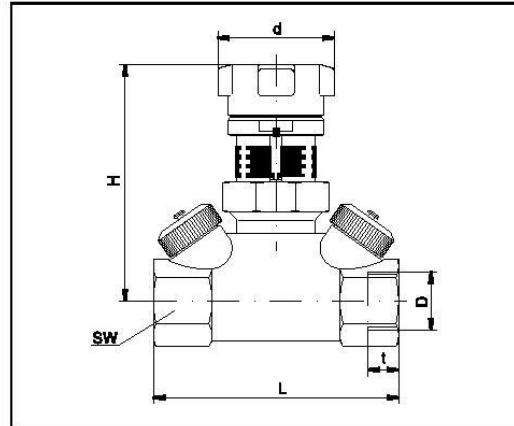
Size	k_{vs} -value	Item no.
DN 15	1.7	1061704
DN 20	2.7	1061706
DN 25	3.6	1061708
DN 32	6.8	1061710
DN 40	10.0	1061712
DN 50	18.0	1061716

“Hycoccon VPZ”:

both ports bronze press connection

Size	k_{vs} -value		Item no.
DN 15	1.7	15 mm	1061751
DN 15	1.7	18 mm	1061752
DN 20	2.7	22 mm	1061754
DN 25	3.6	25 mm	1061756
DN 32	6.8	35 mm	1061758
DN 40	10.0	42 mm	1061760

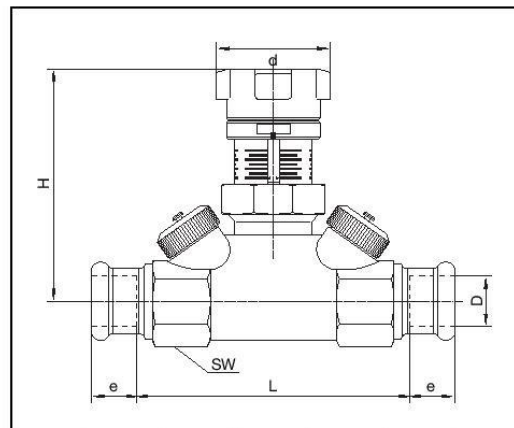
For the direct connection of copper pipe pipes according to EN 1057/DVGW GW 392, stainless steel pipes according to EN 10088/DVGW 541 and thin-walled C-steel pipes (material no. E 195/1.0034) according to EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the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



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

Dimensions “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

Dimensions “Hycoccon VPZ”

*SW = spanner size



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“Hycocn”

“Hycocn VTZ”:

both ports male thread and collar nut

Size	K_{vs} -Value	Item no.
DN 15	1.7	1061804
DN 20	2.7	1061806
DN 25	3.6	1061808
DN 32	6.8	1061810
DN 40	10.0	1061812
DN 50	18.0	1061816

Accessories:

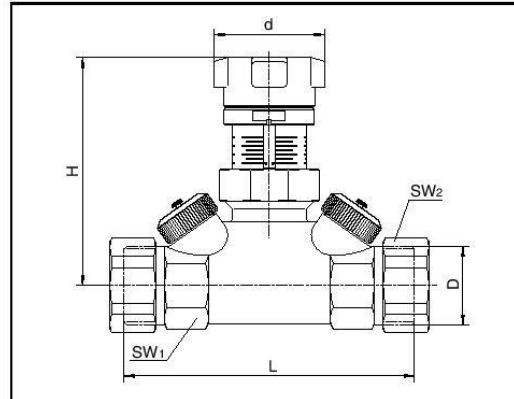
Fill and drain tool	1061791
Locking pin	1061792

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	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

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

Dimensions

*SW = spanner size

Tailpipe sets:

2 weldable tailpipes

for valve DN	Item no.
15	1060592
20	1060593
25	1060594
32	1060595
40	1060596
50	1060597

2 solder tailpipes

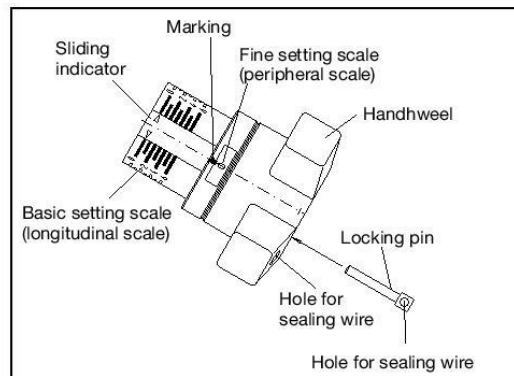
Size	for valve DN	Item no.
15 mm	15	1061092
18 mm	20	1061093
22 mm	20	1061094
28 mm	25	1061095
35 mm	32	1061096
42 mm	40	1061097
54 mm	50	1061098

2 tailpipes with male thread

Thread	for valve DN	Item no.
R 1/2	15	1061492
R 3/4	20	1061493
R 1	25	1061494
R 1 1/4	32	1061495
R 1 1/2	40	1061496
R 2	50	1061497

2 tailpipes with female thread

Thread	for valve DN	Item no.
Rp 1/2	15	1061392
Rp 3/4	20	1061393
Rp 1	25	1061394
Rp 1 1/4	32	1061395





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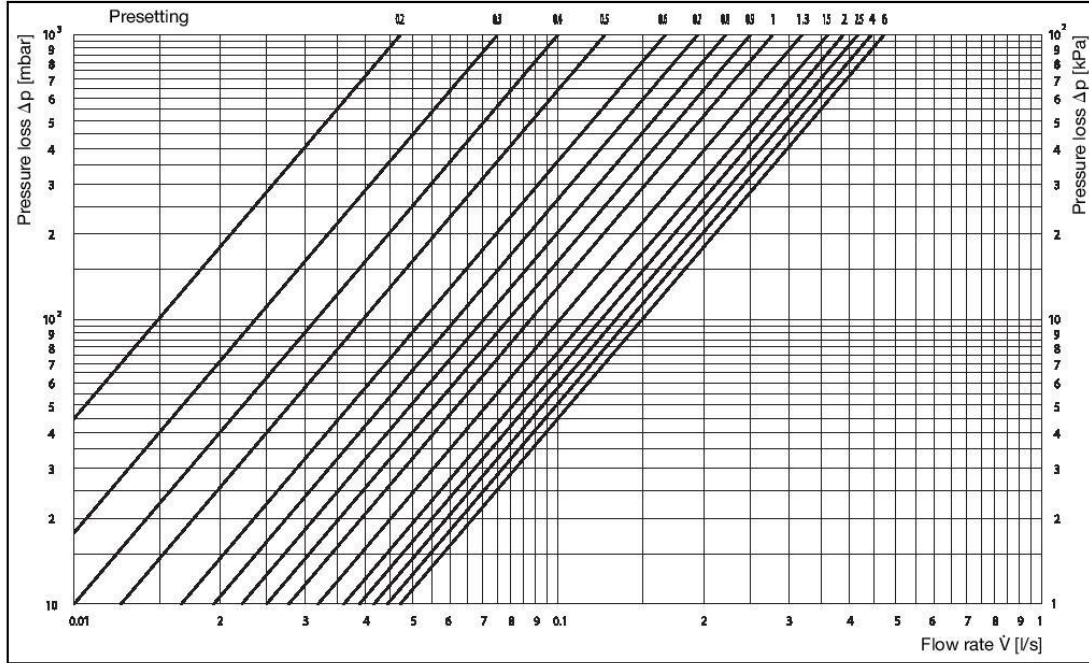
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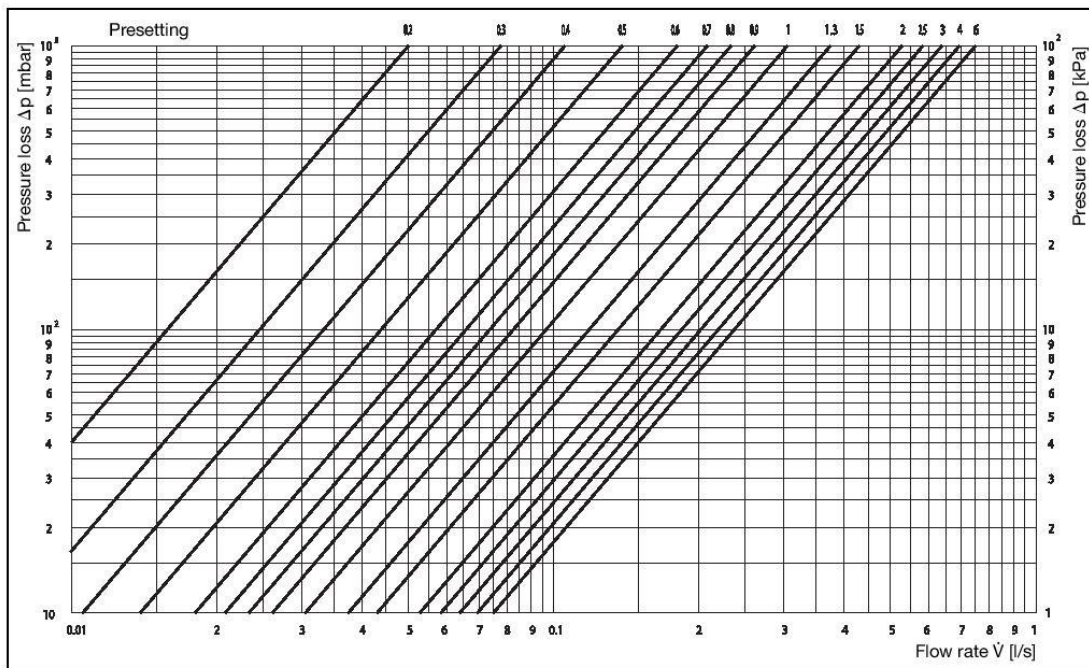
“Hycocn”

“Hycocn VTZ/VPZ”:

DN 15



DN 20





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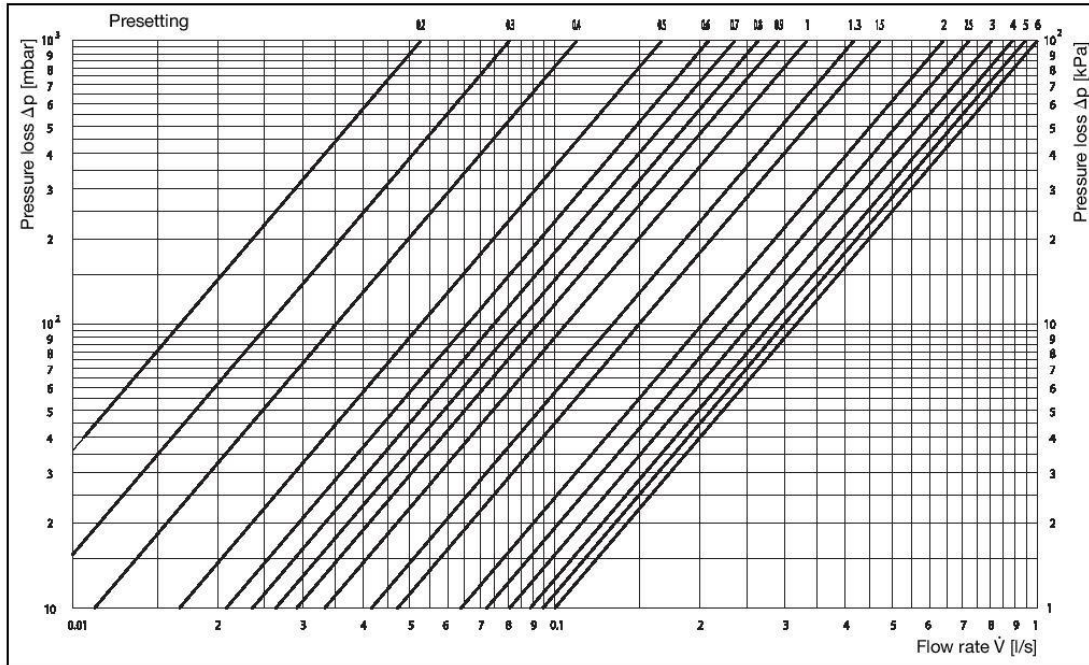
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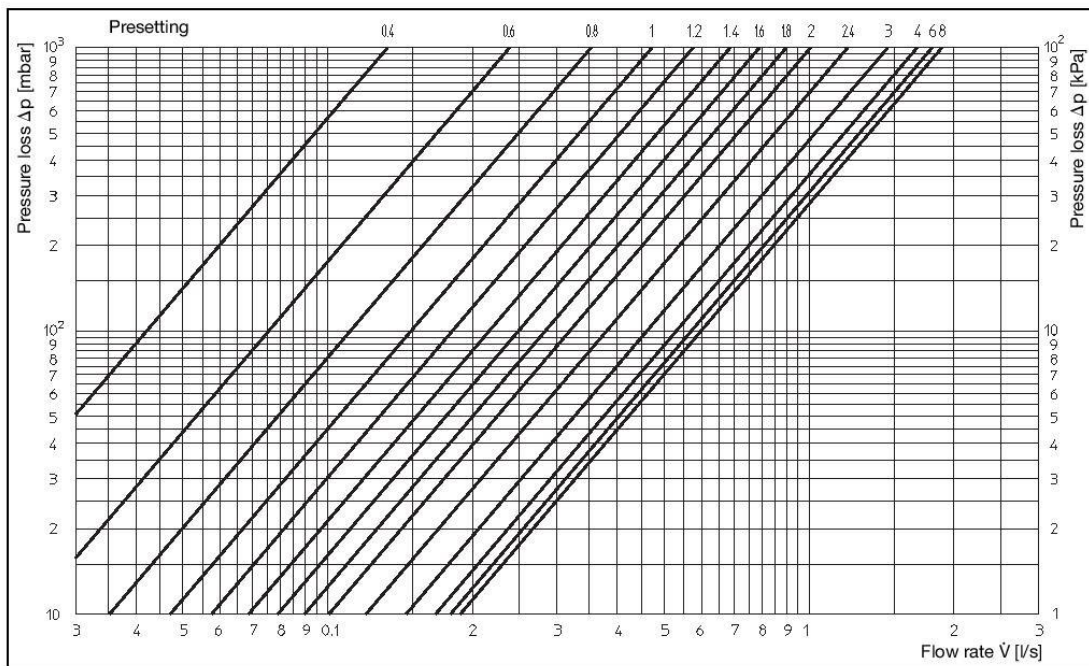


“Hycocn”

DN 25



DN 32





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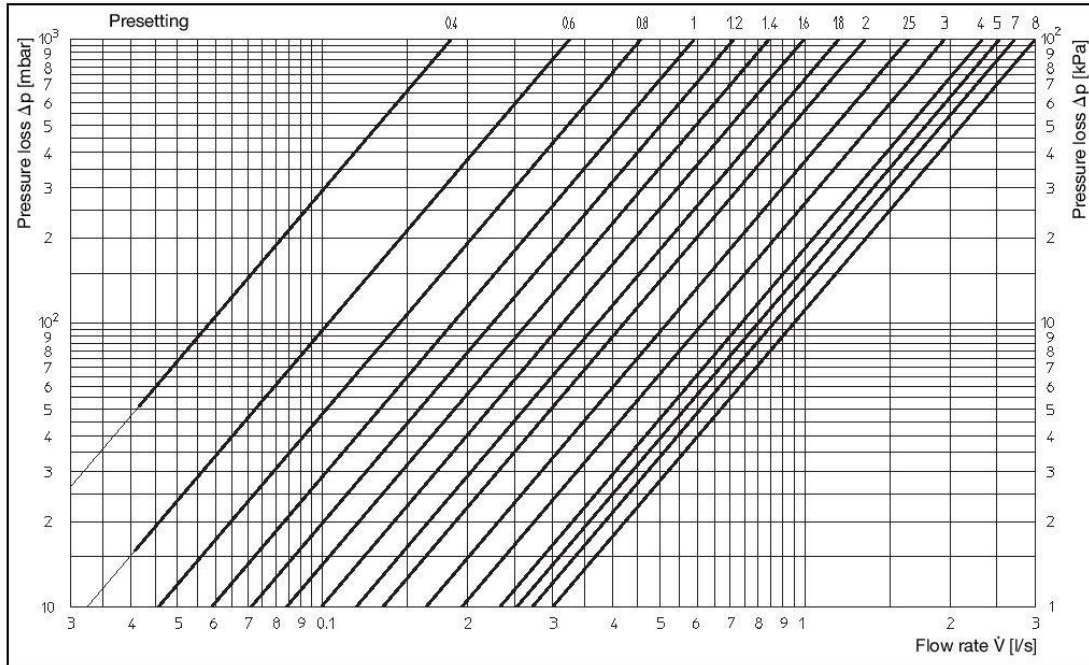
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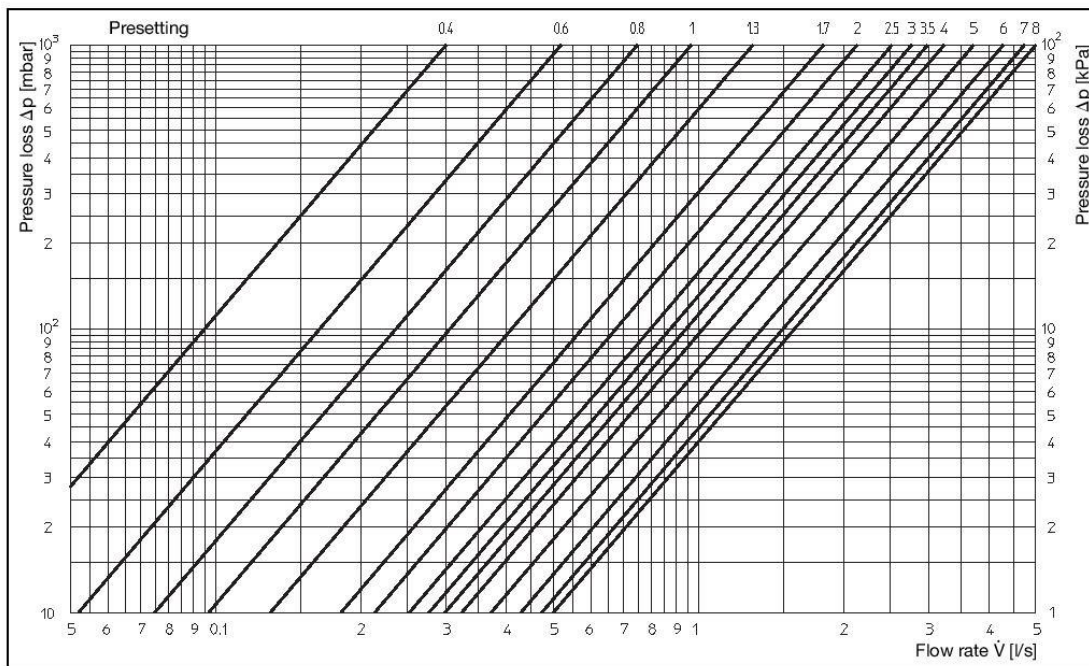


“Hycocn”

DN 40



DN 50





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“Hycocn”

Performance data:

"Hycocn VTZ/VPZ"	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50	
	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-value	kv-value	Zeta-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	1.08	10524
0.5	0.34	874	0.36	2590	0.39	5550	0.70	5228	0.95	5216	1.47	5626
0.6	0.45	499	0.48	1457	0.51	3245	0.85	3545	1.17	3439	1.87	3494
0.7	0.55	334	0.6	932	0.63	2127	1.10	2117	1.41	2368	2.26	2379
0.8	0.66	232	0.72	648	0.75	1501	1.30	1516	1.65	1729	2.69	1683
0.9	0.76	175	0.84	476	0.87	1115	1.52	1109	1.88	1332	3.05	1306
1.0	0.86	137	0.94	380	1.00	844	1.70	886	2.10	1068	3.48	1005
1.1	0.97	107	1.02	323	1.10	698	1.90	710	2.33	867	3.89	803
1.2	1.03	95	1.10	277	1.20	586	2.10	581	2.56	718	4.28	664
1.3	1.10	84	1.20	233	1.30	499	2.30	484	2.80	600	4.67	558
1.4	1.16	75	1.30	199	1.40	431	2.50	410	3.05	506	5.19	452
1.5	1.22	68	1.40	171	1.50	375	2.70	351	3.30	432	5.65	381
1.6	1.26	64	1.51	147	1.60	330	2.85	315	3.57	369	6.09	328
1.7	1.31	59	1.62	128	1.70	292	3.01	283	3.90	310	6.54	285
1.8	1.36	55	1.68	119	1.80	261	3.20	250	4.25	261	6.92	254
1.9	1.41	51	1.74	111	1.90	234	3.40	222	4.55	227	7.30	228
2.0	1.46	47	1.80	104	2.0	211	3.60	198	4.80	204	7.68	206
2.1	1.50	45	1.86	97	2.10	191	3.81	176	5.01	188	7.98	191
2.2	1.53	43	1.93	90	2.21	173	4.02	159	5.20	174	8.33	175
2.3	1.55	42	1.99	85	2.31	158	4.22	144	5.41	161	8.62	164
2.4	1.57	41	2.05	80	2.41	145	4.33	137	5.65	147	8.86	155
2.5	1.58	40	2.10	76	2.50	135	4.60	121	5.90	135	9.06	148
2.6	1.59	40	2.14	73	2.58	127	4.76	113	6.15	124	9.27	142
2.7	1.60	39	2.18	71	2.64	121	4.90	107	6.38	116	9.45	136
2.8	1.61	39	2.21	69	2.70	116	5.00	102	6.60	108	9.62	131
2.9	1.62	39	2.23	68	2.75	112	5.15	97	6.80	102	9.84	126
3.0	1.63	38	2.25	66	2.80	108	5.25	93	7.00	96	9.95	123
3.5	1.65	37	2.33	62	2.98	95	5.69	79	7.85	76	10.74	106
4.0	1.66	37	2.40	58	3.10	88	6.00	71	8.40	67	11.63	90
4.5	1.67	36	2.47	55	3.20	82	6.18	67	8.80	61	12.60	77
5.0	1.68	36	2.55	52	3.30	78	6.30	65	9.10	57	13.38	68
5.5	1.69	35	2.63	49	3.43	72	6.40	63	9.35	54	14.30	60
6.0	1.70	35	2.70	46	3.60	65	6.50	61	9.50	52	15.42	51
6.5							6.58	59	9.65	51	16.32	46
7.0							6.65	58	9.80	49	17.04	42
7.5							6.72	57	9.90	48	17.67	39
8.0							6.80	55	10.00	47	18.00	38



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“Hycoccon”

Isolating and orifice valves “Hycoccon ATZ/APZ” “eco” measuring technique

Overtrop isolating and orifice valves “Hycoccon ATZ/APZ” are installed in the pipework of hot water central heating systems and cooling systems and serve to achieve an isolation of the pipework.

The Overtrop 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 with the help of the “Demo-Bloc” without draining the system 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” 1188051 or draining the system).

The valves are supplied with an insulation for temperatures up to 80 °C (as packaging). For the sizes DN 15 up to DN 40, Overtrop offers a separate insulation for temperatures up to 120 °C. When equipped with additional polystyrene shells, both insulations may be used for cooling systems.

Technical data:

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

Models:

“Hycoccon ATZ”:

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

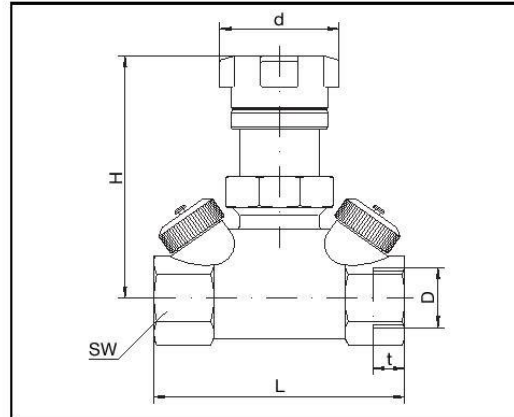
Size	k_{vs} -value	Item no.
DN 15	1.7	1067304
DN 20	2.7	1067306
DN 25	3.6	1067308
DN 32	6.8	1067310
DN 40	10.0	1067312
DN 50	18.0	1067316

“Hycoccon APZ”:

both ports bronze press connection

Size	k_{vs} -value	Item no.
DN 15	1.7	1067351
DN 15	1.7	1067352
DN 20	2.7	1067354
DN 25	3.6	1067356
DN 32	6.8	1067358
DN 40	10.0	1067360

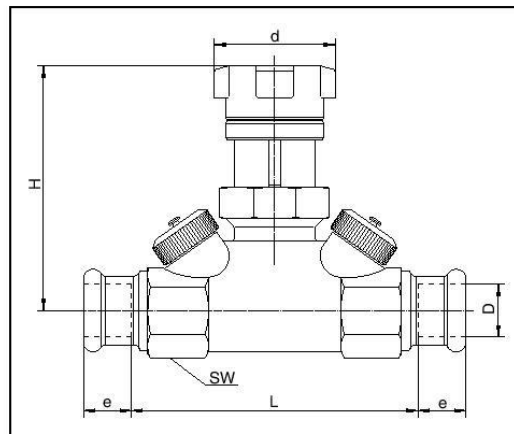
For the direct connection of copper pipe pipes according to EN 1057/DVGW GW 392, stainless steel pipes according to EN 10088/DVGW 541 and thin-walled C-steel pipes (material no. E 195/1.0034) according to EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the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



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

Dimensions “Hycoccon 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	55	139	100	50

Dimensions “Hycoccon APZ”

*SW = spanner size



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“Hycococon”

“Hycococon ATZ”:

both ports male thread and collar nut

Size	k_{vs} -value	Item no.
DN 15	1.7	1067404
DN 20	2.7	1067406
DN 25	3.6	1067408
DN 32	6.8	1067410
DN 40	10.0	1067412
DN 50	18.0	1067416

Accessory:

Fill and drain tool 1061791

Tailpipe sets:

2 weldable tailpipes

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

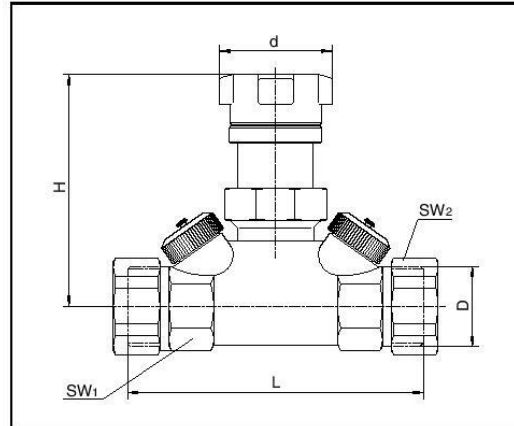
15 mm for valve DN 15	1061092
18 mm for valve DN 20	1061093
22 mm for valve DN 20	1061094
28 mm for valve DN 25	1061095
35 mm for valve DN 32	1061096
42 mm for valve DN 40	1061097
54 mm for valve DN 50	1061098

2 tailpipes with male thread

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 tailpipes with female thread

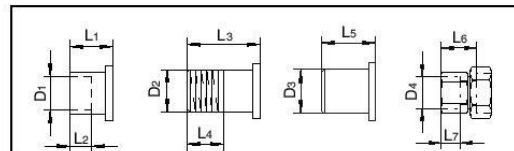
Rp 1/2 for valve DN 15	1061392
Rp 3/4 for valve DN 20	1061393
Rp 1 for valve DN 25	1061394
Rp 1 1/4 for valve DN 32	1061395



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

Dimensions

*SW = spanner size



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	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



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“Hycoccon”

Regulating valves “Hycoccon ETZ” and “Hycoccon HTZ” for subsequent conversion to thermostatic operation “eco” measuring technique

Function:

Oventrop regulating valves “Hycoccon ETZ” and “Hycoccon 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 lock.

The required values of presetting can be obtained from the flow charts. Presetting is carried out by using a presetting key (“Hycoccon ETZ”: item no. 1183961 / “Hycoccon HTZ”: item no. 1068585).

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 may 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 “Y” type strainer is recommended.

During the construction period, the valve may be operated with the screw cap. The screw cap may not be used for a permanent closure of the valve. A metal cap has to be fitted to the connection nipple at the outlet port of the valve.

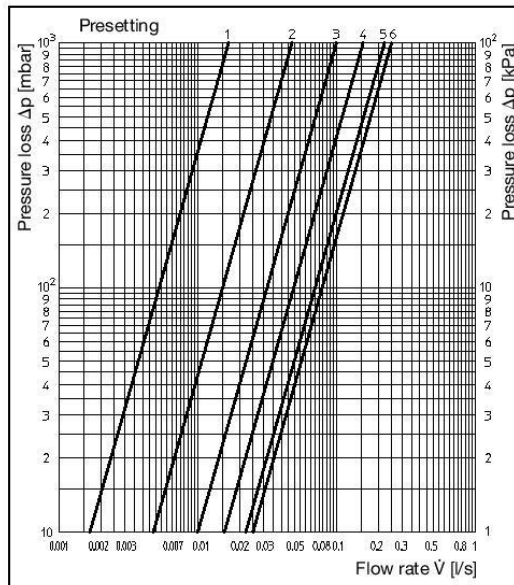
The flow charts are valid for installation of the regulating valves in the supply or the return pipe, provided the direction of flow conforms to the arrow on the valve body.

In cooling systems using mixtures of water and glycol, the correction factors related to the indicated chart values have to be taken into consideration. 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. Bus application electromotive actuators (“Uni EIB/LON”) may also be used.

Conversion of the regulating valves “Hycoccon HTZ” to differential pressure regulators is possible without draining the system.

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

Performance data (kvs 0.9)

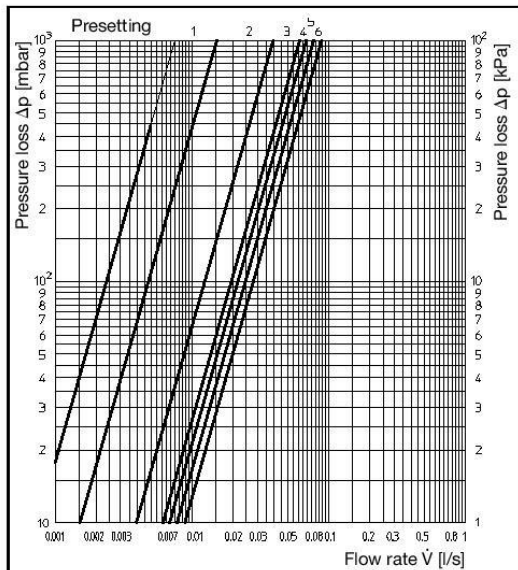


All patterns and sizes, kvs values

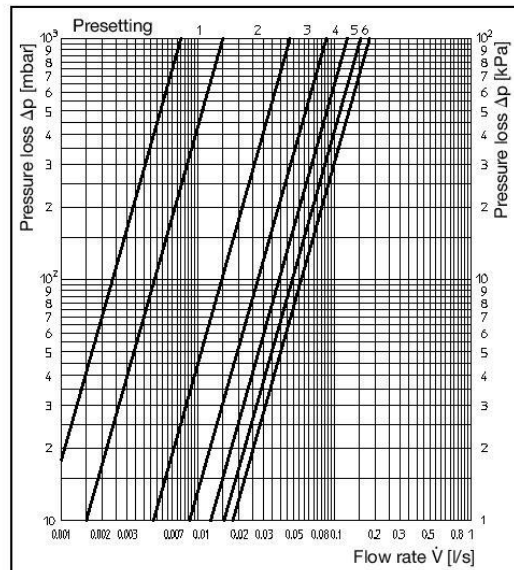
Flow charts and performance data for “Hycoccon ETZ”

DN 15 – DN 25 (kvs 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



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“Hycococon”

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 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 functional components in one plane, 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”). Bonnet (DN 15 – DN 25) replaceable with the help of the “Demo-Bloc” without draining the system.

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)

Technical data:

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

Effective piston stroke:
 “Hycococon ETZ”: 2.5 mm
 “Hycococon HTZ”:
 DN 15 – DN 25: 3 mm
 DN 32 + DN 40: 4 mm

Models:

“Hycococon ETZ”

Size	k_v 1 K P	k_v 2 K P	k_{vs} -Wert	Item no.
DN 15 Rp 1/2	0.32	0.65	0.9	1068364
DN 20 Rp 3/4	0.32	0.65	0.9	1068366
DN 25 Rp 1	0.32	0.65	0.9	1068368

“Hycococon HTZ”

Size	k_v 1 K P	k_v 2 K P	k_{vs} -Wert	Item no.
DN 15 Rp 1/2	0.52	0.95	1.7	1068564
DN 20 Rp 3/4	0.52	1.04	2.7	1068566
DN 25 Rp 1	0.52	1.08	3.6	1068568
DN 32 Rp 1 1/4	0.70	1.39	6.8	1068570
DN 40 Rp 1 1/2	0.84	1.58	10.0	1068572

Accessory:

Fill and drain tool 1061791

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) (1068667: bronze body). Maintenance-free stem seal due to double O-ring, all functional components in one plane, 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”). Bonnet (DN 15 – DN 25) replaceable with the help of the “Demo-Bloc” without draining the system.

Oventrop offers a separate insulation for temperatures up to 120 °C (except for item no. 1068667).

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

Technical data:

Max. operating temperature t_s : +120 °C
 Min. operating temperature t_s : -10 °C
 Max. operating pressure p_s : 16 bar (PN 16)
 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
 Effective piston stroke:
 “Hycococon ETZ”: 2.2 mm
 “Hycococon HTZ”:
 DN 15 – DN 25: 3 mm
 DN 32 + DN 40: 4 mm

“Hycococon ETZ”

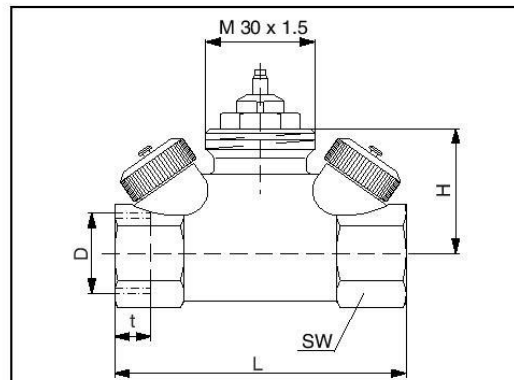
Size	k_v 1 K P	k_v 2 K P	k_{vs} -value	Item no.
DN 15 1/2"	0.32	0.65	0.9	1068464
DN 20 3/4"	0.32	0.65	0.9	1068466
DN 25 1"	0.32	0.65	0.9	1068468

„Hycococon HTZ“

Size	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	1068664
DN 20 3/4"	0.52	1.04	2.7	1068666
DN 25 1"	0.63	1.30	5.0	1068667
DN 32 1 1/4"	0.70	1.39	6.8	1068670
DN 40 1 1/2"	0.84	1.58	10.0	1068672

Accessory:

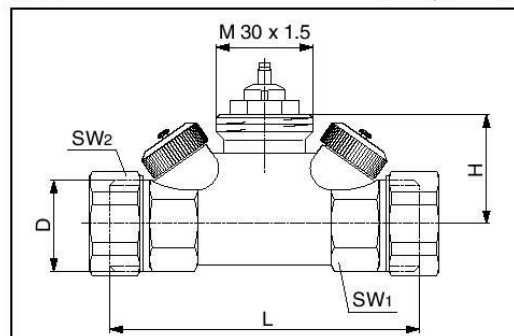
Fill and drain tool 1061791



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

Dimensions

*SW = spanner size



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

Dimensions

*SW = spanner size

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

Dimensions “Hycococon HTZ” DN 20 k_{vs} -value 5.0, item no. 1068667



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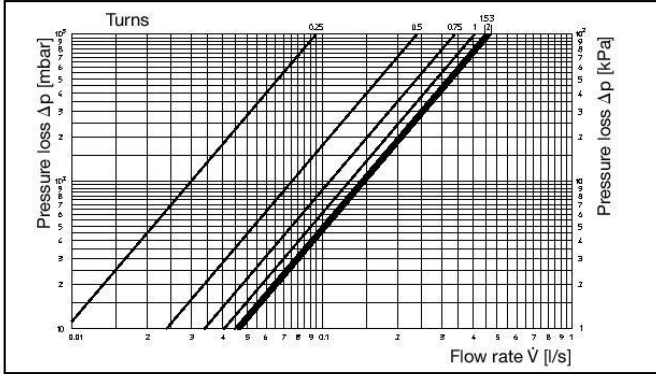
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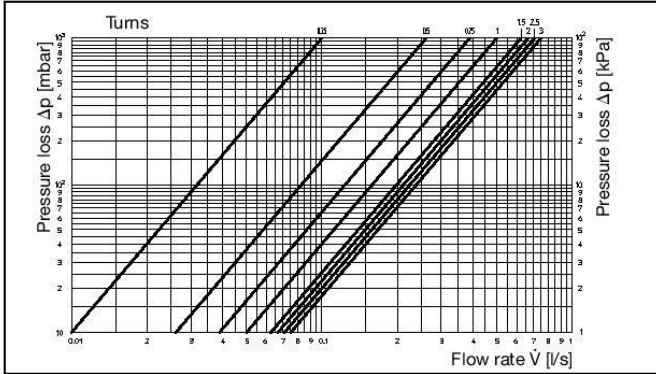


“Hycococon”TM

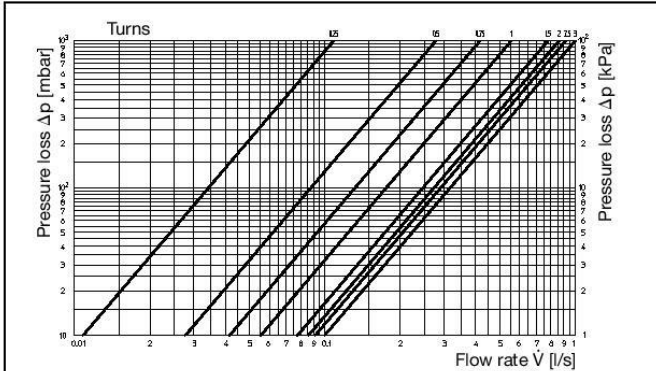
Flow charts for “Hycococon HTZ”
 DN 15 item no. 1068564/1068664



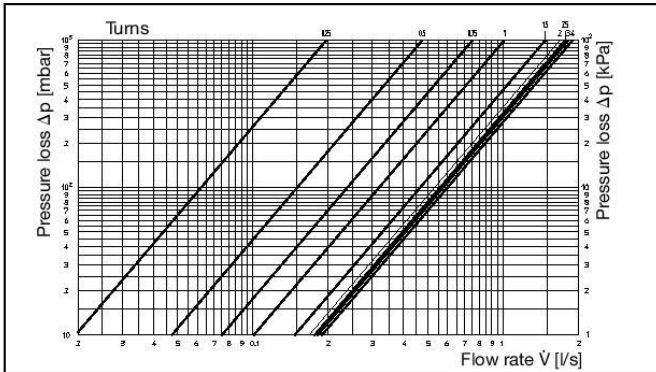
DN 20 (kvs 2.7) item no. 1068566/1068666



DN 25 item no. 1068568/1068668



DN 32 item no. 1068570/1068670





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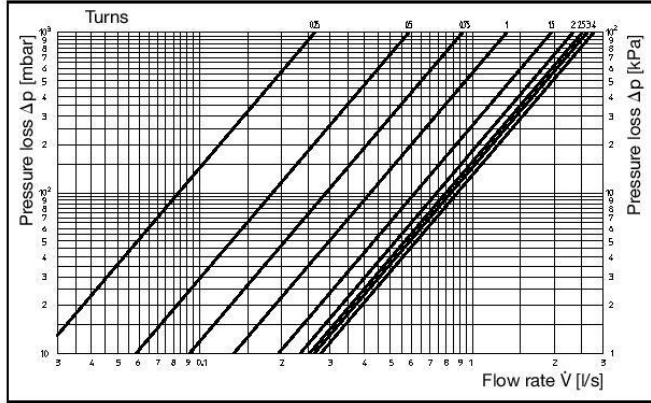
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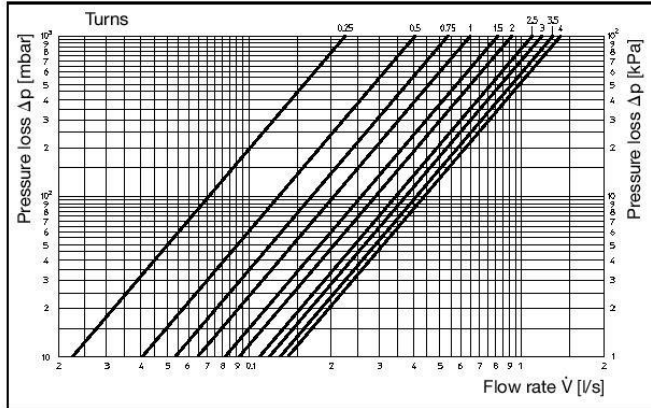


“Hycoccon”

DN 40 item no. 1068572/1068672



DN 20 (kvs 5.0) item no. 1068667



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	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	-	-	-

Dimensions

Tailpipe sets:

2 weldable tailpipes

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

Item no.

- 1060592
- 1060593
- 1060594
- 1060595
- 1060596

2 solder tailpipes

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

1061092

- 1061093
- 1061094
- 1061095
- 1061096
- 1061097

2 tailpipes with male thread

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

- 1061492
- 1061493
- 1061494
- 1061495
- 1061496

2 tailpipes with female thread

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

- 1061392
- 1061393
- 1061394
- 1061395



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“Hycoccon”

Valve inserts suitable for “Hycoccon” valves

Sizes DN 15 – DN 25

(except for item o. 1068667)

k_v and Zeta-values

Item no.



“Series A”

1187069

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
DN20	0.50	0.95	1.25	1.35	1343	372	215	184
DN25	0.50	0.95	1.25	1.35	3380	935	540	463

“Series A”



“Series F”

1187352

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
DN20	0.20	0.32	0.35	0.37	8535	3330	2790	2490
DN25	0.20	0.32	0.35	0.37	21100	8240	6890	6166

“Series F” (with fine presetting)

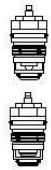


“Series ADV 6”

1186001

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
DN20	0.32	0.65	0.8	3330	795	525
DN25	0.32	0.65	0.8	8240	2000	1320

“Series ADV 6” (with double function and presetting)



“Series PTB”

P1 1186052

P2 1186053

P3 1186054

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 PTB”



“Series KTB”

for chilled water circuits

1147169

Size	k_v	Zeta
DN 15	0.5	150
DN 20	0.5	404
DN 25	0.5	1340

“Series KTB” $k_{vs} = 1.0$



with stainless steel seat
(especially for steam installations)

1186200



“Series AZ”

1187060

Size	k_{vs}	Zeta
DN 15	1.8	31
DN 20	2.8	43
DN 25	3.5	69

“Series AZ” (for zone control), all patterns $k_v = 1.1$



Special insert for reversed
supply and return pipe

1187070

Zeta values related to the inner pipe diameter according to EN 10255



Return temperature limitation

1026981



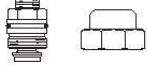
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“Hycoccon”


 Item no.
 “Combi LR” with cap 1187071

 for “Hycoccon ETZ” (“Series AV 6”) 1187057


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
DN20	0.32	0.65	0.8	0.9	3330	795	525	414
DN25	0.32	0.65	0.8	0.9	8240	2000	1320	1042

“Series AV 6”

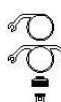
 for “Hycoccon HTZ” 1067085
 DN 15 - DN 25

 for “Hycoccon VTZ/VPZ” and “Hycoccon ATZ/APZ” 1067065
 DN 15 - DN 25

Sizes DN 32 and DN 40

 for “Hycoccon VTZ/VPZ” and “Hycoccon HTZ”
 DN 32 1067066
 DN 40 1067067

 for “Hycoccon ATZ/APZ”
 DN 32 1067068
 DN 40 1067069

 **Measuring and draining unit**
 DN 15- DN 40 1061790

 **Plug**
 DN 15 - DN 40 1061798



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“Hycoccon”

Insulation:

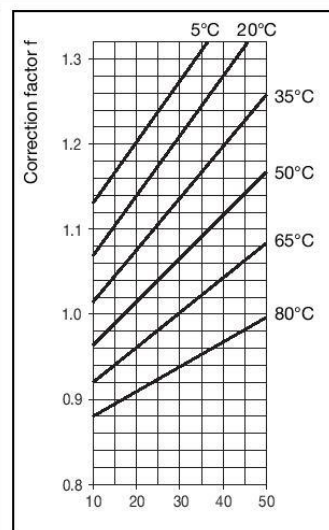
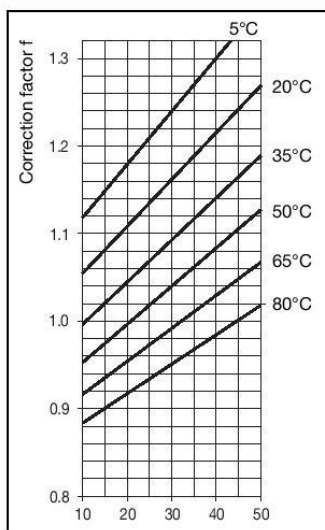
- Type I for use in heating systems up to 80 °C.
 This insulation made of expanded polystyrene (EPS) also serves as packaging and is supplied with each double regulating and commissioning valve (or isolating and orifice valve) together with the corresponding clamping rings. The handwheel and the presetting scale remain accessible.
- Type II (item no. 1061771-75) 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.
- Type III (item no. 1061781-85) 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 covered by using a sealing material.

The insulations cannot be used for item no. 1068667.

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
50	131	143	-	-	211	-	143

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.)

Subject to technical modification without notice.

Product range 3
 ti 128-EN/20/MW
 Edition 2015

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).