

# spirax sarco

## Pilot Operated Pressure Regulator w/ Electric Override 1/2" to 4" 25PE

The 25PE has all of the features of the 25P, with the addition of an electric pilot. An electrical signal can override the pressure pilot to provide a remote shut-off capability.

\*Note: For pressures below 15 psig, the E pilot is not recommended for use with valves 2 1/2" and larger.

Model	25PE			
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")
Electric Pilot Specifications	Enclosure: NEMA 4 & 7 (C&D) 115v (230v)/60Hz Inrush: 45 VA Normally closed 200 psig Max. operating pressure			
Electric Pilot Options	For regulators 2 1/2" and larger at pressures below 125 psig, use the following electric pilot: Enclosure: NEMA 4 & 7 (C&D) 115v (230v)/60Hz Inrush: 45 VA Normally closed 140 psig Max. operating pressure (for faster response time) 230 Volt Coil			

### Typical Applications

Steam pressure reducing applications where the PRV must also respond to an electrical program timer, safety or limit switch, or remote manual switch.

### 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 main valve shall be capable of dead-end shut-off. The electric pilot shall have a NEMA 4 & 7 (C & D) enclosure with 115v (230v) 60 Hz coil.

### Limiting Operating Conditions

**Max. Operating Pressure (PMO)**  
 NPT: 200 psig (14 barg) @ 392°F (200°C)  
 ANSI 125: 125 psig (8 barg) @ 392°F (200°C)  
 ANSI 250: 200 psig (14 barg) @ 392°F (200°C)  
 ANSI 150: 185 psig (12 barg) @ 392°F (200°C)  
 ANSI 300: 200 psig (14 barg) @ 392°F (200°C)

**Max. Operating Temperature**  
 392°F (200°C)

### 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

### Pressure Shell Design Conditions

**PMA** Cast Iron: 250 psig/0-450°F 17 barg/0-232°C  
 Max. allowable pressure Cast Steel: 300 psig/0-600°F 21 barg/0-316°C

**TMA** Cast Iron: 450°F/0-250 psig 232°C/0-17 barg  
 Max. allowable temperature Cast Steel: 600°F/0-300 psig 316°C/0-21 barg

### Capacities

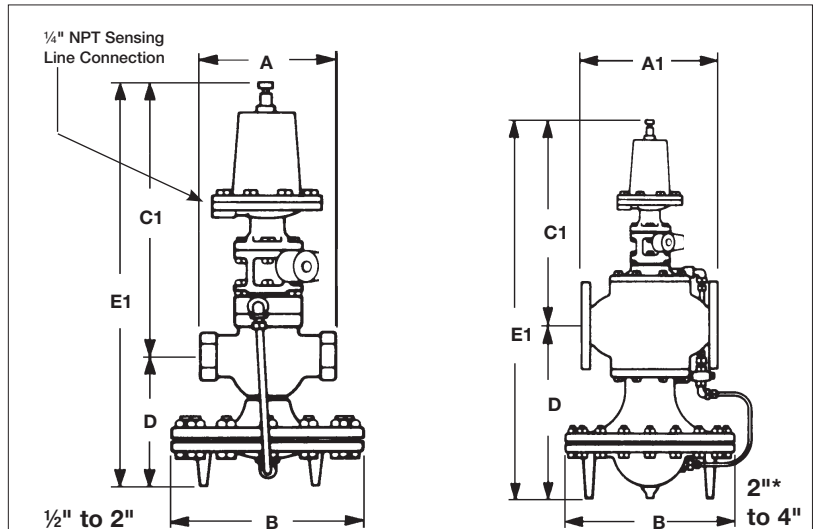
For selection & sizing data, see TI-3-030-US.

### 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-3-0271-US and TI-1-1120-US.



Size	Dimensions (nominal) in inches and millimeters							Weight	
	Ansi 125		Ansi 250		Ansi 300		Cast Iron	Cast Steel	
	A	A1	A1	B	C1	D			E1
1/2", 3/4"	5.5 140	-	-	7.6 194	14.1 367	6.2 157	20.6 524	36 lb 16.3 kg	39 lb 17.7 kg
1"	6.0 152	-	-	8.6 219	14.4 365	6.75 171	21.1 537	43 lb 19.5 kg	47 lb 21.3 kg
1 1/4", 1 1/2"	7.25 184	-	-	8.6 219	14.9 379	7.1 179	22.0 559	48 lb 21.8	52 lb 23.6 kg
2"	8.5 216	-	9.0 228	10.6 270	15.6 395	8.2 208	23.75 603	73 lb 33.1 kg	80 lb 36.3 kg
2 1/2"	- -	10.9 276	11.5 292	13.6 346	16.25 413	13.9 354	30.2 767	160 lb 72.6 kg	175 lb 79.4 kg
3"	- -	11.75 298	12.5 318	13.6 346	16.2 411	14.4 367	30.6 778	191 lb 86.6 kg	208 lb 94.4 kg
4"	- -	13.9 352	14.5 368	15.6 397	17.5 445	16.1 410	33.6 854	287 lb 130 kg	313 lb 142 kg

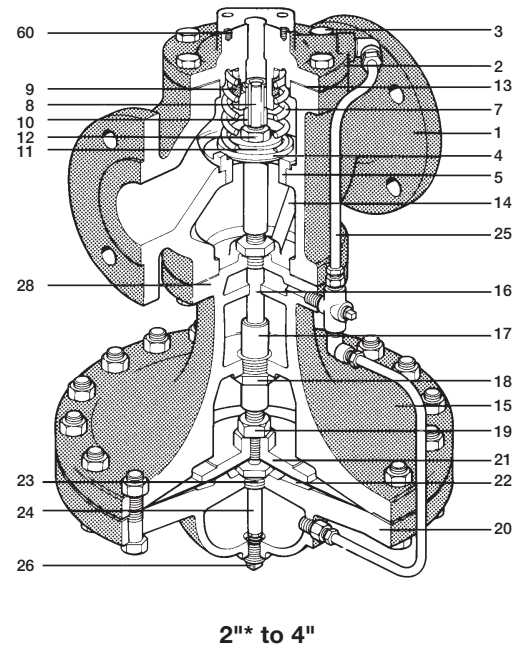
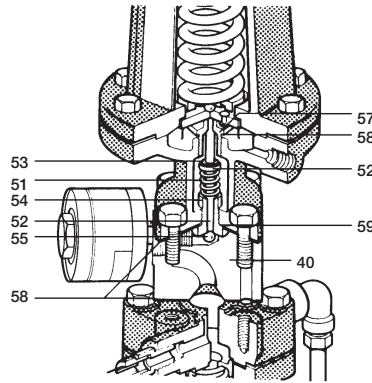
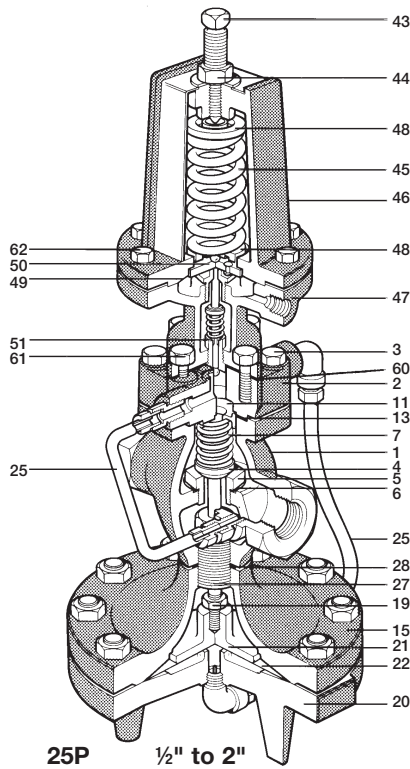
Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

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

TI-3-0151-US 4.12

# Pilot Operated Pressure Regulator w/ Electric Override

## 1/2" to 4" 25PE



### Construction Materials

\*ANSI 300 ONLY

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	AISI 304
18	Diaphragm Stem Guide	Stainless Steel	AISI 303
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	

No.	Part	Material	
24	Tube & Orifice	Stainless Steel	
25	Tubing Assembly	Copper	
		Brass	
26	Plug (Cast Iron)	Brass	
	(Cast Steel)	Steel	
27	Connector Stud	Stainless Steel	
28	Body Gasket	1/2" - 2" Copper Clad	
		2" - 4" Graphite	
40	Electric Pilot Adapter	Cast Iron	ASTM A 126 CL B
		Bronze	ASTM B62
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	ASTM A569
49	Diaphragm	Stainless Steel	
50	Diaphragm Plate	Brass	
51	Pilot Head Spring	Stainless Steel	
52	Spring Retainer Cup	Stainless Steel	
53	Retaining Ring	Brass	
54	Pilot Seat	Stainless Steel	
55	Pilot Head	Stainless Steel	
56	Head Stem	Stainless Steel	
57	Stem Guide	Stainless Steel	
58	Stem Guide Gasket	Stainless Steel	
59	Seat Gasket	Stainless Steel	
60	Pilot Gasket	Graphite	
61	Pilot Mounting Screws	Steel	ASTM A449
62	Diaphragm Case Screws	Steel	

TI-3-0151-US 4.12