

# 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.

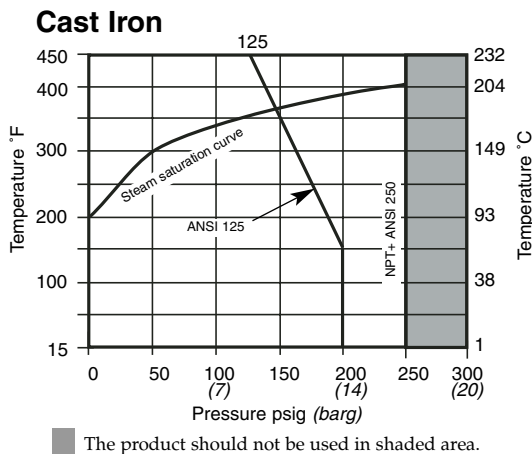
Model ⇄	25P			
<b>Sizes</b>	1/2" to 2"	2-1/2", 3", 4"	1/2" to 2"	2-1/2", 3", 4"
<b>Connections</b>	NPT	ANSI 125 flgd.	NPT	ANSI 300 flgd.
<b>Construction</b>	Cast Iron		Cast Steel	
<b>Options</b>		ANSI 250 flgd.		ANSI 150 flgd.

### 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.

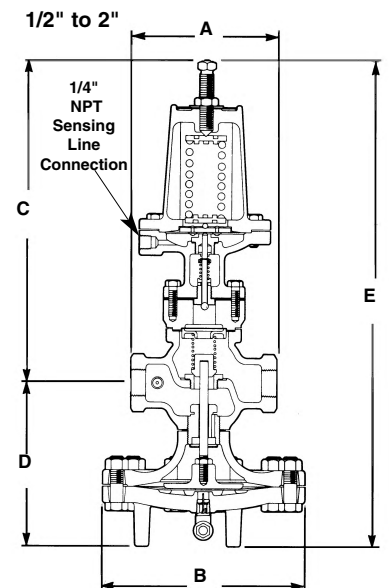
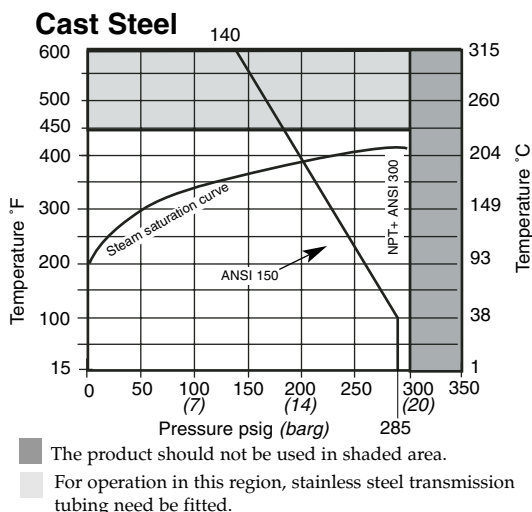
### Capacities

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 290 psi



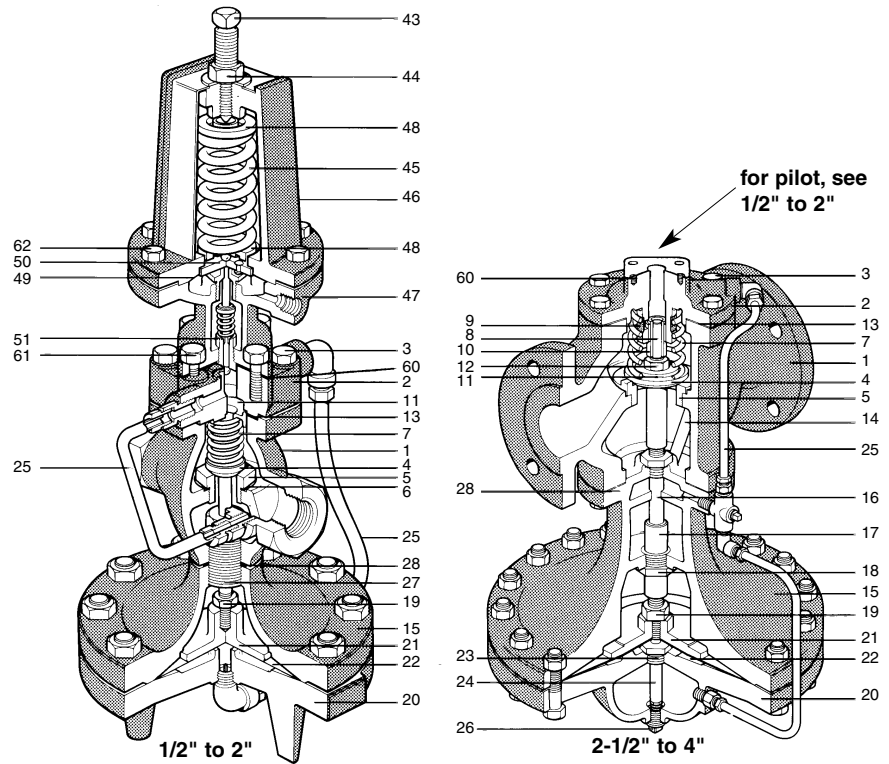
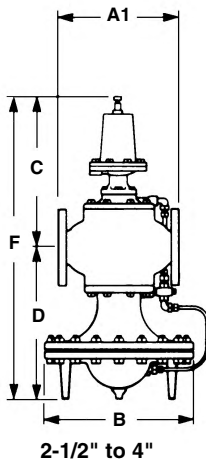
Size	Dimensions (nominal) in inches and millimeters								Weight	
	Ansi 125		Ansi 250		B	C	D	E	Cast Iron	Cast Steel
	A	A1	A1	A1						
1/2", 3/4"	5.5	-	-	7.6	12.2	6.2	18.4	32 lb	35 lb	
	140	-	-	194	310	157	467	14.5 kg	15.9 kg	
1"	6.0	-	-	8.6	12.1	6.75	18.9	39 lb	43 lb	
	152	-	-	219	308	171	479	17.7 kg	19.5 kg	
1-1/4", 1-1/2"	7.25	-	-	8.6	12.7	7.1	19.75	44 lb	48 lb	
	184	-	-	219	322	179	502	20 kg	21.8 kg	
2"	8.5	-	-	10.6	13.3	8.2	21.5	69 lb	75 lb	
	216	-	-	270	338	208	546	31.3 kg	34 kg	
2-1/2"	-	10.9	11.5	13.6	14.0	13.9	27.9	157 lb	171 lb	
	-	276	292	346	356	354	710	71.2 kg	77.6 kg	
3"	-	11.75	12.5	13.6	13.9	14.4	28.4	188 lb	205 lb	
	-	298	318	346	354	367	721	85.3 kg	93 kg	
4"	-	13.9	14.5	15.6	15.25	16.1	31.4	284 lb	309 lb	
	-	352	368	397	387	410	797	129 kg	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 Cast Steel
2	Cover	Cast Iron Cast Steel
3	Cover Bolts	Steel
4	Main Valve Head	Stainless Steel 1-1/2", 25 & 2" 25S all other sizes
5	Main Valve Seat	Stainless Steel 1/2"-2" 2-1/2" - 4"
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 2-1/2" - 4"
12	Nut	Steel
13	Cover Gasket	Graphite
14	Pressure Equalizer Pipe	Stainless Steel
15	Upper Diaphragm Case	Cast Iron Cast Steel
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 2-1/2" - 4"
20	Lower Diaphragm Case	Cast Iron Cast Steel
21	Diaphragm Plate	Brass 1/2" - 2" C.I. 2-1/2" - 4"
22	Main Diaphragm (2 ply)	Stainless Steel
23	Bushing	CRS
24	Tube & Orifice	Stainless Steel
25	Tubing Assembly  (optional for cast steel)	Copper Brass Stainless Steel

No.	Part	Material
26	Plug (Cast Iron) (Cast Steel)	Brass Steel
27	Connector Stud	Stainless Steel
28	Body Gasket	1/2" - 2" Copper Clad 2-1/2" - 4" Graphite
43	Adjustment Screw	Stainless Steel
44	Jam Nut	Brass
45	Pilot Valve Spring	Steel
46	Upper Diaphragm Case	Cast Iron Cast Steel
47	Lower Diaphragm Case	Cast Iron Cast Steel
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 5/16" - 18 x 1"

### 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 IMI 3.000.

### Maintenance

Complete installation and maintenance instructions are given in IMI 3.000, a copy of which is supplied with each regulator. Available spare parts are shown on TIS 3.027 & 3.0271.

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