



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

"Hycocon V", "Hycocon A", "Hycocon T", "Hycocon TM", "Hycocon B"

Double regulating and commissioning valve "Hycocon V"

Function:

Oventrop double regulating and commissioning valves "Hycocon V" 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 threaded ports for 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.

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 with 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 networks (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 by means of the pressure test points
- threads according to DIN 2999 (BS 21) suitable for Oventrop compression fittings (one edge olive) for copper pipes with a max. diameter of 22 mm and the Oventrop composition pipe "Copipe" 14 and 16 mm
- easy filling and draining by screwing a separate tool (accessory) onto one of the measuring nipples



Double regulating and commissioning valve PN 16 "Hycocon V"



Possible combinations "Hycocon V", "Hycocon A" and "Hycocon DP" for hydronic balancing



Other possible combinations "Hycocon T", "Hycocon TM" and "Hycocon B" with valve inserts and actuators or thermostats

Double regulating and commissioning valve "Hycocoon V" both ports with female thread according to DIN (BS 21)

Tender specification:

Double regulating and commissioning valve PN 16 both ports with female thread according to DIN 2999 (BS 21), between -20 °C and +120 °C, not suitable for steam. 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.

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 both ports with female thread according to DIN (BS 21)

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

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	kvs value	Item no.
DN 15	1/2"					1.7	106 17 04
DN 20		3/4"				2.7	106 17 06
DN 25			1"			3.6	106 17 08
DN 32				1 1/4"		6.8	106 17 10
DN 40					1 1/2"	10.0	106 17 12

Accessories:

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

Double regulating and commissioning valve "Hycocoon V" both ports with male thread and collar nut

Tender specification:

Double regulating and commissioning valve PN 16 both ports with male thread for weldable, solder and threaded tailpipes, flat sealing, between -20 °C and +120 °C, not suitable for steam. 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.

Suitable for the connection of thermostats (e.g. "Uni XH"), actuators (e.g. electromotive actuators "Uni EIB/LON") or 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.

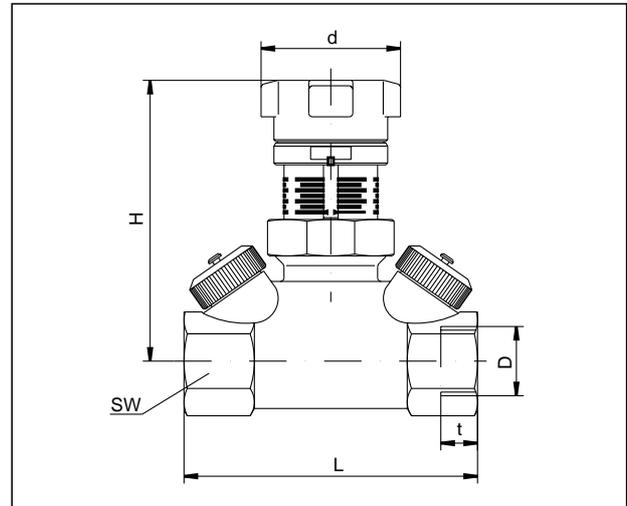
Double regulating and commissioning valves both ports with male thread and collar nut, with integrated pressure test points and drain valves (with captive caps)

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	kvs value	Item no.
DN 15	1/2"					1.7	106 18 04
DN 20		3/4"				2.7	106 18 06
DN 25			1"			3.6	106 18 08
DN 32				1 1/4"		6.8	106 18 10
DN 40					1 1/2"	10.0	106 18 12

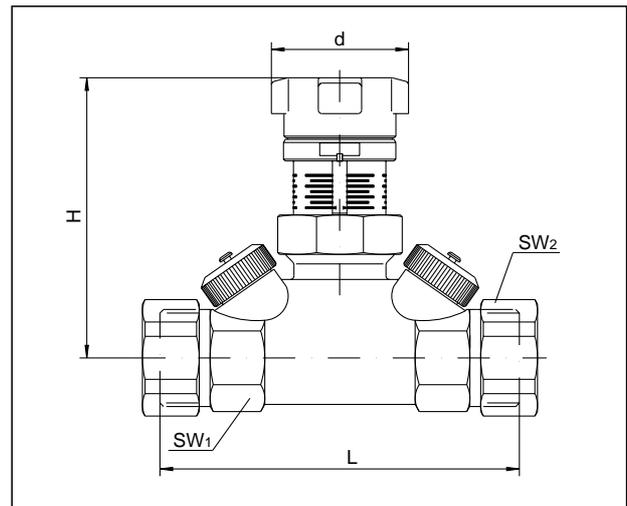
Accessories:

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

Dimensions:



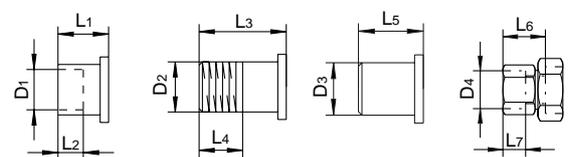
DN	D DIN 2999	t	SW*	L	H	d
15	1/2"	13.2	27	80	77	38
20	3/4"	14.5	32	82	79	38
25	1"	16.8	41	92	81	38
32	1 1/4"	19.1	50	115	91	50
40	1 1/2"	19.1	54	130	100	50



DN	L	H	SW ₁ *	SW ₂ *	d
15	95	77	27	30	38
20	98	79	32	37	38
25	105	81	41	46	38
32	129	91	50	52	50
40	145	100	54	58	50

*SW = spanner size

Dimensions:



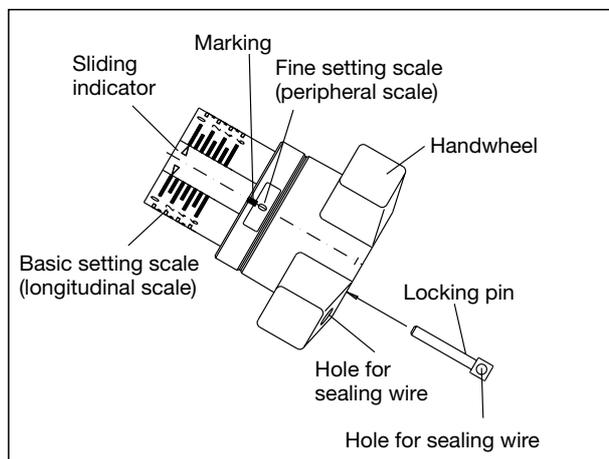
DN	D ₁	L ₁	L ₂	D ₂ DIN 2999	L ₃	L ₄	D ₃	L ₅	D ₄ DIN 2999	L ₆	L ₇
15	15	18	12	1/2"	31	13.2	20.5	50	1/2"	37	13.2
20	18	23	15	3/4"	34	14.5	26	50	3/4"	39	14.5
20	22	24	17	-	-	-	-	-	-	-	-
25	28	27	20	1"	40	16.8	33	60	1 1/4"	53	16.8
32	35	32	25	1 1/4"	46	19.1	41	60	1 1/4"	55	19.1
40	42	37	29	1 1/2"	49	19.1	47.5	65	-	-	-

Tailpipe sets:

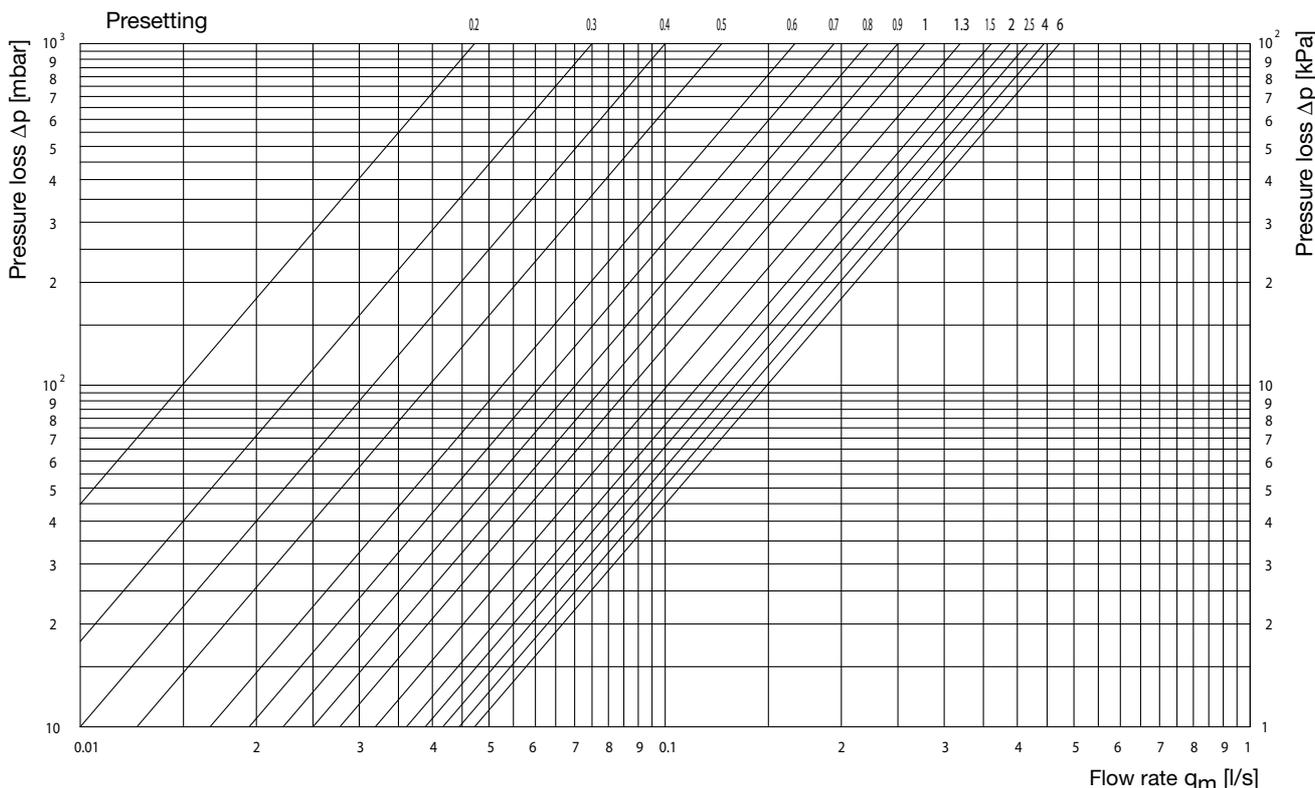
2 weldable tailpipes		
1/2"		106 05 92
3/4"		106 05 93
1"		106 05 94
1 1/4"		106 05 95
1 1/2"		106 05 96
2 solder tailpipes		
15 mm	DN 15	106 10 92
18 mm	DN 20	106 10 93
22 mm	DN 20	106 10 94
28 mm	DN 25	106 10 95
35 mm	DN 32	106 10 96
42 mm	DN 40	106 10 97
2 tailpipes with male thread		
1/2"		106 14 92
3/4"		106 14 93
1"		106 14 94
1 1/4"		106 14 95
1 1/2"		106 14 96
2 tailpipes with female thread		
1/2"		101 93 64
3/4"		101 93 66
1"		106 13 94
1 1/4"		106 13 95

Presetting

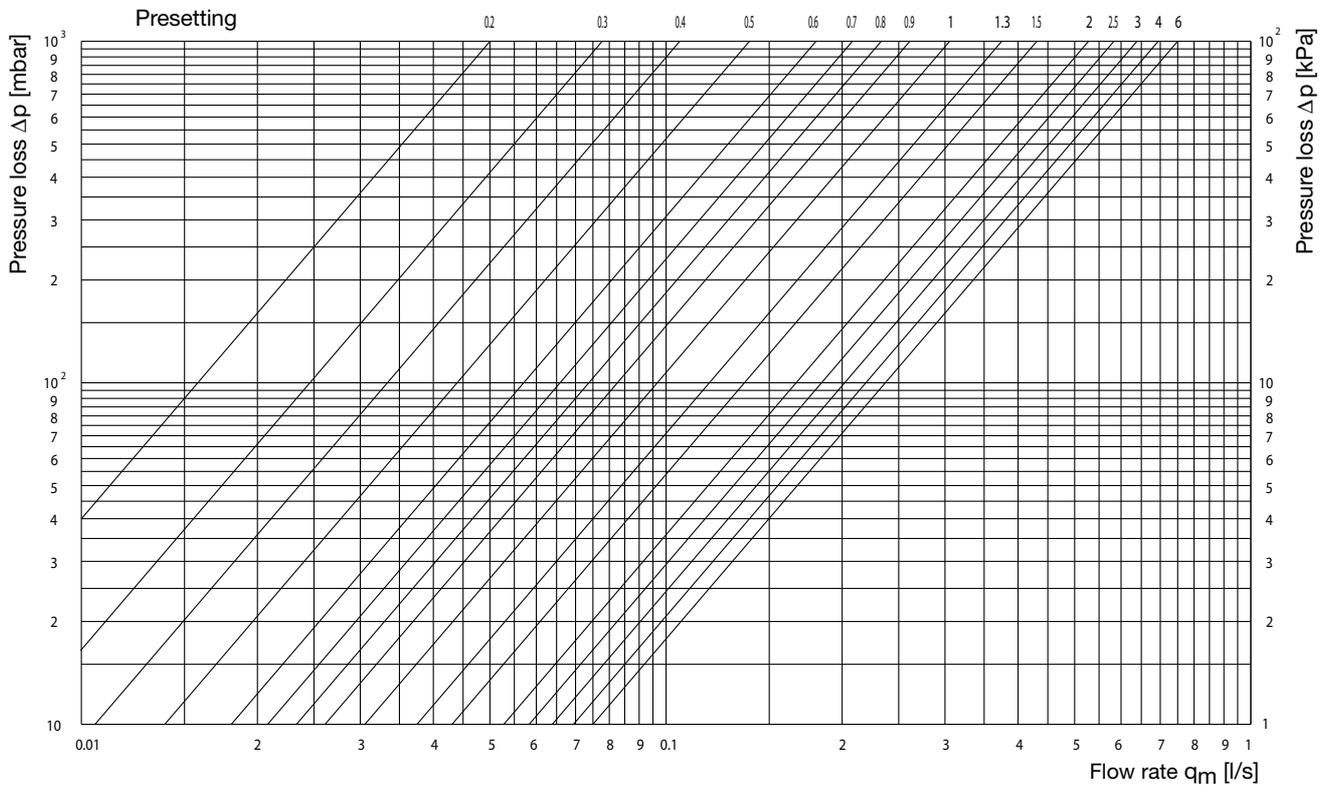
- The value of presetting of the valve is adjusted by turning the handwheel.
 - The display of the basic setting is shown by the longitudinal scale together with the sliding indicator. Each turn of the handwheel is represented by a line on the longitudinal scale.
 - The display of the fine setting is 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.
- The set presetting value is limited by turning the inner adjustment stem clockwise until stop. To do so, use a screwdriver with a bezel of about 3 to 4 mm.
- The presetting value may be locked by using the locking pin (accessory).



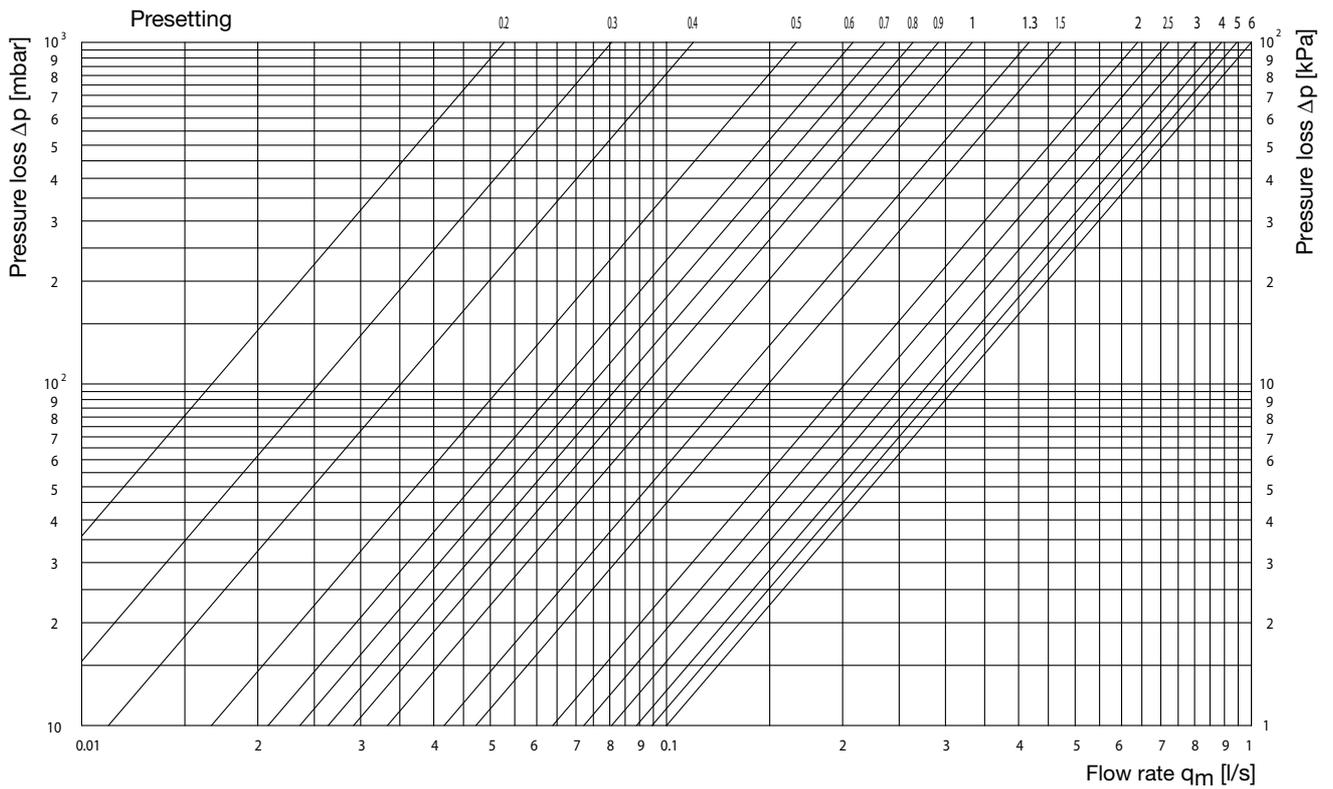
DN 15



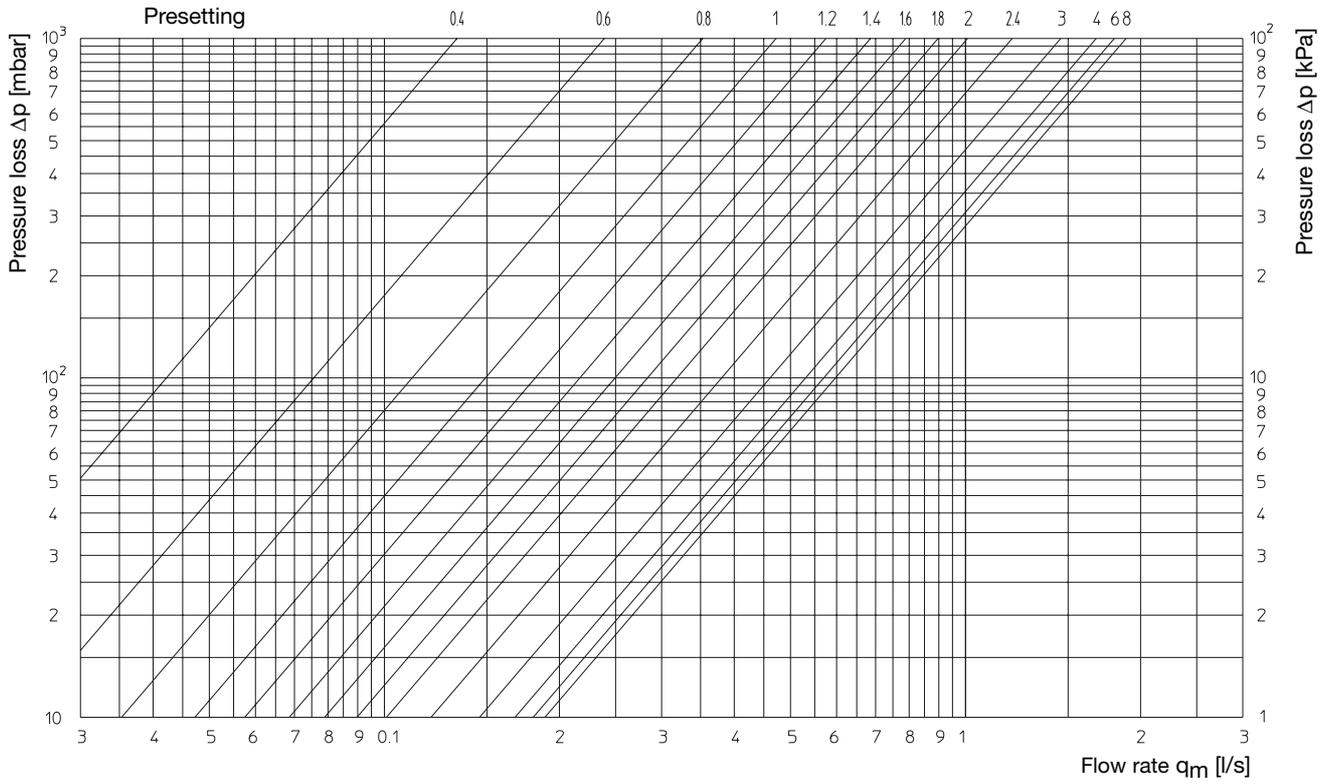
DN 20



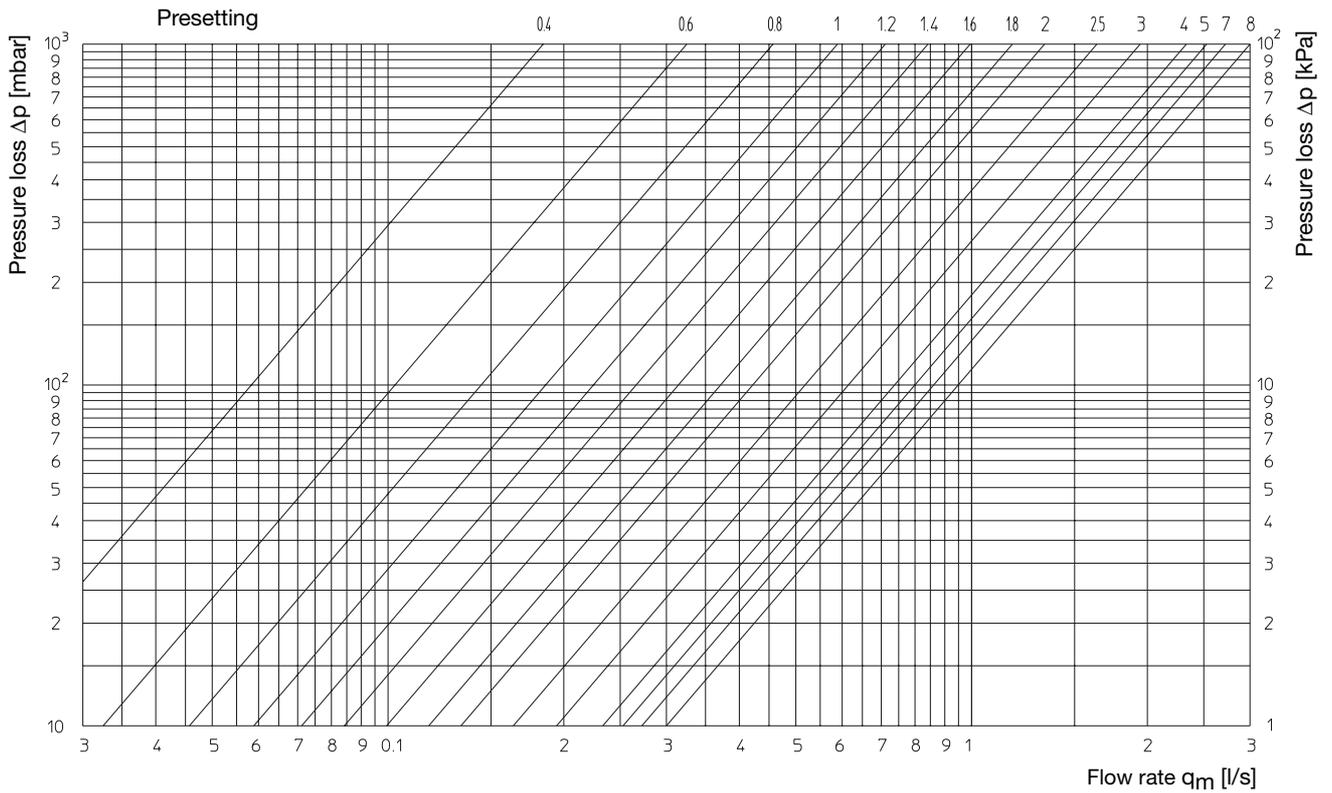
DN 25



DN 32



DN 40



Isolating and orifice valve "Hycococon A" without presetting

Function:

Oventrop isolating and orifice valves "Hycococon A" 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 Oventrop have two threaded ports for fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure. The isolating and orifice valves are delivered with mounted pressure test points, drain valves and caps.

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

Conversion to double regulating and commissioning valve 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 between - 20°C and +120°C, not suitable for steam, 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. Supplied 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") or 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.

Isolating and orifice valve both ports with female thread according to DIN (BS 21)

	kvs value	Item no.
DN 15 (1/2")	1.7	106 73 04
DN 20 (3/4")	2.7	106 73 06
DN 25 (1")	3.6	106 73 08
DN 32 (1 1/4")	6.8	106 73 10
DN 40 (1 1/2")	10.0	106 73 12

Isolating and orifice valve both ports with male thread and collar nut

	kvs value	Item no.
DN 15 (1/2")	1.7	106 74 04
DN 20 (3/4")	2.7	106 74 06
DN 25 (1")	3.6	106 74 08
DN 32 (1 1/4")	6.8	106 74 10
DN 40 (1 1/2")	10.0	106 74 12

Accessory:

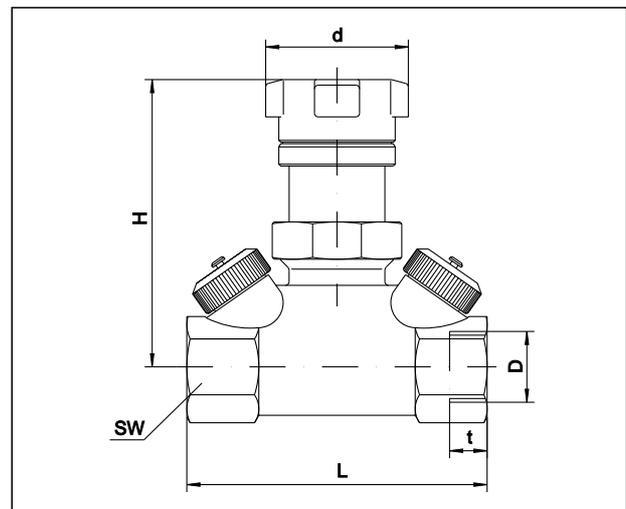
Fill and drain tool 106 17 91

Tailpipe sets:

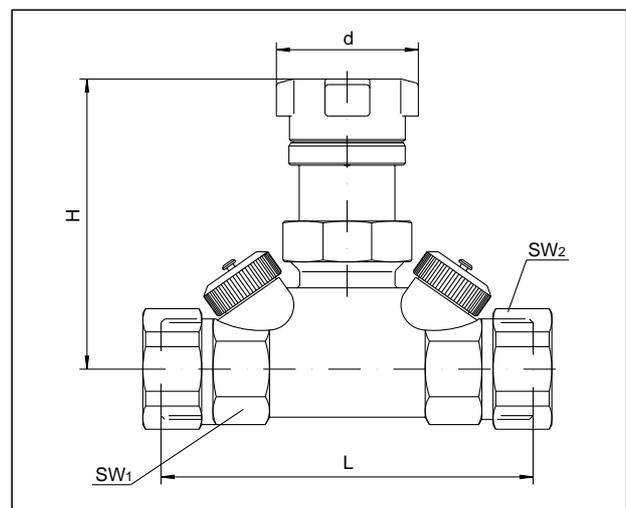
2 weldable tailpipes		2 solder tailpipes			
1/2"	106 05 92	15 mm	DN 15	106 10 92	
3/4"	106 05 93	18 mm	DN 20	106 10 93	
1"	106 05 94	22 mm	DN 20	106 10 94	
1 1/4"	106 05 95	28 mm	DN 25	106 10 95	
1 1/2"	106 05 96	35 mm	DN 32	106 10 96	
		42 mm	DN 40	106 10 97	

2 tailpipes with male thread		2 tailpipes with female thread	
1/2"	106 14 92	1/2"	101 93 64
3/4"	106 14 93	3/4"	101 93 66
1"	106 14 94	1"	106 13 94
1 1/4"	106 14 95	1 1/4"	106 13 95
1 1/2"	106 14 96		

Dimensions:



DN	D DIN 2999	t	SW*	L	H	d
15	1/2"	13.2	27	80	77	38
20	3/4"	14.5	32	82	79	38
25	1"	16.8	41	92	81	38
32	1 1/4"	19.1	50	115	91	50
40	1 1/2"	19.1	54	130	100	50



DN	L	H	SW ₁ *	SW ₂ *	d
15	95	77	27	30	38
20	98	79	32	37	38
25	105	81	41	46	38
32	129	91	50	52	50
40	145	100	54	58	50

*SW = spanner size

Regulating valves "Hycococon T" and "Hycococon TM" for subsequent conversion to thermostatic operation

Function:

Overtrop regulating valves "Hycococon T" and "Hycococon TM" are installed in the pipework of hot water central heating systems and cooling systems and serve to achieve a hydro- nomic balance between the various circuits of the system. They can also be combined with thermostatic or electric actua- tors.

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 ("Hycococon T": item no. 118 39 61/"Hycococon TM": valve is supplied with a presetting key).

The regulating valves have two threaded ports for fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure. The regulating valves are delivered with mounted pressure test points, drain valves and caps.

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

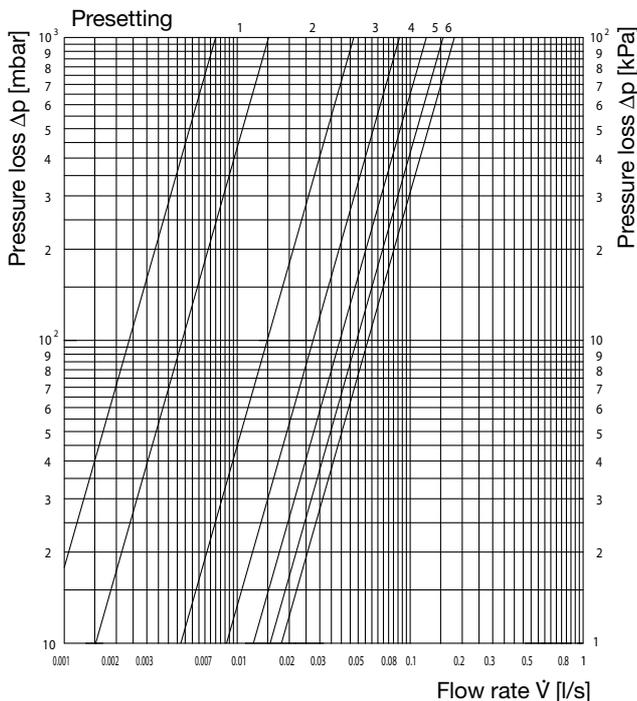
The pipework has to be flushed thoroughly before installing the valve. The installation of an Overtrop strainer is recom- mended.

The flow charts are valid for installation of the regulating valves in the supply or the return pipe, provided the direction of flow conforms with 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 subsequent conversion of the regulating 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 networks (EIB/LON) may also be used.

"Hycococon T" DN 15 - DN 25 (kvs 0.9)

with valve insert "Series AV6", all patterns and sizes up to 2K P-deviation



"Hycococon T" and "Hycococon TM", combination possibilities

Performance data (kvs 0,9):

Presetting	1	2	3	4	5	6
k _v value at 1K P-deviation	0.055	0.141	0.221	0.247	0.28	0.32
k _v value at 1.5K P-deviation	0.055	0.170	0.296	0.370	0.42	0.49
k _v 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

When using the thermostat "Uni MH", the k_v values indicated in the technical information rise. For detailed information see technical information thermostats "Uni MH" and "Uni MD".

Regulating valves "Hycocoon T" and "Hycocoon TM" both ports with female thread according to DIN (BS 21)

Tender specification:

Regulating valve PN 16 both ports with female thread according to DIN 2999 (BS 21), between -20 °C and +120 °C, not suitable for steam, max. differential pressure 1 bar. Straight pattern model with presetting; brass bonnet, valve body made of brass resistant to dezincification (DZR), maintenance-free stem 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") or actuators (e.g. electromotive actuators "Uni EIB/LON") under working conditions. Oventrop offers a separate insulation for temperature up to 120 °C.

Regulating valves both ports with female thread according to DIN (BS 21)

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

"Hycocoon T"

DN	1/2"	3/4"	1"	kvs-Wert	Art.-Nr.
DN 15	1/2"			0.9	106 83 64
DN 20		3/4"		0.9	106 83 66
DN 25			1"	0.9	106 83 68

"Hycocoon TM"

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	kvs	Art.-Nr.
DN 15	1/2"					1.7	106 85 64
DN 20		3/4"				2.7	106 85 66
DN 25			1"			3.6	106 85 68
DN 32				1 1/4"		6.8	106 85 70
DN 40					1 1/2"	10.0	106 85 72

Accessory:

Fill and drain tool 106 17 91

Regulating valves "Hycocoon T" and "Hycocoon TM" both ports with male thread and collar nut

Tender specification:

Regulating valve PN 16 both ports with male thread for weldable, solder and threaded tailpipes, flat sealing, between -20 °C and +120 °C, not suitable for steam, max. differential pressure 1 bar. Straight pattern model with presetting; brass bonnet, valve body made of brass resistant to dezincification (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.

Connection thread M 30 x 1.5 suitable for the connection of thermostats (e.g. "Uni XH") and actuators (e.g. electromotive actuators "Uni EIB/LON") under working conditions. Oventrop offers a separate insulation for temperature up to 120 °C.

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

"Hycocoon T"

DN	1/2"	3/4"	1"	kvs value	item no.
DN 15	1/2"			0.9	106 84 64
DN 20		3/4"		0.9	106 84 66
DN 25			1"	0.9	106 84 68

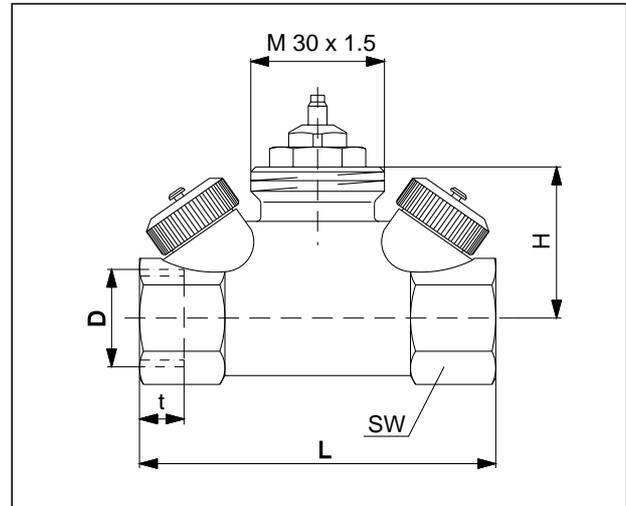
"Hycocoon TM"

DN	1/2"	3/4"	1"	1 1/4"	1 1/2"	kvs	Art.-Nr.
DN 15	1/2"					1.7	106 86 64
DN 20		3/4"				2.7	106 86 66
DN 20			3/4"			5.0	106 86 67
DN 25			1"			3.6	106 86 68
DN 32				1 1/4"		6.8	106 86 70
DN 40					1 1/2"	10.0	106 86 72

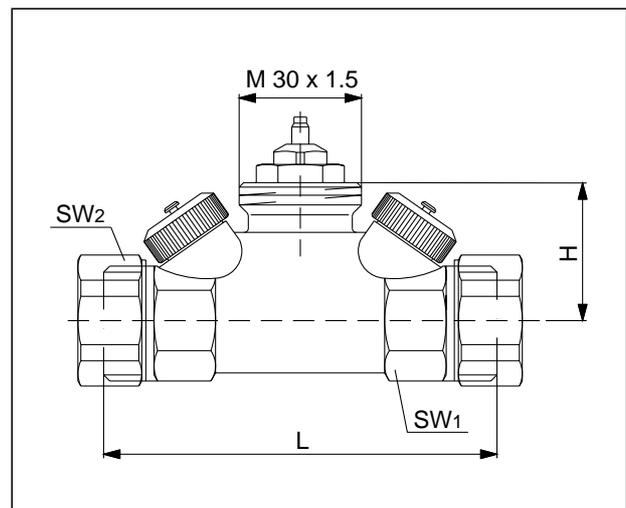
Accessory:

Fill and drain tool 106 17 91

Dimensions:



DN	D DIN 2999	t	SW*	L	H
15	1/2"	13.2	27	80	33
20	3/4"	14.5	32	82	35
25	1"	16.8	41	92	37
32	1 1/4"	19.1	50	115	48
40	1 1/2"	19.1	54	130	55



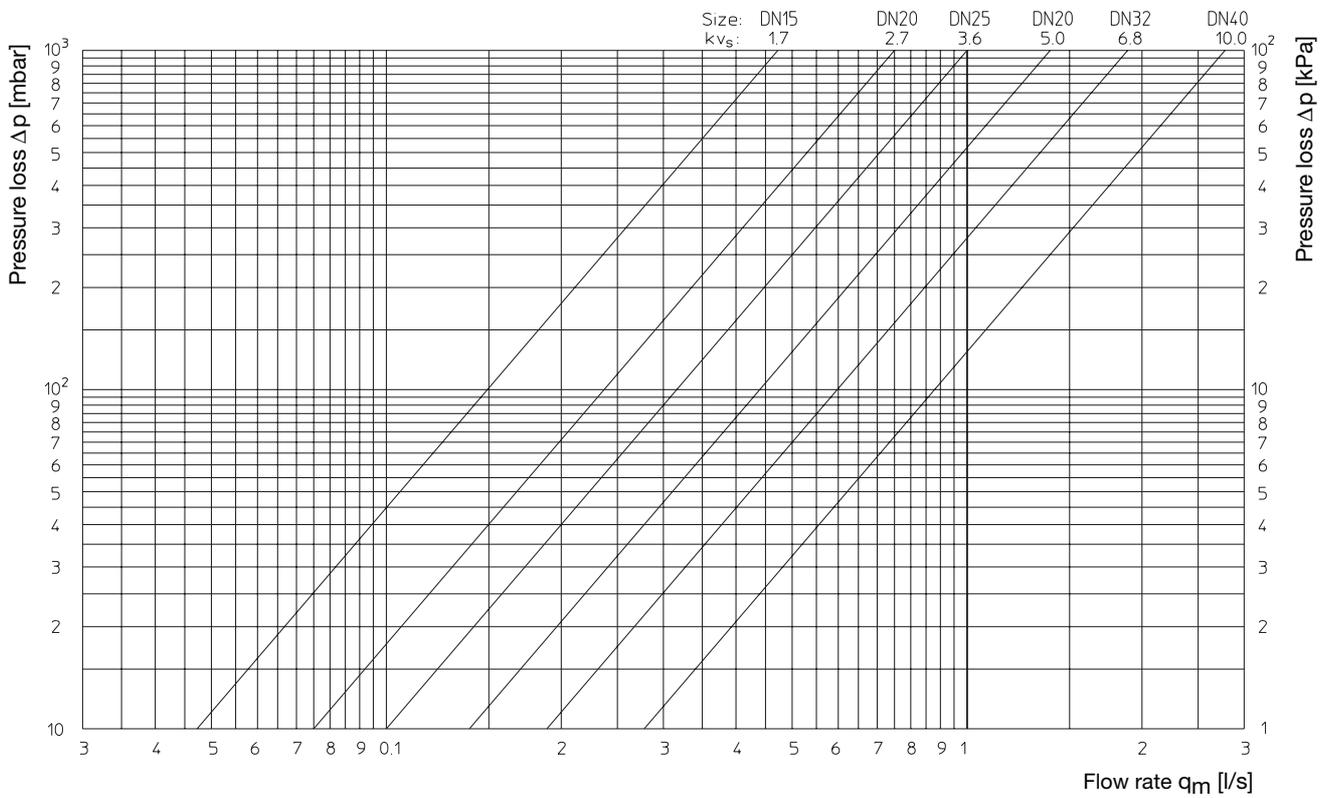
DN	L	H	SW1*	SW2*
15	95	33	27	30
20	98	35	32	37
25	105	37	41	46
32	129	98	50	52
40	145	55	54	58

"Hycocoon TM" DN 20 3/4" kvs value 5.0, item no. 106 86 67

DN	L	H	SW1*	SW2*
20	106	42	32	37

*SW = spanner size

"Hycocn TM"



Dimensions:

DN	D1	L1	L2	D2 DIN 2999	L3	L4	D3	L5	D4 DIN 2999	L6	L7
15	15	18	12	1/2"	31	13.2	20.5	50	1/2"	37	13.2
20	18	23	15	3/4"	34	14.5	26	50	3/4"	39	14.5
20	22	24	17	-	-	-	-	-	-	-	-
25	28	27	20	1"	40	16.8	33	60	1 1/4"	53	16.8
32	35	32	25	1 1/4"	46	19.1	41	60	1 1/4"	55	19.1
40	42	37	29	1 1/2"	49	19.1	47.5	65	-	-	-

Tailpipe sets:

2 weldable tailpipes

1/2"	106 05 92
3/4"	106 05 93
1"	106 05 94
1 1/4"	106 05 95
1 1/2"	106 05 96

2 solder tailpipes

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

2 tailpipes with male thread

1/2"	106 14 92
3/4"	106 14 93
1"	106 14 94
1 1/4"	106 14 95
1 1/2"	106 14 96

2 tailpipes with female thread

1/2"	101 93 64
3/4"	101 93 66
1"	106 13 94
1 1/4"	106 13 95

Basic body "Hycococon B"

Function:

The Oventrop basic bodies "Hycococon B" with the corresponding valve insert and alternatively the measuring and draining unit or the plug 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.

Balance is carried out according to the valve insert.

The required values of presetting can be obtained from the flow chart.

The Oventrop basic bodies have two threaded ports for fill and drain tool with hose connection or measuring needles for the measurement of the differential pressure.

Installation is possible 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 basic bodies in the supply or the return pipe, provided the direction of flow conforms with the arrow embossed on the valve body.

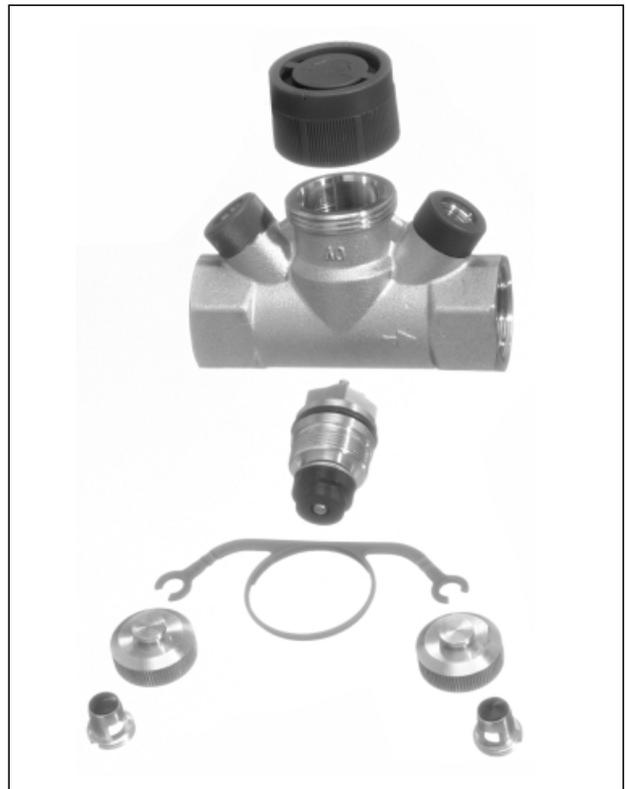
In cooling systems using mixtures of water and glycol, the correction factors related to the indicated chart values have to be taken into consideration. When using the flow-meter "OV-DMC 2", the percentage of the water and glycol mixture has to be entered. The conversion is carried out by the computer. The universal bonnet connection (M 30 x 1.5) does not only allow a subsequent conversion 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 networks (EIB/LON) may also be used.

Advantages:

- the location of all functioning components on one level allows a simple assembly and easy operation
- free choice of pressure test points, drain valves or plugs
- infinitely adjustable presetting, exact measurement of pressure loss and flow by means of the pressure test points (depending on the valve insert)
- threads according to DIN 2999 (BS 21) suitable for Oventrop compression fittings (one edge olive) for copper pipes with a max. diameter of 22 mm and the Oventrop composition pipe "Copipe" 14 and 16 mm
- numerous combination possibilities with valve inserts



Double regulating and commissioning valve "Hycococon B"



Measuring and draining units

Valves body "Hycococon B" both ports with female thread according to DIN (BS 21)

Tender specification:

Valve body PN 16 both ports with female thread according to DIN 2999 (BS 21), between -20 °C and +120 °C, valve body made of brass resistant to dezincification (DZR). All functioning components on one level, without integrated pressure test points and drain valves and without valve insert, 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") and actuators (e.g. electromotive actuators "Uni EIB/LON") under working conditions. Oventrop offers a separate insulation for temperatures up to 120 °C.

Valve bodies both ports with female thread according to DIN (BS 21) without integrated pressure test points and drain valves (without captive caps) and without valve insert

DN	1/2"	3/4"	1"	kvs-Wert	Art.-Nr.
DN 15	1/2"			*	106 17 44
DN 20		3/4"		*	106 17 46
DN 25			1"	*	106 17 48

* according to used insert

Accessory

Fill and drain tool 106 17 91

Valve body "Hycococon B" both ports with male thread and collar nut

Tender specification:

Valve body PN 16 both ports with male thread and collar nut for weldable, solder and threaded tailpipes, flat sealing, between -20 °C and +120 °C, valve body made of brass resistant to dezincification (DZR). All functioning components on one level, without integrated pressure test points and drain valves and without valve insert, 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") and actuators (e.g. electromotive actuators "Uni EIB/LON") under working conditions. Oventrop offers a separate insulation for temperatures up to 120 °C.

Valve bodies both ports with male thread and collar nut, without integrated pressure test points and drain valves (without captive caps) and without valve insert

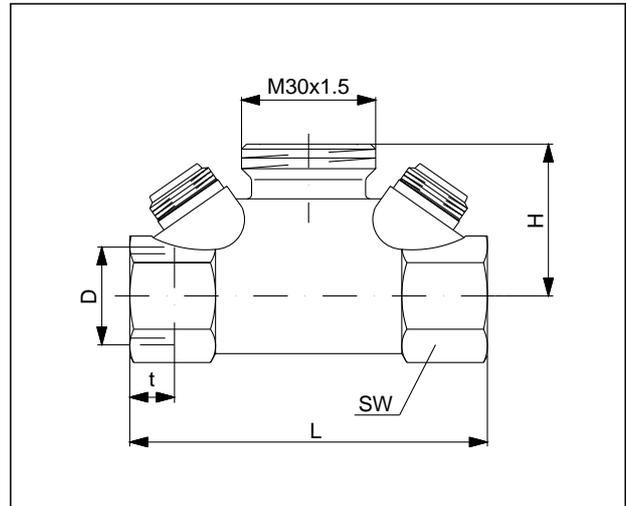
DN	1/2"	3/4"	1"	kvs value	item no.
DN 15	1/2"			*	106 18 44
DN 20		3/4"		*	106 18 46
DN 25			1"	*	106 18 48

* according to used insert

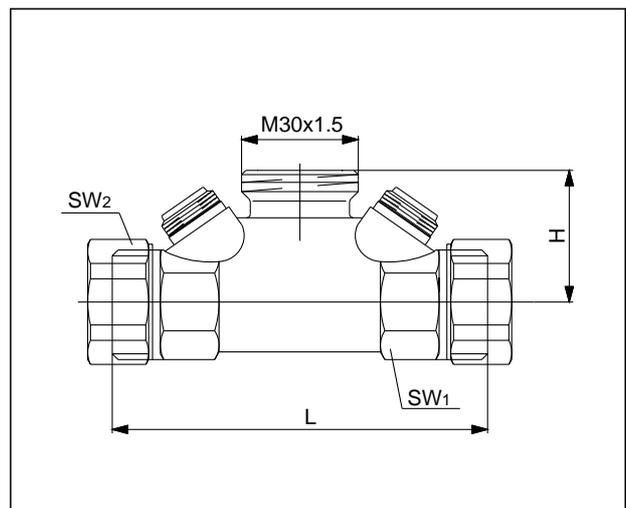
Accessory

Fill and drain tool 106 17 91

Dimensions:



DN	D DIN 2999	t	SW*	L	H
15	1/2"	13,2	27	80	33
20	3/4"	14,5	32	82	35
25	1"	16,8	41	92	37



DN	L	H	SW ₁ *	SW ₂ *
15	95	33	27	30
20	98	35	32	37
25	105	37	41	46

*SW = spanner size

Valve inserts suitable for valve bodies "Hycococon" of the sizes DN 15 - DN 25
(except for 106 86 67)

k_v and Zeta values



"Series A" 118 70 69

"Series A"

Size	k_v at P-deviation			k_{vs}	Zeta at P-deviation			
	1 K	2 K	3 K		1K	2K	3 K	offen
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" 118 73 52

"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	offen
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" 118 60 01

"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 P" P1 118 60 52

"Series P"

Size	k_{vs}	Zeta
DN 15 "P 1"	0.45	499
DN 15 "P 2"	0.80	158
DN 20 "P 1"	0.45	1658
DN 20 "P 2"	0.80	525
DN 25 "P 1"	0.45	4170
DN 25 "P 2"	0.80	1320



P2 118 60 53



"Series KT" 114 71 69
for chilled water circuits

"Series KT" $k_{vs} = 1.0$

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



with stainless steel seat
(especially for steam installations) 118 62 00



"Series AZ" 118 70 60

„Baureihe AZ" (for zone control), all patterns $k_v = 1,1$

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



Special insert for reversed supply and return pipe 118 70 70

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

When using the thermostat "Uni MH", the k_v values indicated in the technical information rise. For detailed information see technical information thermostats "Uni MH" and "Uni MD".



Return temperature limitation 102 69 81



"Combi LR" with cap 118 70 71



for "Hycocon T" ("Series AV 6") 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	offen
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 TM" and "Hycocon DP" 106 70 85
DN 15 - DN 25



for "Hycocon V" and "Hycocon A" 106 70 65
DN 15 - DN 25

Sizes DN 32 and DN 40



for "Hycocon V", "Hycocon TM" and
"Hycocon DP"
DN 32 106 70 66
DN 40 106 70 67



for "Hycocon A"
DN 32 106 70 68
DN 40 106 70 69



Measuring and draining unit
DN 15- DN 40 106 17 90



Plug
DN 15 - DN 40 106 17 98

Dimensions:

DN	D ₁	L ₁	L ₂	D ₂ DIN 2999	L ₃	L ₄	D ₃	L ₅	D ₄ DIN 2999	L ₆	L ₇
15	15	18	12	1/2"	31	13.2	20.5	50	1/2"	37	13.2
20	18	23	15	3/4"	34	14.5	26	50	3/4"	39	14.5
20	22	24	17	-	-	-	-	-	-	-	-
25	28	27	20	1"	40	16.8	33	60	1 1/4"	53	16.8

Tailpipe sets:

2 weldable tailpipes

1/2"	106 05 92
3/4"	106 05 93
1"	106 05 94

2 solder tailpipes

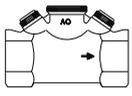
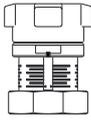
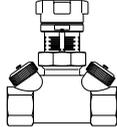
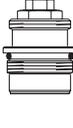
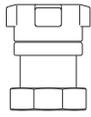
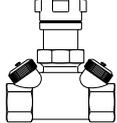
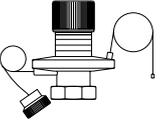
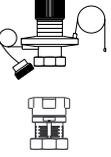
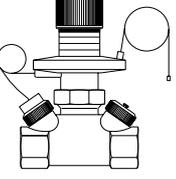
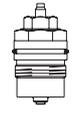
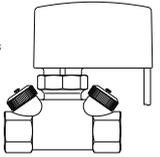
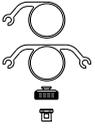
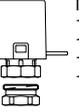
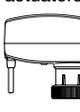
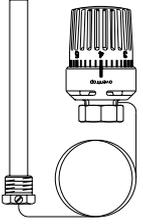
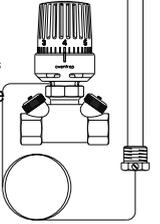
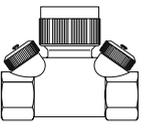
15 mm DN 15	106 10 92
18 mm DN 20	106 10 93
22 mm DN 20	106 10 94
28 mm DN 25	106 10 95

2 tailpipes with male thread

1/2"	106 14 92
3/4"	106 14 93
1"	106 14 94

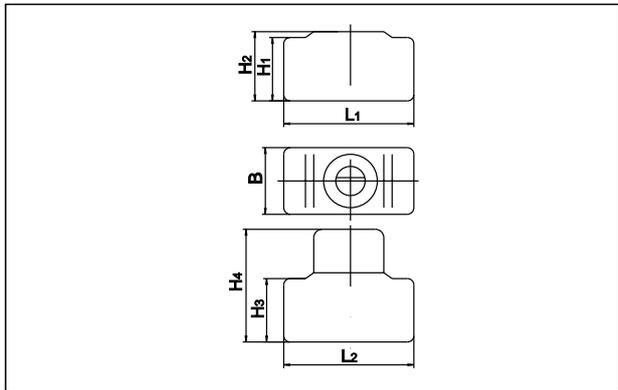
2 tailpipes with female thread

1/2"	101 93 64
3/4"	101 93 66
1"	106 13 94

Body	Inserts	Control unit	Valves (examples)	Accessories	
 <p>DN 15-DN 40</p>	 <p>Standard valve insert of "Hycoco V" and "Hycoco A" DN 15-DN 25 item no. 106 70 65</p>	 <p>DN 15-DN 25 item nos. 106 17 93-95 DN 32-DN 40 item no. 106 17 96-97</p>	<p>"Hycoco V" DN 15-DN 40</p> 		
	 <p>Standard valve insert of "Hycoco A" DN 32 item no. 106 70 68 DN 40 item no. 106 70 69</p>	 <p>DN 15-DN 25 DN 32-DN 40</p>	<p>"Hycoco A" DN 15-DN 40</p> 		
	<p>Bonnet for differential pressure regulator "Hycoco DP"</p>  <p>DN 15-DN 25 Item no. 106 20 82 including insert 106 70 85</p>				
	 <p>Standard valve insert of "Hycoco V/TM/DP" DN 32-DN 40 DN 32 Item no. 106 70 66 DN 40 Item no. 106 70 67</p>	 <p>Bonnet for differential pressure regulator "Hycoco DP" DN 32-DN 40 Item no. 106 20 85 Item nos. 106 17 96-97</p>	<p>"Hycoco DP" DN 15-DN 40</p> 		
	 <p>Standard valve insert of "Hycoco TM/DP" DN 15-DN 25 Item no. 106 70 85</p>	 <p>Thermostats and actuators for "Hycoco" DN 15-DN 40</p>	<p>"Hycoco T/TM" with actuator DN 15-DN 25</p> 	 <p>Measuring and draining unit Item no. 106 17 90</p>	
	 <p>"Series A" Item no. 118 70 69</p>	 <p>"Series AZ" Item no. 118 70 60</p>	<p>Electrothermal actuators</p>  <p>Item nos. 101 24 85 101 24 86 101 24 87 101 24 89</p>	<p>Electromotive actuators</p>  <p>Item nos. 101 27 00 101 27 01</p>	
	 <p>P1 kv 0.45 Item no. 118 60 52</p>	 <p>P2 kv 1.0 Item no. 118 60 53</p>	<p>Manual heads</p>  <p>Item nos. 101 25 65 101 25 75</p>	<p>Electromotive actuators</p>  <p>System EIB System LON</p>	<p>"Hycoco T/TM" thermostatic operation DN 15-DN 25</p> 
	 <p>Reversed supply/return pipe Item no. 118 70 70</p>	 <p>"Series F" Item no. 118 73 52</p>			 <p>Plug Item no. 106 17 98</p>
	 <p>"Series KT" Item no. 114 71 69</p>	 <p>"Series ADV 6" Item no. 118 60 01</p>	 <p>"Uni RTLH" DN 15-DN 25 Item no. 102 71 65</p>	<p>"Hycoco T/TM" with temperature controller DN 15-DN 25</p> 	
	 <p>"Series AV 6" Item no. 118 70 57</p>	 <p>Steam insert Item no. 118 62 00</p> <p>DN 15-DN 25 (except for item no. 106 86 67)</p>			
	 <p>RTL Item no. 102 69 81</p> <p>DN 15-DN 25 (except for item no. 106 86 67)</p>		<p>"Hycoco B" DN 15-DN 25 combinations with further valve inserts</p> 		
	 <p>"Combi LR" DN 15-DN 25 (except for item no. 106 86 67) Item no. 118 70 71</p>	<p>Spanner Control unit in the insert</p>			

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 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 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.

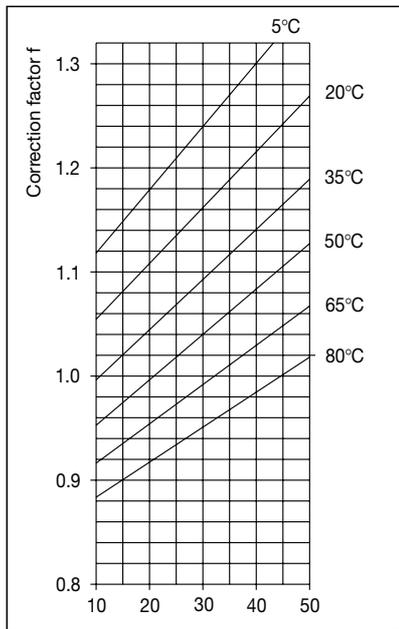


DN	H ₁	H ₂	H ₃	H ₄	L ₁	L ₂	B
15	82	89	87	130	155	160	76
20	82	89	87	130	155	160	76
25	88	95	93	135	155	160	84
32	94	108	99	150	178	183	96
40	104	120	110	170	197	203	110

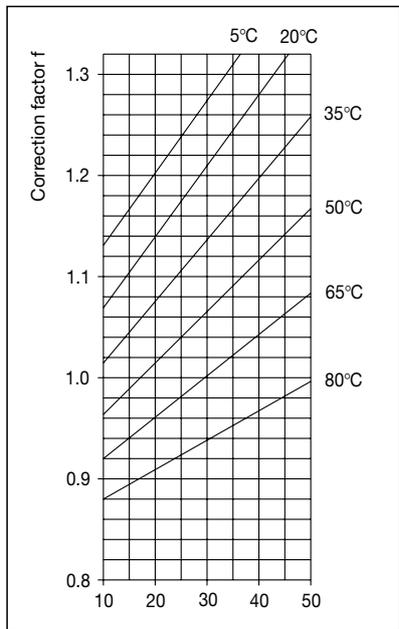
Correction factor for mixtures of water and glycol:

When antifreeze liquids are added to the heating water, the pressure loss taken from 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 flow-meter "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, l/h, gal/min)
- differential pressure measuring (indication in mbar, kPa, PSI, mm WG, m WG)
- temperature measuring (indication in °C or °F)
- presetting Arriving at the presetting value based on the measured differential pressure, the given flow rate and the valve size.

The characteristic lines of all Oventrop regulating valves DN 10 - DN 300 are memorised in the flow-meter.

With the use of a respective kv value, it is possible to carry out measurements on valves of other manufacturers.

(For practical use of the "OV-DMC 2", special operating instructions are available.)



Flow-meter, item no. 106 91 77

Oventrop differential pressure gauge (without memory and microprocessor)

Pocket size differential pressure gauge for practical use on site for checking Δp in conjunction with Oventrop regulating valves.

To measure static pressure, connection on one only sensor is necessary. Digital indication in kPa units.

Subject to technical modification without notice.

Product group 3
ti 128-1/10/12.2001/MW

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