

“Hycococon DTZ” Differential pressure regulator Measuring technique “eco”

Tender specification:

The Oventrop differential pressure regulator “Hycococon DP” for a constant control of the set nominal value is a proportional regulator which works without auxiliary energy.

Infinitely adjustable nominal value between 50 and 300 mbar or between 250 and 600 mbar. The nominal value can be locked and is visible from outside. With direct isolation and a facility for draining and filling, installation in the return pipe, straight pattern model. Valve disc with soft seal.

Connection thread M 30 x 1.5.

Valve body (DN 15 – DN 40 made of dezincification (DZR) brass; DN 50 made of bronze), bonnet made of dezincification resistant (DZR) brass, regulator housing (DN 15 – DN 25 made dezincification (DZR) brass, DN 32 – DN 50 made of bronze), inner parts made of dezincification resistant (DZR) brass, O-rings, washer and diaphragm made of EPDM.

Supplied with insulation shells (as packaging) suitable for temperatures up to 80 °C.

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 Δp_v : 1.5 bar
 Length of capillary: 1 m

Models:

Differential pressure regulator both ports with female thread according to EN 10226

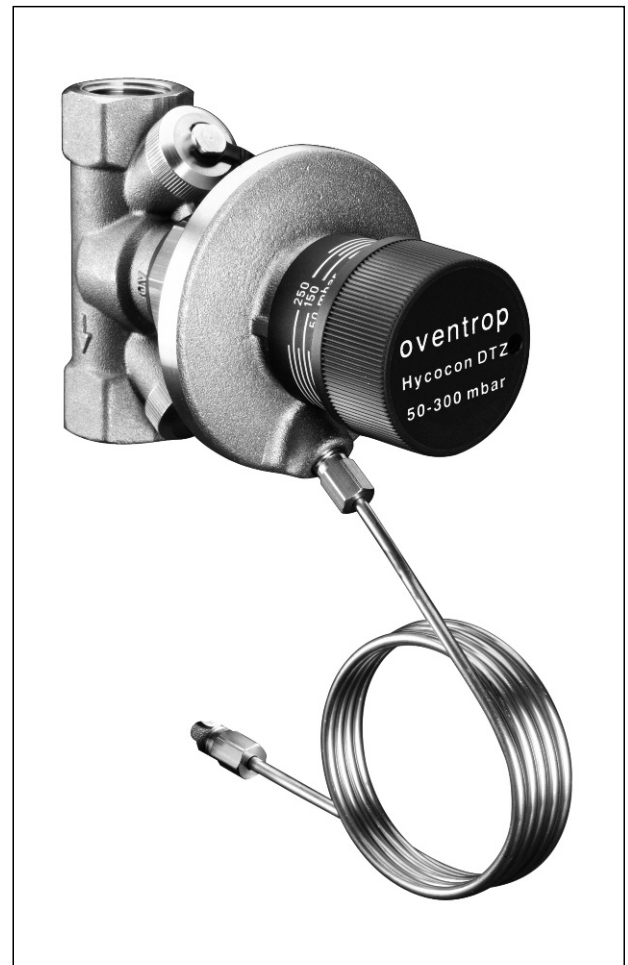
Size	kvs	Item no. 50-300 mbar	Item no. 250-600 mbar
DN 15	1.7	1062004	1062204
DN 20	2.7	1062006	1062206
DN 25	3.6	1062008	1062208
DN 32	6.8	1062010	1062210
DN 40	10.0	1062012	1062212
DN 50	23.0	1062016	1062216

Differential pressure regulator both ports with male thread and collar nut

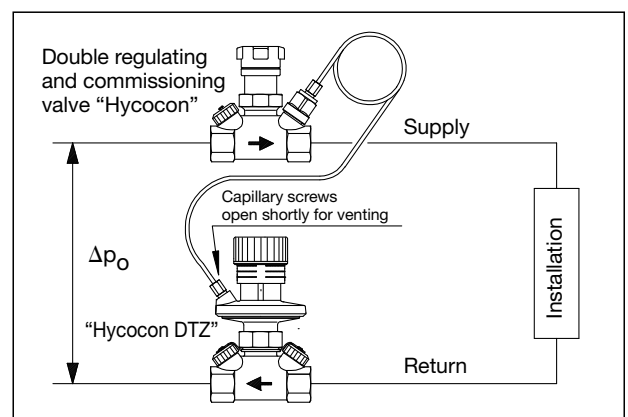
Size	kvs	Item no. 50-300 mbar	Item no. 250-600 mbar
DN 15	1.7	1062104	1062304
DN 20	2.7	1062106	1062306
DN 25	3.6	1062108	1062308
DN 32	6.8	1062110	1062310
DN 40	10.0	1062113	1062312
DN 50	23.0	1062116	1062316

Advantages:

- all functional components in one plane
- infinitely adjustable nominal value between 50 and 300 mbar/250 and 600 mbar
- very good optical display of the set nominal value
- nominal value can be locked
- simple isolation of the riser
- with fill and drain tool (accessory) for filling and draining the riser
- pressure balanced valve disc
- existing valves of the series “Hycococon VTZ/HTZ/ETZ” sized DN 15 up to DN 40 can be converted without draining the system



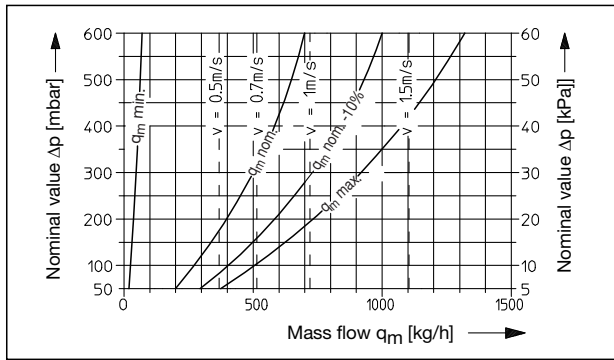
“Hycococon DTZ”



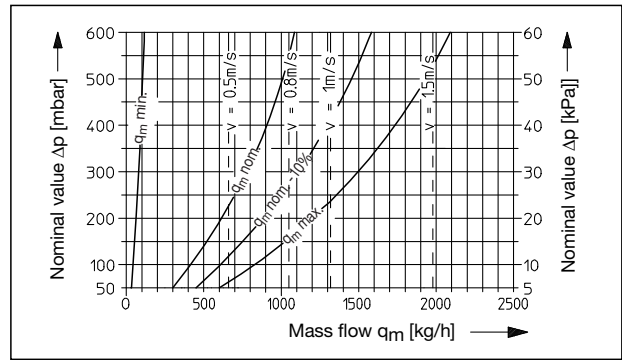
System illustration - Installation in the return pipe

Performance data:

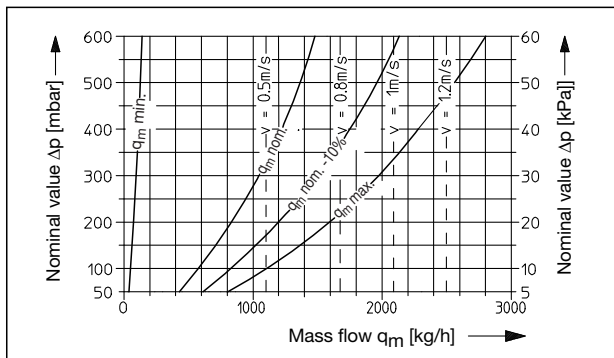
DN 15: $k_{vs} = 1.7$



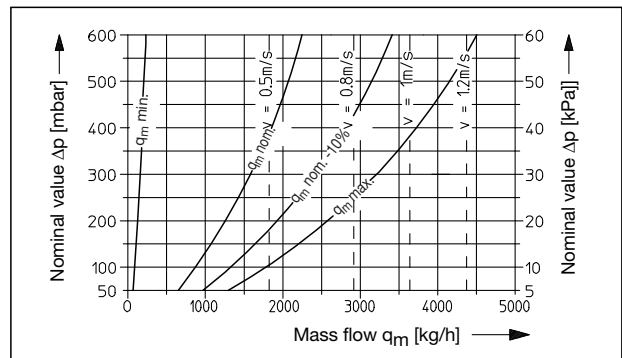
DN 20: $k_{vs} = 2.7$



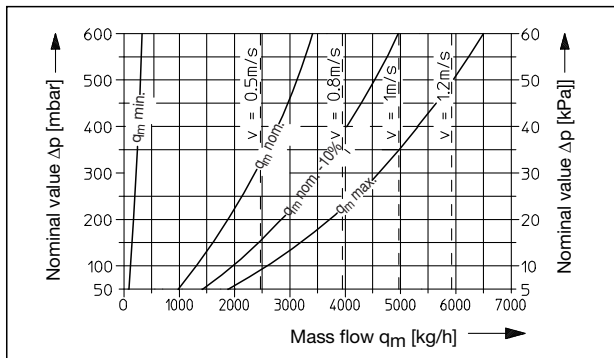
DN 25: $k_{vs} = 3.6$



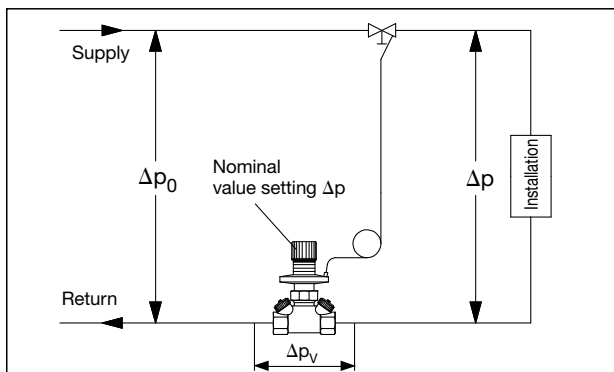
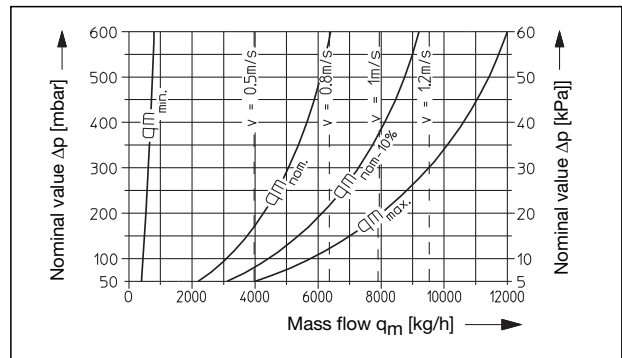
DN 32: $k_{vs} = 6.8$



DN 40: $k_{vs} = 10.0$

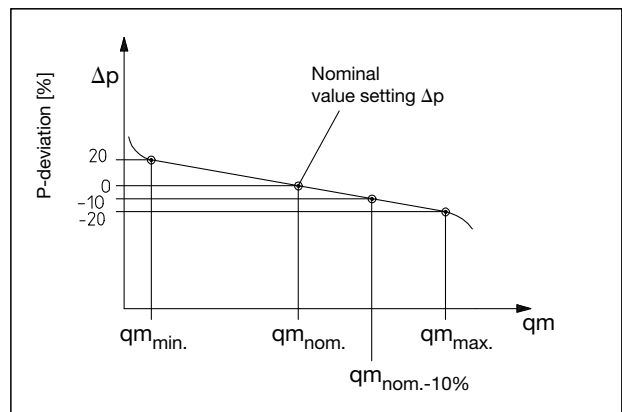


DN 50: $k_{vs} = 23.0$



Example of installation

The recommended application range is determined by the minimum flow rate ($q_{m, min.}$) and the maximum flow rate ($q_{m, max.}$). Design of the regulator can be carried out with the help of the charts illustrated above. Depending on the flow rate and the differential pressure, the suitable regulator can be determined. The maximum flow rate of the installation to be expected may not exceed the flow rate of the regulator ($q_{m, max.}$). As for the curve $q_{m, nom.}$, the differential pressure of the installation corresponds to the set nominal value.



Smallest p-deviation with average nominal setting ($q_{m, nom.}$).

The curve $q_{m, nom.} - 10\%$ shows the values with a p-deviation of 10%.

The charts are valid for the condition $\Delta p_0 \geq 2 \times \Delta p$. To guarantee a sufficient valve authority of the differential pressure regulator, Δp_0 should be $\geq 1.5 \times \Delta p$.

Note: Operation of the differential pressure regulator is guaranteed even below this value.

Function:

Oventrop differential pressure regulators are proportional regulators working without auxiliary energy. They are designed for use in heating or cooling systems to maintain a constant differential pressure within a necessary proportional band. The spring for nominal pressure can be set with the help of the nominal value setting device, so that values between 50 and 300 mbar/250 and 600 mbar can be set. The outer chamber of the diaphragm regulator must be connected to the capillary, and the capillary to the supply pipe. With the differential pressure in the installation increasing, the valve disc closes down and opens as the differential pressure falls. The excess differential pressure is reduced by the differential pressure regulator, until the set differential pressure in the pipe is reached.

Installation of the regulator:

Oventrop differential pressure regulators “Hycocn DTZ” are installed in the return pipe. Installation is possible in any position provided the direction of flow conforms to the direction of the arrow on the valve body. The pipework has to be flushed thoroughly before installation of the differential pressure regulator. The installation of an Oventrop “Y” type strainer is recommended. The capillary should be fitted above or horizontal to the supply pipe, to avoid blockage of the capillary by small particles, it should not be connected to the supply pipe from underneath.

Setting the nominal value:

The nominal value of the Oventrop differential pressure regulator is infinitely adjustable between 50 and 300 mbar and 250 and 600 mbar. The required value can be set by turning the handwheel and can be secured with the help of a locking pin (accessory).

Function of the manual isolation:

The Oventrop differential pressure regulator “Hycocn DTZ“ may be isolated manually e.g. when servicing the system, and additionally acts as an isolating valve. To carry out manual isolation, turn the handwheel clockwise until stop beyond the nominal value 50/250 mbar. The connection pipe of the upper diaphragm chamber must be connected to the supply pipe.

If the regulator is to be reopened after servicing, turn the handwheel anticlockwise to the nominal value. A perfect regulation is only possible in this position.

Draining and filling of the installation:

The installation may be drained or filled with the help of an additional fill and drain tool. To do so, a G ½ hose may be connected to the fill and drain tool (G ¾ collar nut).

Accessories:

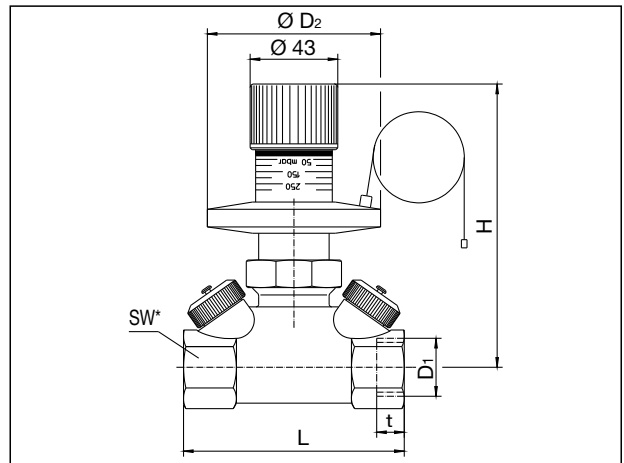
	Item no.
Adapter (for the connection of the capillary to a G ¾ flat sealing male thread)	1062090
Locking pin with sealing wire	1062092
Fill and drain tool	1061791
Adapter (for the connection of the capillary to the measuring technique “classic” G ¼ connection)	1609302
Capillary 2 m long	1062095

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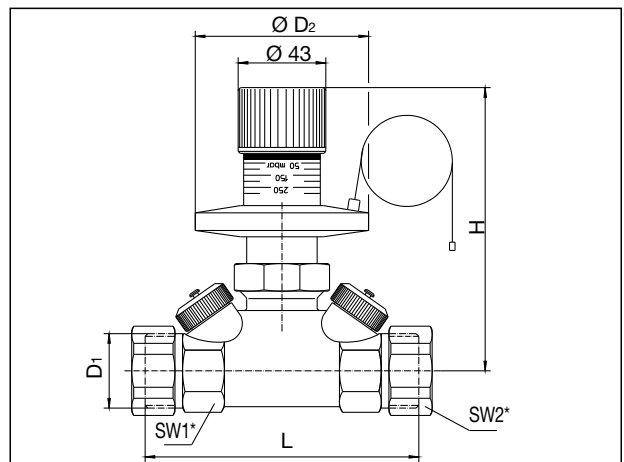
Subject to technical modification without notice.

Product range 3
 ti 129-EN/20/MW
 Edition 2015



DN	D1 EN 10226	Ø D2	t	SW *	L	H
15	Rp ½	71.5	13.2	27	80	113
20	Rp ¾	71.5	14.5	32	82	116
25	Rp 1	71.5	16.8	41	92	120
32	Rp 1¼	104	19.1	50	115	140
40	Rp 1½	104	19.1	55	130	145
50	Rp 2	104	25.7	70	140	163

Dimensions * SW = spanner size



DN	D1 ISO 228	Ø D2	L	H	SW1*	SW2*
15	G ¾	71.5	95	113	27	30
20	G 1	71.5	98	116	32	37
25	G 1¼	71.5	105	120	41	46
32	G 1½	104	129	140	50	52
40	G 1¾	104	145	145	55	58
50	G 2½	104	148	163	70	75

Dimensions * SW = spanner size

DN	D1	L1	L2	D2 EN 10226	L3	L4	D3	L5	D4 EN 10226	L6	L7
15	15	18	12	R ½	31	13.2	20.5	50	Rp ½	37	13.2
20	18	23	15	R ¾	34	14.5	26	50	Rp ¾	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 1¼	46	19.1	41	60	Rp 1¼	55	19.1
40	42	37	29	R 1½	49	19.1	47.5	65			
50	54	50	40	R 2	55	23.4	60	65			

Dimensions