

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

##### Function:

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

The balance is achieved by a presetting with memory lock.

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

The selected presetting can be read off two scales (basic and fine setting scale, see “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 at the valve inlet.

The valve must only be installed into a clean pipework system and must only be operated with a clean unpolluted fluid. The installation of an Oventrop “Y” type strainer is recommended.

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

In cooling systems using mixtures of water and glycol, the correction factors related to the indicated chart values have to be taken into consideration (see page 16). When using the measuring system “OV-DMC 3”, 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 a differential pressure regulator bonnet or an actuator. For use with chilled ceiling elements, bus application electromotive actuators (“Uni EIB”) may also be used. When converting size DN 50 to receive a differential pressure regulator bonnet, the system has to be drained.

##### Advantages:

- the location of the functional components in one plane allows for 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 suitable for Oventrop compression fittings (1027151-58) for copper pipes with a max. diameter of 22 mm and the Oventrop composition pipe “Copipe” or flat sealing with male threads and collar nut or press connection
- easy filling and draining by screwing a separate tool accessory) onto one of the measuring nipples



“Hycococon VTZ”



Combination options “Hycococon VTZ”, “Hycococon ATZ” and “Hycococon DTZ” for hydronic balancing



Further combination options “Hycococon ETZ” and “Hycococon HTZ” with valve inserts and actuators or thermostats

**Double regulating and commissioning valves "Hycococon 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 (DN 50: made of bronze) 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.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB") 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 110 °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:**

"Hycococon VTZ":

both ports female thread according to EN 10226

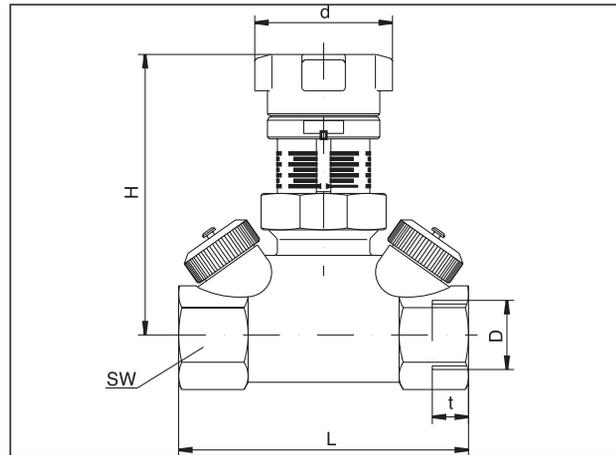
Size	$k_{vs}$ value	Item no.
DN 15	1.7	1061704
DN 20	2.7	1061706
DN 25	3.6	1061708
DN 32	6.8	1061710
DN 40	10.0	1061712
DN 50	18.0	1061716

"Hycococon 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

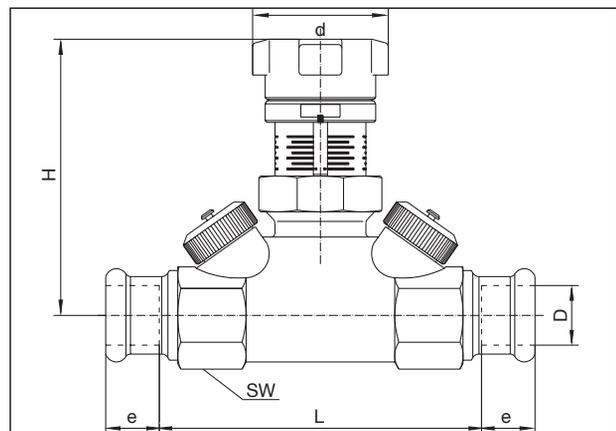
For the direct connection of copper pipe pipes according to EN 1057/DVGW GW 392, stainless steel pipes according to EN 10088/DVGW 541 and thin-walled C-steel pipes (material no. E 195/1.0034) according to EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the 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 "Hycococon 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 "Hycococon VPZ"

\*SW = Spanner size

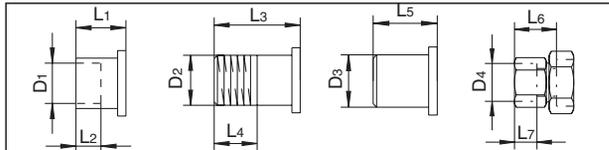
"Hycoccon VTZ":

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 sets:**

Fill and drain tool	1061791
Locking pin	1061792

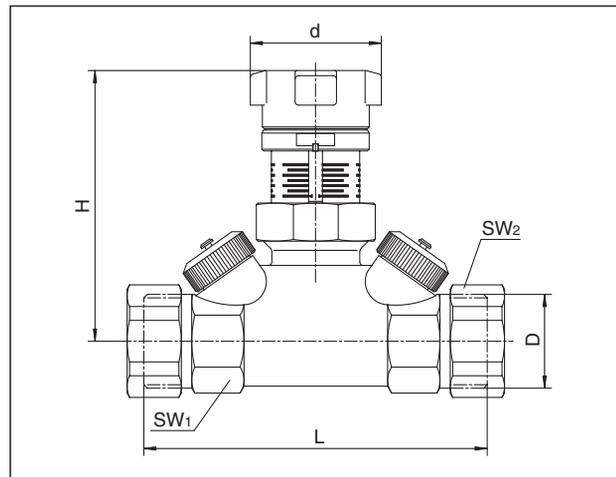


DN	D1	L1	L2	D2 EN 10226	L3	L4	D3	L5	D4 EN 10226	L6	L7
15	15	18	12	R 1/2	31	13.2	20.5	50	Rp 1/2	37	13.2
20	18	23	15	R 3/4	34	14.5	26	50	Rp 3/4	38	14.5
20	22	24	17	-	-	-	-	-	-	-	-
25	28	27	20	R 1	40	16.8	33	60	Rp 1	53	16.8
32	35	32	25	R 1 1/4	46	19.1	41	60	Rp 1 1/4	55	19.1
40	42	37	29	R 1 1/2	49	19.1	47.5	65	-	-	-
50	54	50	40	R 2	55	23.4	60	65	-	-	-

Dimensions

**Presetting:**

- The presetting value of the valve is set by turning the handwheel.
  - The basic setting is displayed by the longitudinal scale together with the sliding indicator. Each turn of the handwheel is represented by a line on the longitudinal scale.
  - The fine setting is displayed by the peripheral scale together with the marking. The subdivisions of the peripheral scale correspond to 1/10<sup>th</sup> of a turn of the handwheel.
- The set presetting value is limited by turning the inner adjustment stem clockwise until it seats. This can be done by using a screwdriver with a bezel of about 3 to 4 mm.
- The presetting value may be locked by using the locking pin (accessory).



DN	D ISO 228	L	H	SW <sub>1</sub>	SW <sub>2</sub>	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 3/8	148	104	70	75	50

Dimensions

\*SW = Spanner size

**Tailpipe sets:**

**2 weldable tailpipes**

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

**2 solder tailpipes**

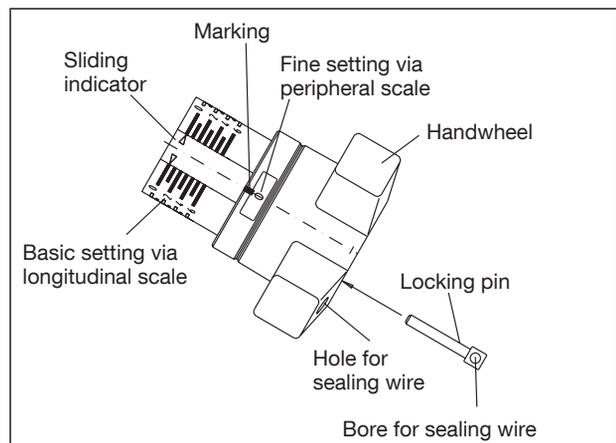
15 mm	for valve DN 15	1061092
18 mm	for valve DN 20	1061093
22 mm	for valve DN 20	1061094
28 mm	for valve DN 25	1061095
35 mm	for valve DN 32	1061096
42 mm	for valve DN 40	1061097
54 mm	for valve DN 50	1061098

**2 male threaded tailpipes**

R 1/2	for valve DN 15	1061492
R 3/4	for valve DN 20	1061493
R 1	for valve DN 25	1061494
R 1 1/4	for valve DN 32	1061495
R 1 1/2	for valve DN 40	1061496
R 2	for valve DN 50	1061497

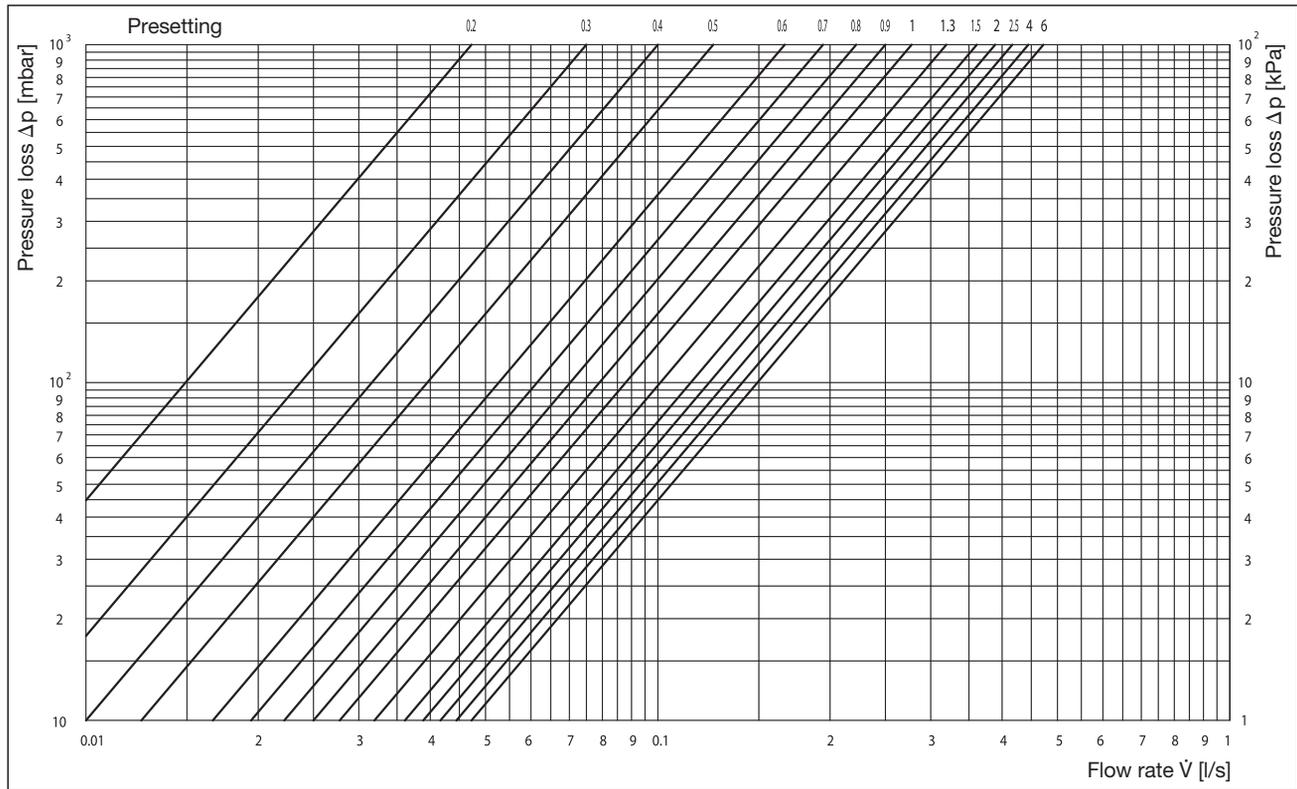
**2 female threaded tailpipes**

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

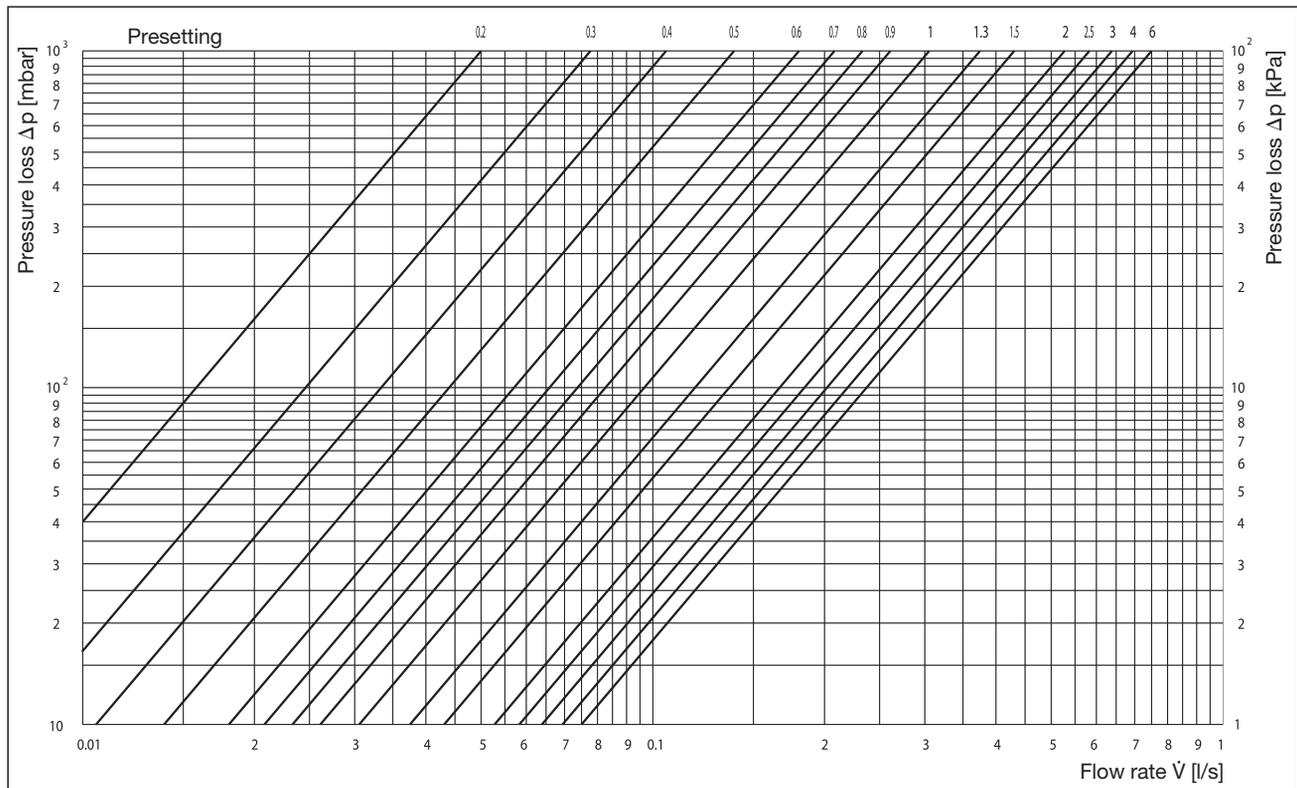


"Hycocon VTZ/VPZ"

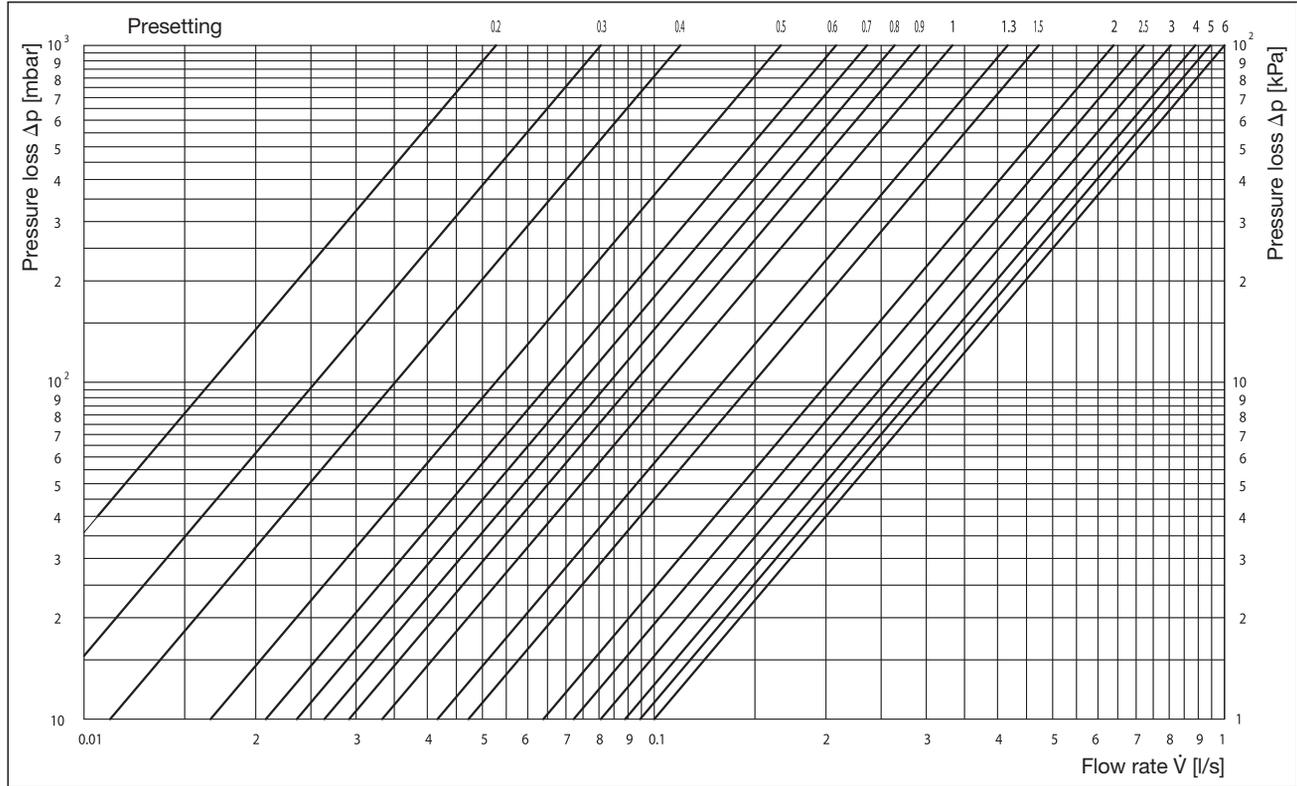
DN 15



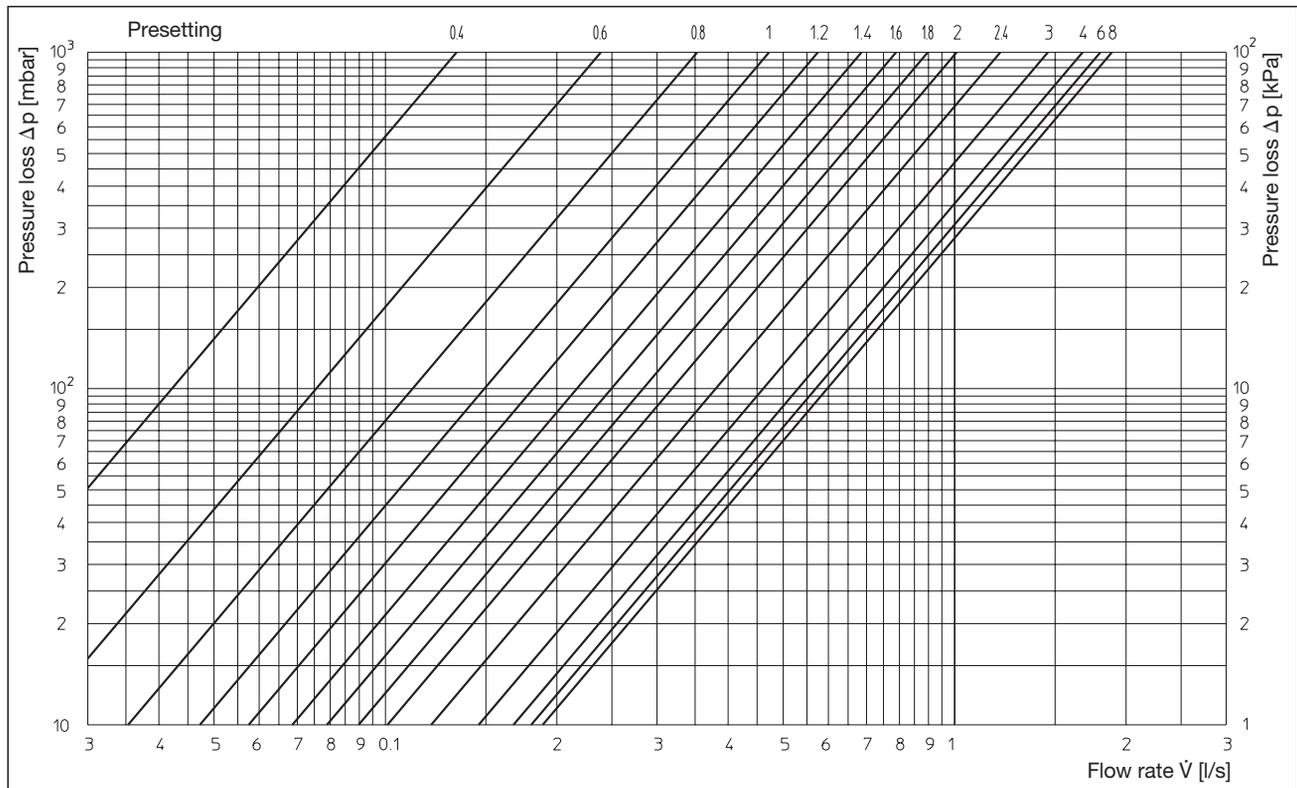
DN 20



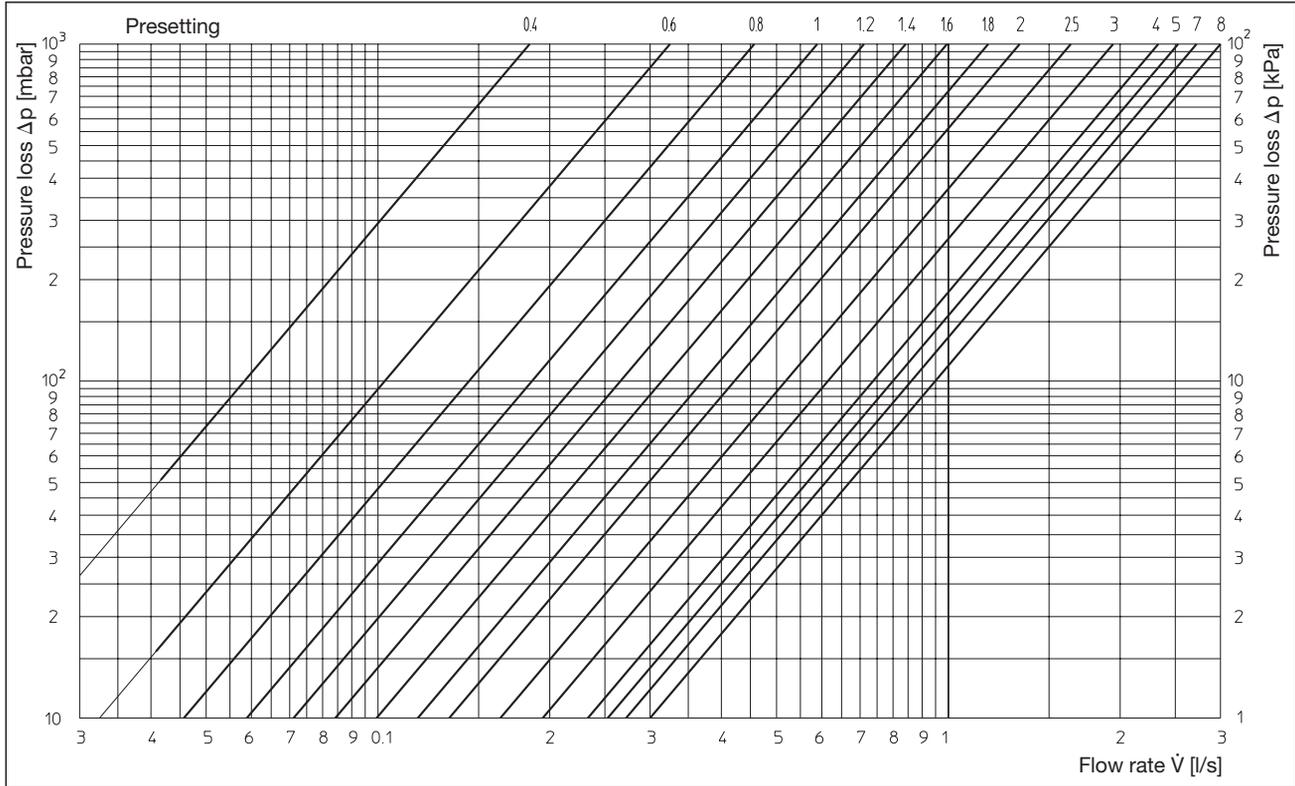
DN 25



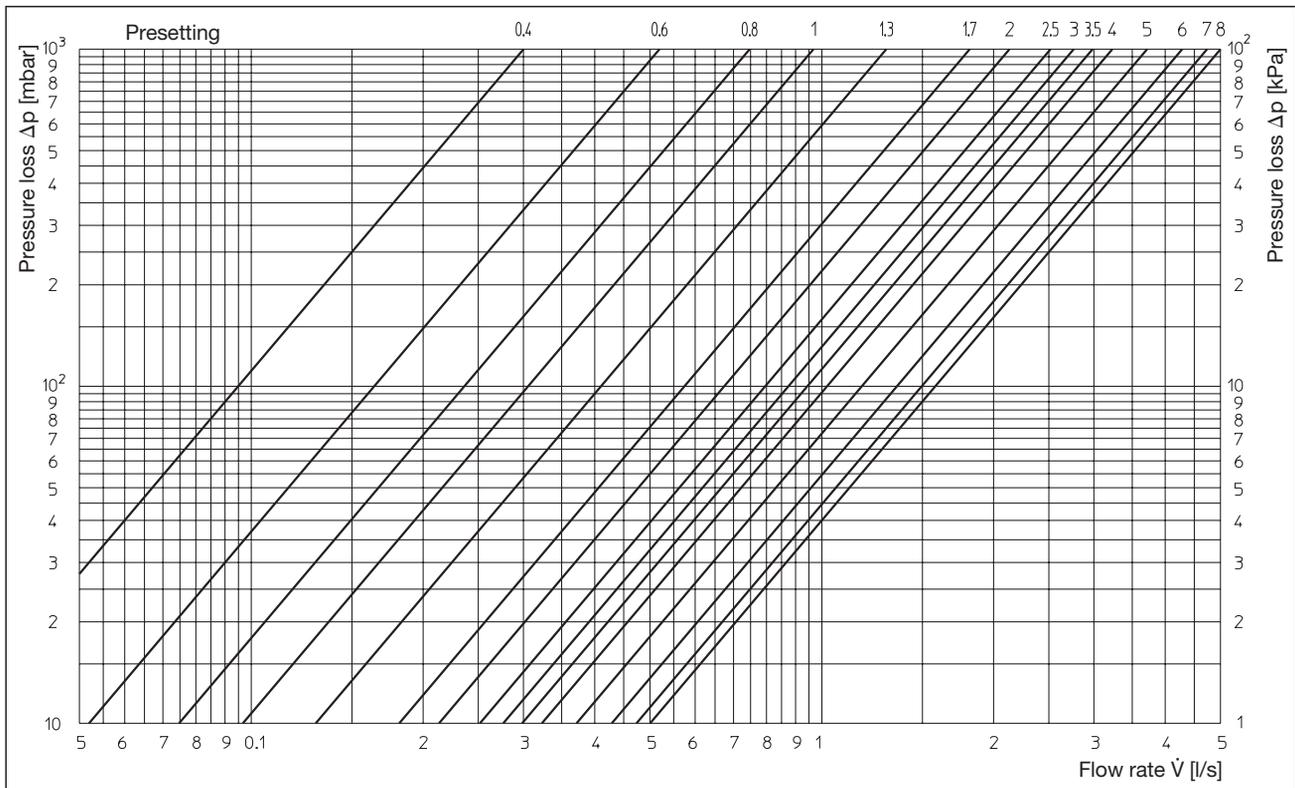
DN 32



DN 40



DN 50



Performance data:

“Hycoccon VTZ/VPZ”	DN 15		DN 20		DN 25		DN 32		DN 40		DN 50		
	Presetting	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	

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

**Function:**

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 pipework.

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 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 (DN 50: made of bronze), 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") 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 110 °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.

**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:**

"Hycococon ATZ":

both ports female thread according to EN 10226

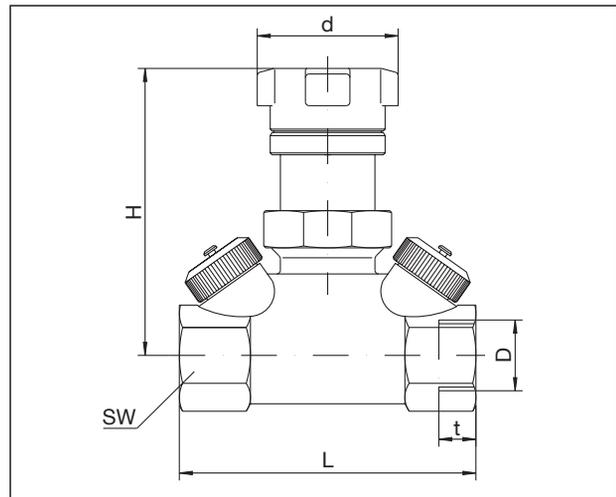
Size	$k_{vs}$ value	Item no.
DN 15	1.7	1067304
DN 20	2.7	1067306
DN 25	3.6	1067308
DN 32	6.8	1067310
DN 40	10.0	1067312
DN 50	18.0	1067316

"Hycococon APZ":

both ports bronze press connection

Size	$k_{vs}$ value		Item no.
DN 15	1.7	15 mm	1067351
DN 15	1.7	18 mm	1067352
DN 20	2.7	22 mm	1067354
DN 25	3.6	25 mm	1067356
DN 32	6.8	35 mm	1067358
DN 40	10.0	42 mm	1067360

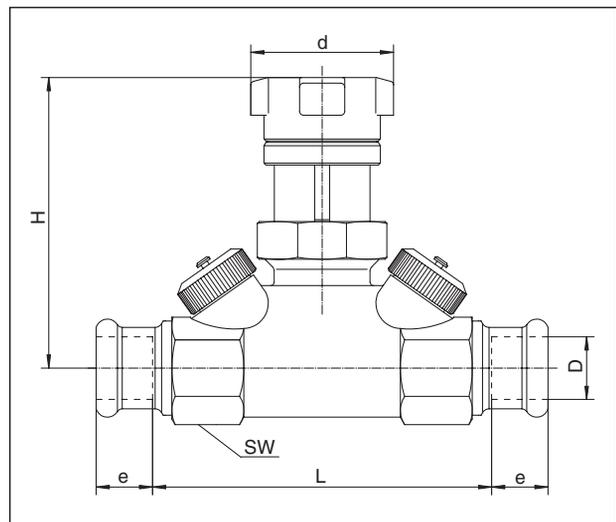
For the direct connection of copper pipe pipes according to EN 1057/DVGW GW 392, stainless steel pipes according to EN 10088/DVGW 541 and thin-walled C-steel pipes (material no. E 195/1.0034) according to EN 10305-3. Pressing must be carried out to tighten the connection. Only use press jaws with the original contours SANHA (SA), Geberit-Mapress (MM) or Viegla (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 "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	55	139	100	50

Dimensions "Hycococon APZ"

\*SW = Spanner size

“Hycoccon 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

**Accessories:**

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

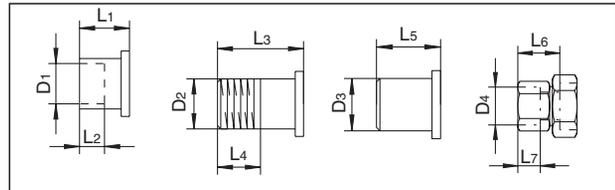
15 mm for valve DN 15 1061092  
 18 mm for valve DN 20 1061093  
 22 mm for valve DN 20 1061094  
 28 mm for valve DN 25 1061095  
 35 mm for valve DN 32 1061096  
 42 mm for valve DN 40 1061097  
 54 mm for valve DN 50 1061098

2 male threaded tailpipes

R 1/2 for valve DN 15 1061492  
 R 3/4 for valve DN 20 1061493  
 R 1 for valve DN 25 1061494  
 R 1 1/4 for valve DN 32 1061495  
 R 1 1/2 for valve DN 40 1061496  
 R 2 for valve DN 50 1061497

2 female threaded tailpipes

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	D1	L1	L2	D2 EN 10226	L3	L4	D3	L5	D4 EN 10226	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	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

**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. 1183962 / “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.

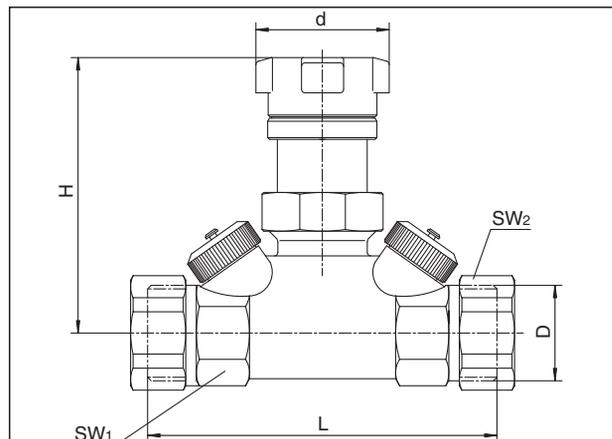
The valve must only be installed into a clean pipework system and must only be operated with a clean unpolluted fluid. The installation of an Oventrop “Y” type strainer is recommended.

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 measuring system “OV-DMC 3” (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”) may also be used.

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



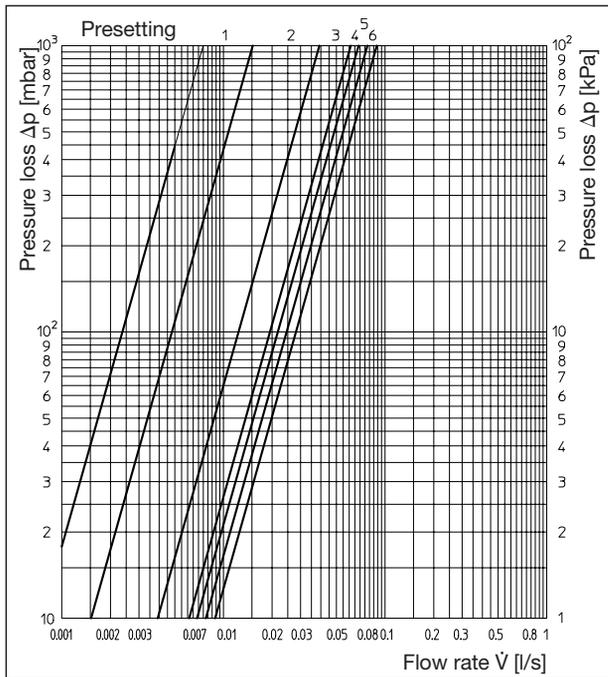
DN	D EN 10226	L	H	SW* <sub>1</sub>	SW* <sub>2</sub>	d
15	G 3/4	95	77	27	30	38
20	G 1	98	79	32	37	38
25	G 1 1/4	105	81	41	46	38
32	G 1 1/2	129	91	50	52	50
40	G 1 3/4	145	100	55	58	50
50	G 2	148	104	70	75	50

Dimensions

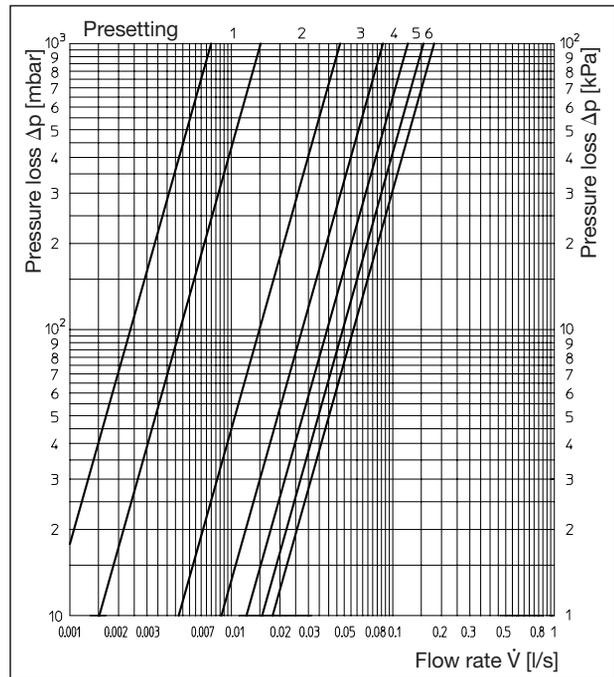
\*SW = Spanner size

**Flow charts and performance data "Hycoccon ETZ"  
DN 15 - DN 25**

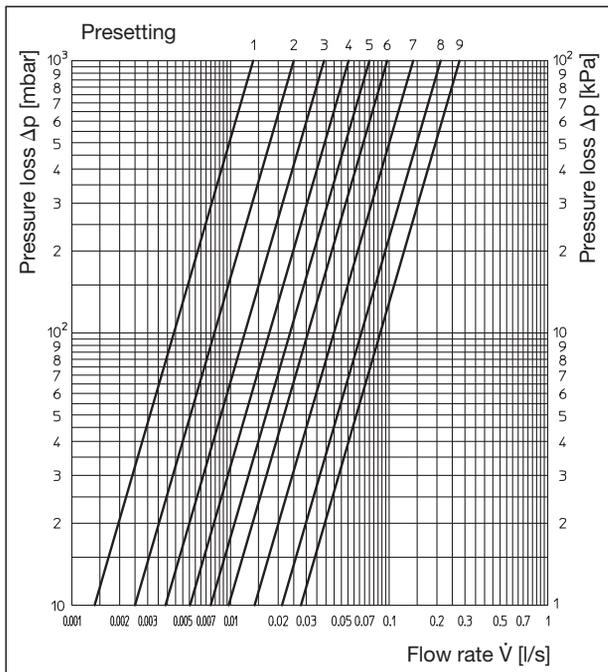
with valve insert "AV 9"



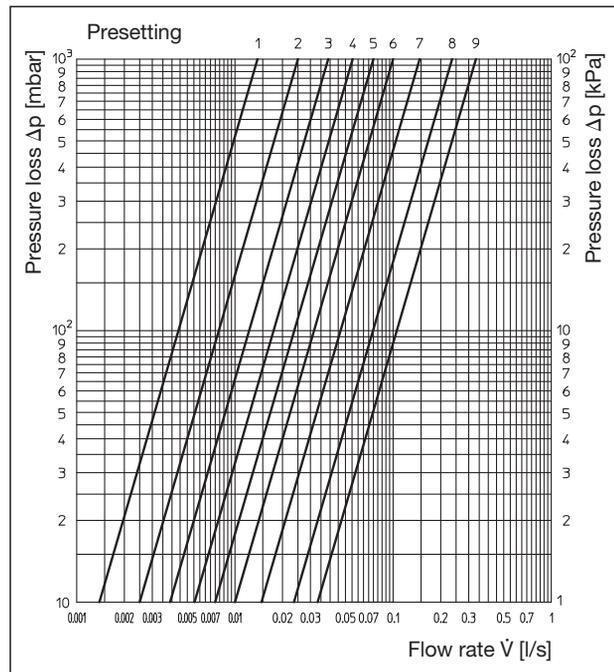
All models and sizes up to 1 K P-deviation



All models and sizes up to 2 K P-deviation



DN 15  $k_{VS}$  values



DN 20 and DN 25  $k_{VS}$  values

Presetting	1	2	3	4	5	6	7	8	9
$k_{VS}$ value at 1 K P-deviation	0.05	0.09	0.13	0.17	0.21	0.25	0.29	0.33	0.36
$k_{VS}$ value at 1,5 K P-deviation	0.05	0.09	0.14	0.19	0.24	0.29	0.38	0.47	0.52
$k_{VS}$ value at 2 K P-deviation	0.05	0.09	0.14	0.20	0.26	0.32	0.43	0.57	0.67
$k_{VS}$ DN 15	0.05	0.09	0.14	0.20	0.27	0.35	0.51	0.76	1.00
$k_{VS}$ DN 20/25	0.05	0.09	0.14	0.20	0.27	0.36	0.53	0.85	1.20

Performance data

**Regulating valves "Hyocon ETZ" and "Hyocon HTZ" with female thread according to EN 10226 "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"). Bonnet (DN 15 – DN 25) replaceable with the help of the "Demo-Bloc" without draining the system.

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

Regulating valves both ports with female thread according to EN 10226, 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: "Hyocon ETZ": 1 bar
- "Hyocon HTZ" (bonnet pressure balanced):
- DN 15 – DN 25: 5 bar
- DN 32: 3 bar
- DN 40: 2 bar
- Effective piston stroke: "Hyocon ETZ": 2.2 mm
- "Hyocon HTZ":
- DN 15 – DN 25: 3 mm
- DN 32/DN 40: 4 mm

**Models:**

"Hyocon ETZ"

Size		$k_v$ 1 K P	$k_v$ 2 K P	$k_{vs}$ value	Item no.
DN 15	Rp 1/2	0.36	0.67	1.00	1068364
DN 20	Rp 3/4	0.36	0.67	1.20	1068366
DN 25	Rp 1	0.36	0.67	1.20	1068368

„Hyocon HTZ“

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 "Hyocon ETZ" and "Hyocon 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"). Bonnet (DN 15 – DN 25) replaceable with the help of the "Demo-Bloc" without draining the system.

Overtrop 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: "Hyocon ETZ": 1 bar
- "Hyocon HTZ" (bonnet pressure balanced):
- DN 15 – DN 25: 5 bar
- DN 32: 3 bar
- DN 40: 2 bar
- Effective piston stroke: "Hyocon ETZ": 2.2 mm
- "Hyocon HTZ":
- DN 15 – DN 25: 3 mm
- DN 32/DN 40: 4 mm

"Hyocon ETZ"

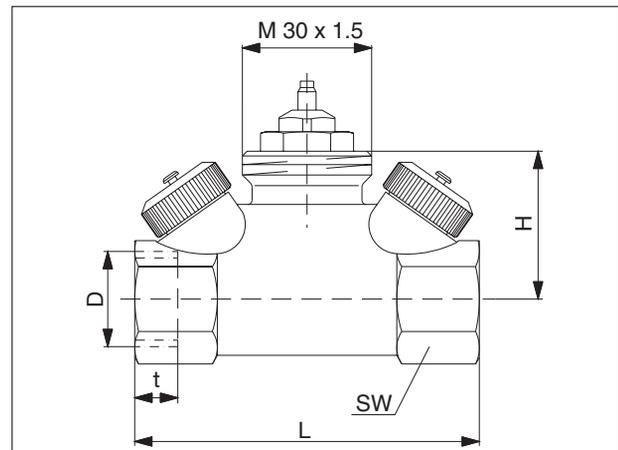
Size		$k_v$ 1 K P	$k_v$ 2 K P	$k_{vs}$ value	Item no.
DN 15	1/2"	0.36	0.67	1.00	1068464
DN 20	3/4"	0.36	0.67	1.20	1068466
DN 25	1"	0.36	0.67	1.20	1068468

„Hyocon HTZ“

DN 15	1/2"	0.52	0.95	1.7	1068664
DN 20	3/4"	0.52	1.04	2.7	1068666
DN 20	3/4"	0.63	1.30	5.0	1068667
DN 25	1"	0.52	1.08	3.6	1068668
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:**

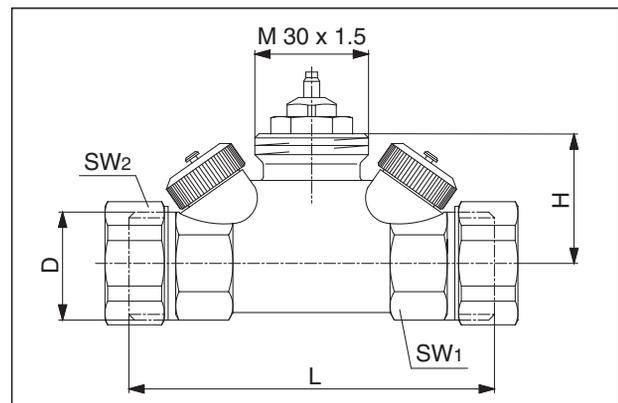
Fill and drain tool 1061791



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	SW* <sub>1</sub>	SW* <sub>2</sub>
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

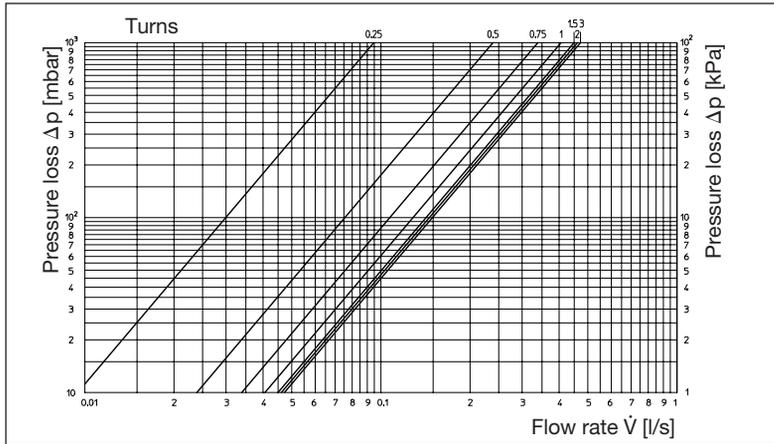
Dimensions

\*SW = Spanner size

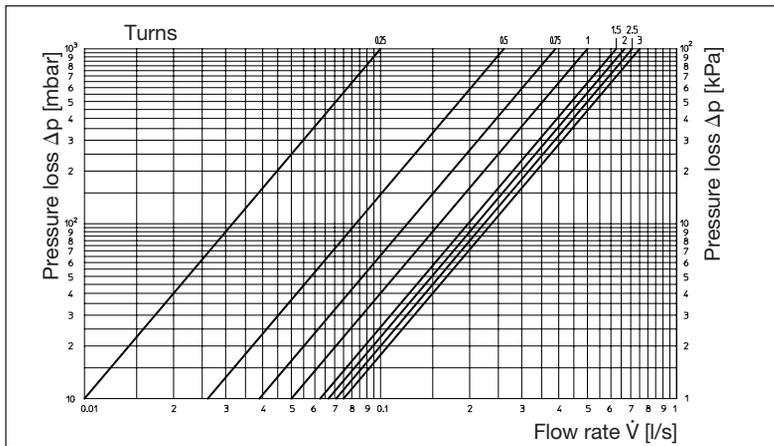
DN	D ISO 228	L	H	SW* <sub>1</sub>	SW* <sub>2</sub>
20	G 1	106	42	32	37

Dimensions "Hyocon HTZ" DN 20  $k_{vs}$  value 5.0 Item no. 1068667

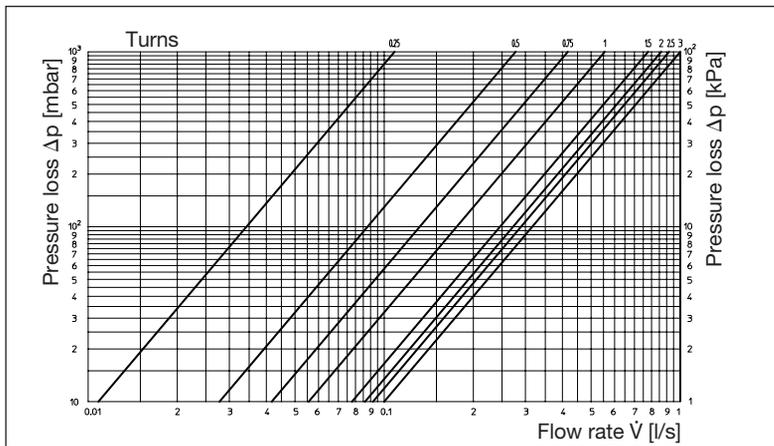
Flow charts for "Hycoccon HTZ"  
 DN 15 item no.1068564/1068664



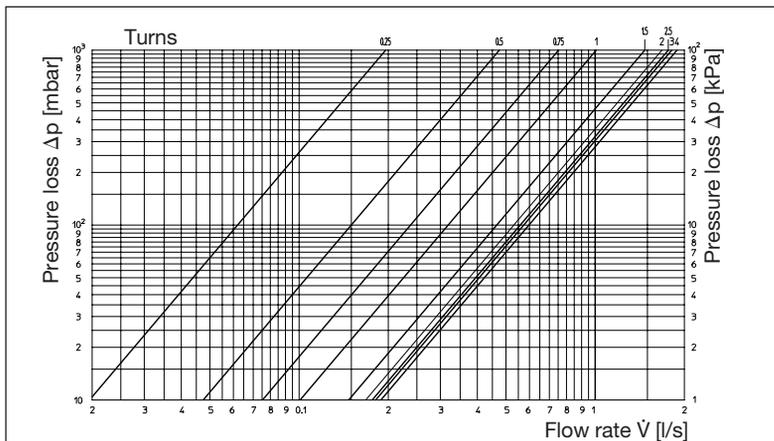
DN 20 ( $k_{vs}$  2.7) item no. 1068566/1068666



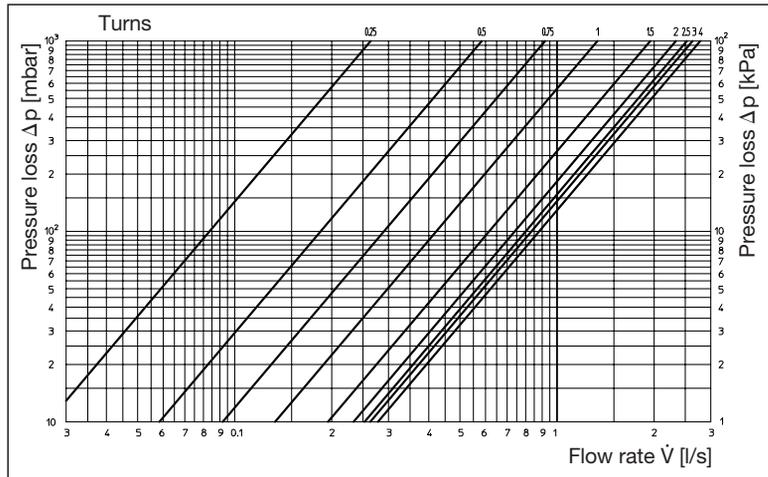
DN 25 item no. 1068568/1068668



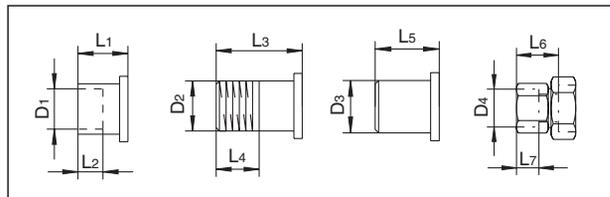
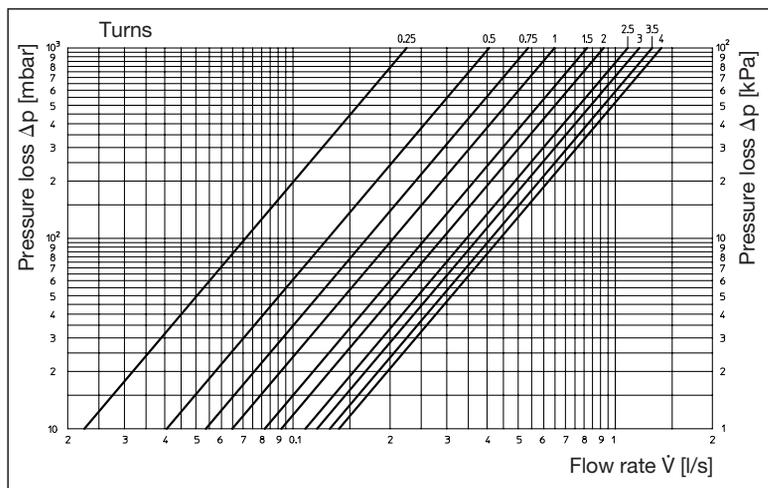
DN 32 item no. 1068570/1068670



DN 40 item no. 1068572/1068672



DN 20 ( $k_{vs}$  5.0) item no. 1068667



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	-	-	-

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 male threaded tailpipes

- 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 female threaded tailpipes

- 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

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

(except for item no. 1068667)

**$k_v$  and Zeta values**

Item no.



"AF"

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
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

"AF" (with fine presetting)



"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

"PTB"



"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

"KTB"  $k_{vs} = 1.0$

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



with stainless steel seat  
(especially for steam installations)

1186200



Special valve insert for reversed  
supply and return pipe

1187070



Return temperature limitation

1026981

 "Combi LR" with cap  
Item no. 1187071

 for "Hycococon ETZ" ("AV 9")  
1187047

Size	k <sub>v</sub> at P-deviation			k <sub>vS</sub>	Zeta at P-deviation			
	1 K	1,5 K	2 K		1K	2K	3 K	open
DN 15	0.36	0.52	0.67	1.00	797	382	230	103
DN 20	0.36	0.52	0.67	1.20	2630	1261	759	237
DN 25	0.36	0.52	0.67	1.20	6588	3158	1902	593

"AV 9"

 for "Hycococon HTZ"  
DN 15 - DN 25  
1067085

 for "Hycococon VTZ/VPZ" and  
"Hycococon ATZ/APZ"  
DN 15 - DN 25  
1067065

**Sizes DN 32 and DN 40**

 for "Hycococon VTZ/VPZ" and "Hycococon HTZ"  
DN 32 1067066  
DN 40 1067067

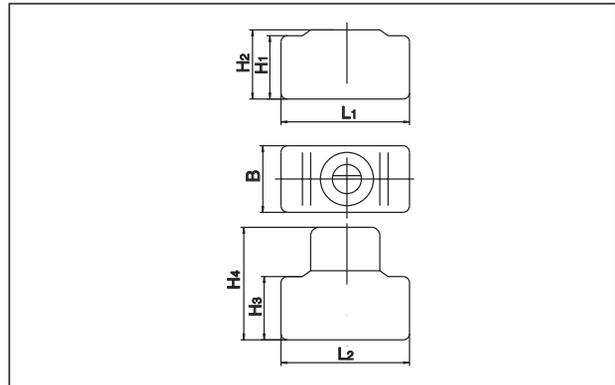
 for "Hycococon ATZ/APZ"  
DN 32 1067068  
DN 40 1067069

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

 **Plug**  
DN 15 - DN 40  
1061798

**Insulation:**

1. Type I for use in heating systems up to 110 °C.  
This insulation also serves as packaging and is supplied with each double regulating and commissioning valve (or isolating and orifice valve) .  
The handwheel and the presetting scale remain accessible.
2. 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.
3. 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 2 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.



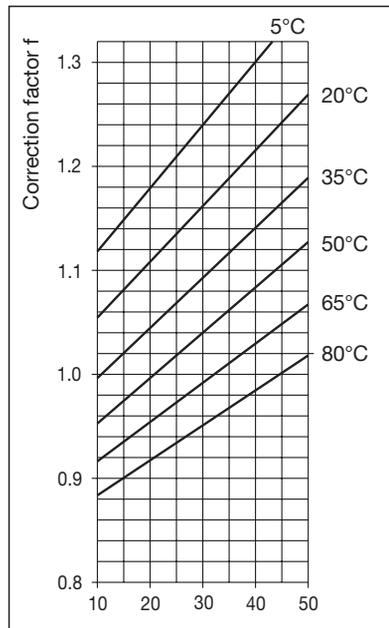
DN	H <sub>1</sub>	H <sub>2</sub>	H <sub>3</sub>	H <sub>4</sub>	L <sub>1</sub>	L <sub>2</sub>	B
15	82	89	87	93	155	160	76
20	82	89	87	93	155	160	76
25	88	95	93	100	155	160	84
32	94	108	99	122	178	183	96
40	104	120	110	130	197	203	110
50	131	143	-	-	211	-	143

The insulations cannot be used for item no. 1068667.

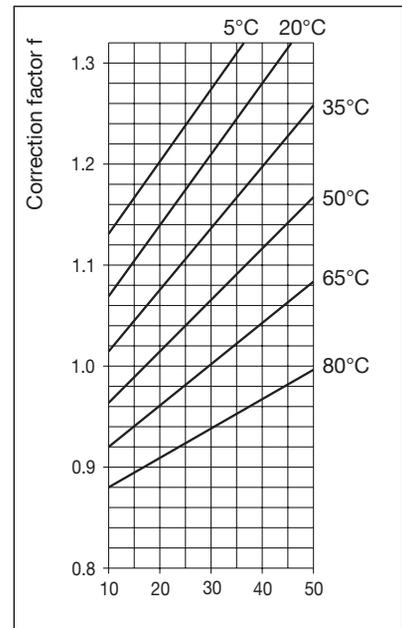
**Correction factors for mixtures of water and glycol:**

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 measuring system “OV-DMC 3”, the correction factor is converted automatically. To do so, the temperature of the mixture is of water and glycol has to be entered and the percentage of glycol is selected in the measuring system.



Weight proportion of ethylene glycol [%]



Weight proportion of propylene glycol [%]

**Measurement and regulation**

**Oventrop measuring system “OV-DMC 3”**

featuring numerous functions and a wide range of applications:

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

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

When entering the respective k<sub>v</sub> value, it is possible to carry out measurements on valves of other manufacturers.

Subject to technical modifications without notice.

Product range 3  
ti 128-EN/20/MW  
Edition 2019