

spirax sarco

Pilot Operated Pressure Regulator 1/2" to 4" 25P

The 25P is a self-actuated pilot-operated pressure regulator. Downstream pressure is fed back through an external sensing line to the pressure pilot, which adjusts the opening of the main valve so as to maintain the set pressure. The main valve can close tight for ANSI/FCI 70-2 Class IV shut off when steam is not required.

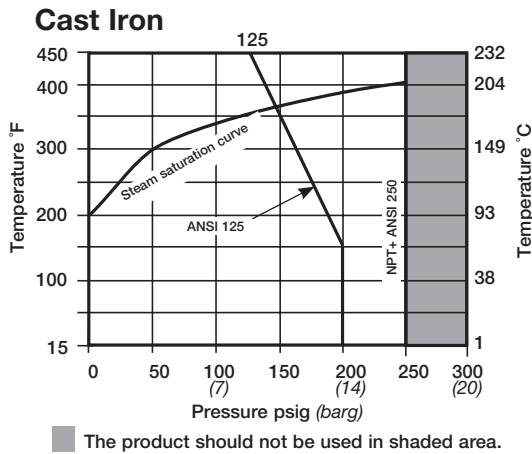
Model	25P			
Sizes	1/2" to 2"	2 1/2", 3", 4"	1/2" to 2"	2", 2 1/2", 3", 4"
Connections	NPT	ANSI 125 flgd.	NPT	ANSI 300 flgd.
Construction	Cast Iron		Cast Steel	
Options		ANSI 250 flgd.		ANSI 150 flgd. (excludes 2")

Typical Applications

The 25P is a reliable, accurate regulator to reduce steam from a high supply pressure to the most efficient operating pressure of the equipment, and to protect the equipment from dangerously high pressures.

Capacities

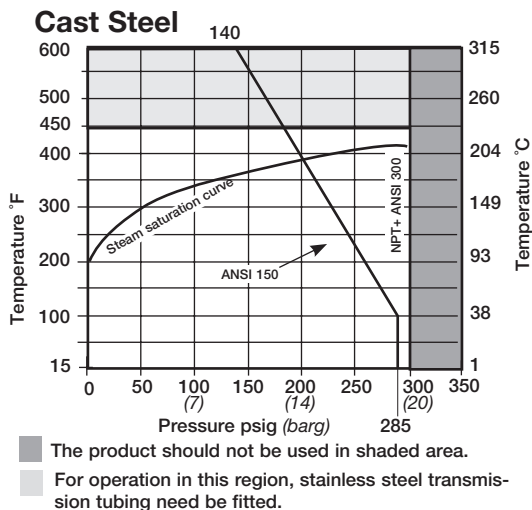
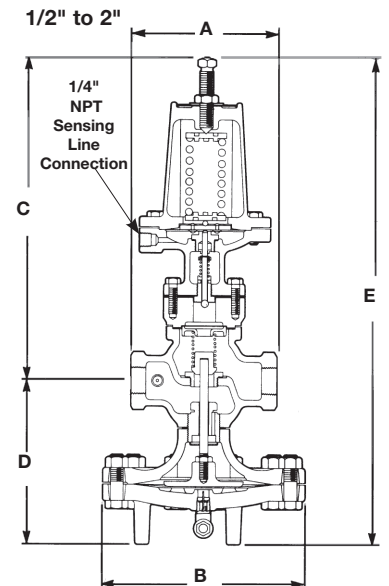
For selection and sizing data, see TIS 3.030.



Downstream Pressure Ranges

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

- Yellow: 3 to 30 psi
- Blue: 20 to 100 psi
- Red: 80 to 250 psi



Note: Maximum temperature for Stainless Steel tubing is 600°F

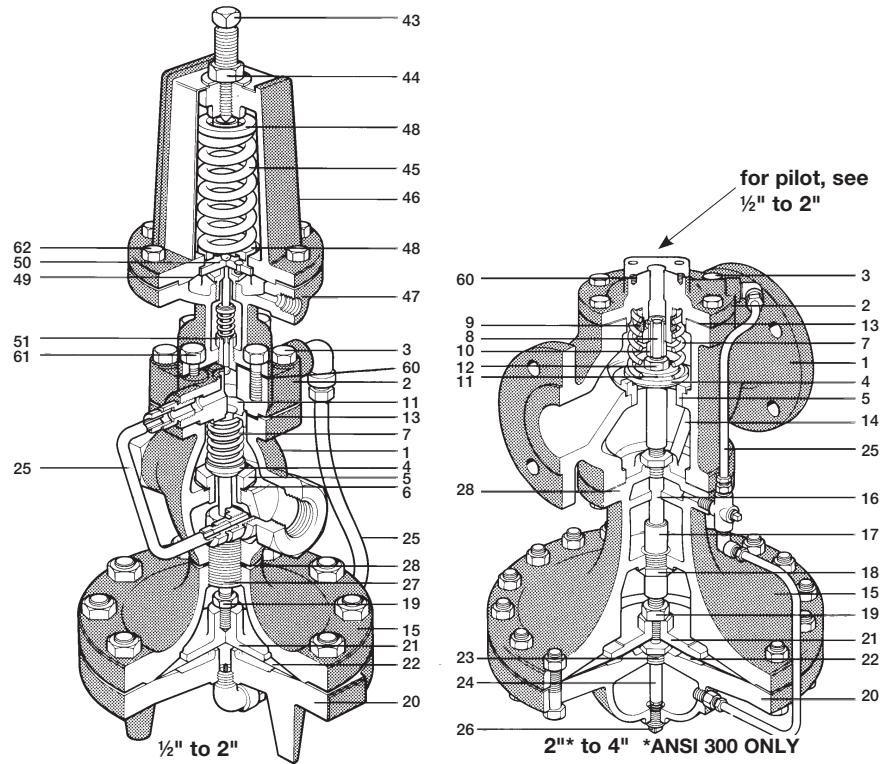
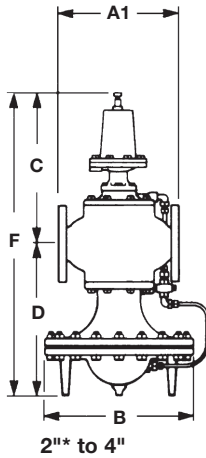
Size	Dimensions (nominal) in inches and millimeters								Weight	
	ANSI 125		ANSI 250		B	C	D	E	Cast Iron	Cast Steel
	A	A1	A1	A1						
1/2", 3/4"	5.5 140	-	-	-	7.6 194	12.2 310	6.2 157	18.4 467	32 lb 14.5 kg	35 lb 15.9 kg
1"	6.0 152	-	-	-	8.6 219	12.1 308	6.75 171	18.9 479	39 lb 17.7 kg	43 lb 19.5 kg
1 1/4", 1 1/2"	7.25 184	-	-	-	8.6 219	12.7 322	7.1 179	19.75 502	44 lb 20 kg	48 lb 21.8 kg
2"	8.5 216	-	9.0 228	-	10.6 270	13.3 338	8.2 208	21.5 546	69 lb 31.3 kg	75 lb 34 kg
2 1/2"	-	10.9 276	11.5 292	-	13.6 346	14.0 356	13.9 354	27.9 710	157 lb 71.2 kg	171 lb 77.6 kg
3"	-	11.75 298	12.5 318	-	13.6 346	13.9 354	14.4 367	28.4 721	188 lb 85.3 kg	205 lb 93 kg
4"	-	13.9 352	14.5 368	-	15.6 397	15.25 387	16.1 410	31.4 797	284 lb 129 kg	309 lb 140 kg

Pilot Operated Pressure Regulator

1/2" to 4" 25P

Sample Specification

The pressure regulator shall be of the pilot-actuated diaphragm operated type. The main valve shall be single-seated with hardened stainless steel trim; the regulator body shall be cast iron (cast steel). The pilot shall be bolted directly to the regulator body. The regulator shall be capable of dead-end shut-off.



Construction Materials

No.	Part	Material	
1	Valve Body	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
2	Cover	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
3	Cover Bolts	Steel	ASTM A449
4	Main Valve Head	Stainless Steel	
5	Main Valve Seat	Stainless Steel	
6	Main Valve Seat Gasket	Copper	
7	Valve Return Spring	Stainless Steel	
8	Valve Stem	Stainless Steel	
9	Strainer Screen	Stainless Steel	
10	Valve Stem Sleeve	Stainless Steel	
11	Spring Guide	Cast Iron 1/2"-2" CRS 2** - 4"	
12	Nut	Steel	
13	Cover Gasket	Graphite	
14	Pressure Equalizer Pipe	Stainless Steel	
15	Upper Diaphragm Case	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
16	Stem Bushing (2 1/2" - 4" Cast Steel only)	Stainless Steel	
17	Diaphragm Plate Stem	Stainless Steel	
18	Diaphragm Stem Guide	Stainless Steel	
19	Nut	Brass 1/2" - 2"	
		Steel 2** - 4"	
20	Lower Diaphragm Case	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
21	Diaphragm Plate	Brass 1/2" - 2" C.I. 2** - 4"	
22	Main Diaphragm (2 ply)	Stainless Steel	
23	Bushing	CRS	
24	Tube & Orifice	Stainless Steel	
25	Tubing Assembly	Copper	
		Brass	
	(optional for cast steel)	Stainless Steel	

No.	Part	Material	
26	Plug (Cast Iron)	Brass	
		Steel	
27	Connector Stud	Stainless Steel	
28	Body Gasket	1/2" - 2" Copper Clad	
		2** - 4" Graphite	
43	Adjustment Screw	Stainless Steel	
44	Jam Nut	Brass	
45	Pilot Valve Spring	Steel	
46	Upper Diaphragm Case	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
47	Lower Diaphragm Case	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
48	Spring Plate	Steel	
49	Diaphragm	Stainless Steel	
50	Diaphragm Plate	Brass	
51	Pilot Head Spring	Stainless Steel	
60	Pilot Gasket	Graphite	
61	Pilot Mounting Screws	Steel	
62	Diaphragm Case Screws	Steel	ASTM A449

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. Complete installation instructions are given in IM-3-000-US.

Maintenance

Complete installation and maintenance instructions are given in IM-3-000-US, a copy of which is supplied with each regulator. Available spare parts are shown on TI-1-1120-US & TI-3-0271-US.

TI-3-015-US 4.12