spirax /sarco®

Direct Operated Pressure Regulator 25MP

The 25MP is a direct acting steam pressure reducing valve. Downstream pressure is fed back through an external sensing line.

Model →	25MP
Sizes	1/2"
Connections	NPT
Construction	Cast Iron

Construction Materials No. Material Body Cast Iron ASTM A 126 CL B Lower Diaphragm Housing Cast Iron ASTM A 126 CL B Diaphragm Bolts ASTM A449 3 Steel Upper Case Diaphragm Cast Iron ASTM A 126 CL B Adjustment Screw Stainless Steel AISI 300 series Brass 6 Jam Nut ASTM B16 Adjustment Spring Carbon Steel AISI 1060 8 Spring Plate Steel ASTM A 569 ASTM 36(260) Diaphragm Plate Brass ASTM B 103 Alloy A 10 Diaphragm Phosphor Bronze 11 Stem Stainless Steel **AISI 303** Valve Head Stainless Steel AISI 440A 400 Series STN Steel 13 Valve Seat Stainless Steel 14 Stem Guide Stainless Steel **AISI 303** 15 Stem Guide Gasket Stainless Steel AISI 302 16 Pilot Valve Spring Stainless Steel AISI 302 17 Pilot Valve Assy. Gasket Graphite **AISI 302** 18 Cover Plate Stainless Steel AISI 300 Series ASTM B 36 19 Retaining Ring **Brass**

Limiting Operating Conditions

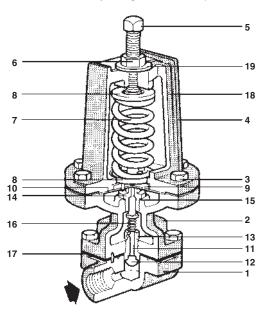
Max. Operating Pressure (PMO) 250 psig (17 barg)
Max. Operating Temperature 450°F (232°C)

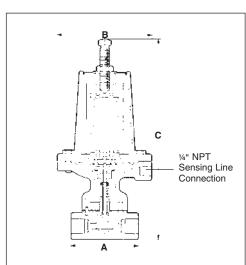
Downstream Pressure Ranges

For the following downstream pressures, three color-coded pilot valve springs are available:

Typical Applications

Small steam pressure reducing applications where an 80% to 90% accuracy of regulation is acceptable.





Dime	nsions	(nominal)	in inches an	d millimeters
Size	Α	В	С	Weight
1/2"	3.5	4.9	9.75	9.75 lb
	89	125	248	4.45 kg

Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

In the interests of development and improvement of the product, we reserve the right to change the specification.

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Capacity - Pounds of saturated steam per hour at 80% accuracy of regulation

Inlet Stea		Reduced Steam Pressure														
Pressure																
psig		2	5	10	15	20	30	40	50	60	75	100	125	150	175	200
	bar	.14	.34	.69	1.03	1.38	2.07	2.76	3.45	4.14	5.17	6.89	8.62	10.3	12.1	13.8
15	1.03	8	10	15												
30	2.07	12	18	27	31	33										
50	3.45	15	20	30	37	46	50	57								
75	5.17	17	23	48	59	73	74	78	73	72						
100	6.89	19	39	56	70	85	93	110	92	98	94					
125	8.62			68	85	102	118	122	116	125	128	119				
150	10.3			85	105	124	139	139	139	142	145	143	139			
175	12.1			97	123	140	159	163	150	159	162	164	162	157		
200	13.8			114	137	160	182	188	173	187	191	194	197	190	167	
250	17.2			137	164	192	218	226	224	228	230	233	232	234	222	210
300	20.6				185	210	245	270	260	265	272	275	216	280	280	275

for kg/hr, multiply by .454

Capacity & Accuracy of Regulation

Capacity of the type MP regulator is based upon the accuracy of regulation of the reduced pressure, and chart values are given for an accuracy of regulation of 80%. This means that, for example, at a reduction of 100 psi to 20 psi, the capacity will be 85 lbs/ hr when the reduced pressure drops to 80% of the 20 psi initial setting or 16 psi.

The following multipliers can be used to determine the capacity for other percent of accuracy of regulation values.

Accuracy of Regulation	Capacity Chart Multiplier				
75%	1.25				
80%	1.0				
85%	0.75				
90%	0.5				

Sample Specification

The pressure regulator shall be direct-acting with an external pressure sensing line. The valve trim shall be hardened stainless steel, and the body shall be cast iron.

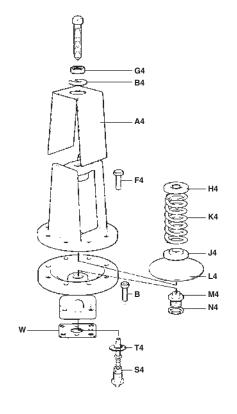
Installation

The regulator should be installed in a horizontal line with suitable bypass and isolating valves. A steam trap should be installed upstream to prevent condensate from reaching the regulator. The trap and regulator should both be protected with a strainer. The pressure sensing line should be located in a straight section of the downstream piping at least 10 pipe diameters from the nearest fitting, or in the steam space.

Maintenance

Complete installation and maintenance instructions are given in IM-3-104-US, a copy of which is supplied with each valve.

Spare Parts



Cover Plate w/ Retaining Ring	A4, B4		
Pilot Screws w/ Gasket	B, W		
Adjustment Screw w/ Nut, and Upper and Lower Spring Support Disc	G4, H4 J4		
Adjustment Spring Specify controlled pressure and spring color Yellow 3 to 30 psi Blue 20 to 100 psi Red 80 to 250 psi	K4		
Diaphragm Assembly	L4		
Stem Guide w/ Gasket	M4, N4		
Head & Seat Assembly w/ Gasket	S4, T4		
Square Gasket for all Pilots (set of 3)	W		

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