

Self-acting Differential Pressure Controls

Type TD56-2G (PN 25) and TD56-2M (PN 16), DN 15 – 80 mm

0-3.9.06.01-G

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TECHNICAL DATA

Materials:

- TD56-2M valve body	Nodular cast iron EN-GJS-400-15
- TD56-2G valve body	Nodular cast iron EN-GJS-400-15
- Cone, Seat	Stainless steel
- O-ring	A70H FEPM
- Bolts, nuts	24 CrMo 4/A4
- Stag bolt, Set point adjuster	St. 42, 1.0503 Electroplated
- Spindle housing	St. 42, 1.0503 Electroplated
- Spring	W. Nr. 1.4568 powder coated
- Diaphragm housing	Steel 1.0122
- Diaphragm	NBR / EPDM
Nominal pressure	TD56-2G - 25 bar TD56-2M - 16 bar
Seating	Single-seated
Flow characteristic	Quadratic
Leakage rate	≤ 0.05% of Kvs
Flanges drilled according to:	
- TD56-2G	EN 1092-2 PN 25
- TD56-2M	EN 1092-2 PN 16
Counter flanges	DIN 2634
Colour (valve body, cover):	
- TD56-2G	Gray
- TD56-2M	Grey

APPLICATIONS

This unit is designed for controlling of differential pressure in individual users circuits and sub-mains within a large distribution network. For instance in district heating or group heating networks. Control of by-pass between flow and return where 3 way valves or 2 way zone control valves are installed to limit volume variations and maximum Δp . Similarly for low water content boilers and devices requiring a minimum circulation irrespective of load conditions.

FUNCTION

The medium flows through the free area between the seat and cone in the direction indicated by the arrow on the body.

The high pressure line is connected to the diaphragm housing via **C1** and the low pressure line to the diaphragm housing via **C2**. Any change of differential pressure across the diaphragm which is connected to the valve mechanism – above or below the set point will cause the diaphragm to change its position.

If higher than set pressure the valve will move to close, if lower than set pressure the valve will move to open, until the system is once again in balance. Adjustment of the differential pressure setting is made by rotating the setpoint adjuster clockwise or anticlockwise until the desired set point is reached. The valve cone is pressure balanced. The pressure acts onto the bottom and top surface of the cone at the same time. In this way, the forces produced by the media are compensated.

DESIGN

The differential pressure control valve is a self-acting unit consisting of a valve, springs, an actuator and two capillary tube connected on the upper and lower side of the actuator. The valve body is made of nodular cast iron. The seat and cone are made of stainless steel. The diaphragm is made of EPDM or NBR rubber, depending on the medium to be controlled.

FEATURES

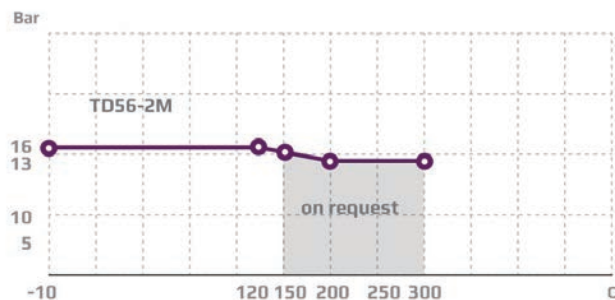
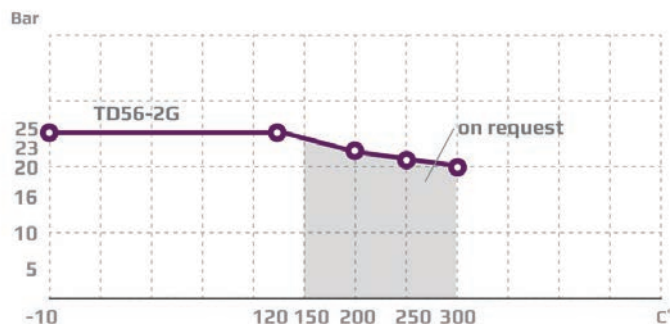
- Exact regulating
- Nominal pressure PN 25 / PN 16
- Self-acting
- Easy to install and use

INSTALLATION

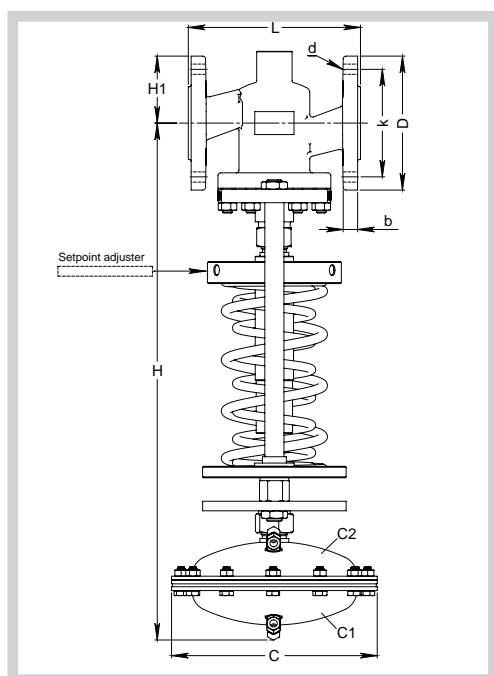
According to the conditions, the TD56-2 can be built into either the return pipe or the flow pipe in a suitable positions. The diaphragm area is large enough to give a sensitive response to small pressure variations.

Subject to change without notice.

PRESSURE/TEMPERATURE DIAGRAM



DIMENSION SKETCH



Type	L mm	H mm	H1 mm	C mm	b mm	D (dia.) mm	k (dia.) mm	d mm dia. (number)
15 TD56-2G/M	130	60	582	220	14	95	65	14x(4)
20 TD56-2G/M	150	65	595	220	16	105	75	14x(4)
25 TD56-2G/M	160	70	601	220	16	115	85	14x(4)
32 TD56-2G/M	180	75	618	220	18	140	100	19x(4)
40 TD56-2G/M	200	85	630	220	19	150	110	19x(4)
50 TD56-2G/M	230	95	660	220	19	165	125	19x(4)
65 TD56-2G/M	290	110	685	220	20	185	145	19x(8)
80 TD56-2G/M	310	155	708	220	20	200	160	19x(8)

SPECIFICATIONS

Type	Flange connection DN in mm	k_{vs} -value m^3/h	Lifting height mm	Weight kg
15 TD56-2G/M	15	4	7.5	21
20 TD56-2G/M	20	6,3	7.5	23
25 TD56-2G/M	25	10	9	24
32 TD56-2G/M	32	16	10	27
40 TD56-2G/M	40	25	11	29
50 TD56-2G/M	50	35	11.5	33
65 TD56-2G/M	65	58	14.5	38
80 TD56-2G/M	80	80	16	55
Set point bar	0.4-0.8	0.6-1.5	1-2.5	2-5