



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

### Description

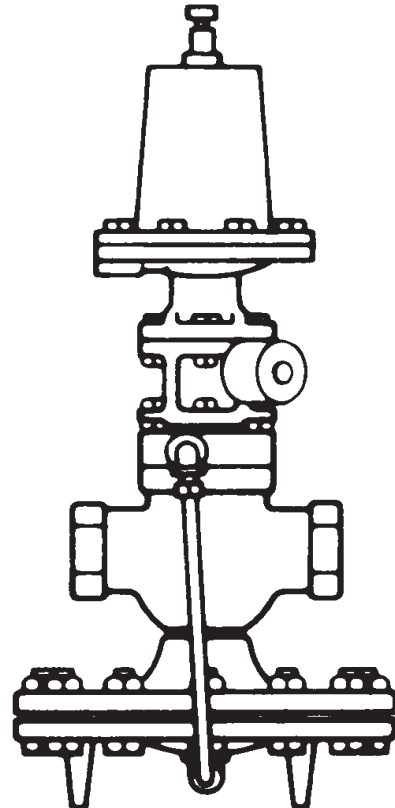
The 25PE has all of the features of the 25P, with the addition of an electric pilot. An electrical signal can override the pressure pilot to provide a remote shut-off capability.

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

<b>Sizes</b>	1/2" to 2"	2 1/2", 3", 4"	1/2" to 2"	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. (excludes 2")
<b>Electric Pilot Specifications</b>	Enclosure: NEMA 4 & 7 (C&D) 115v (230v)/60Hz Inrush: 45 VA Normally closed 200 psi g Max. operating pressure			
<b>Electric Pilot Options</b>	For regulators 2 1/2" and larger at pressures below 125 psi g, use the following electric pilot: Enclosure: NEMA 4 & 7 (C&D) 115v (230v)/60Hz Inrush: 45 VA Normally closed 140 psi g Max. operating pressure (for faster response time) 230 Volt Coil			

### Limiting Operating Conditions

Maximum operating pressure (PMO)	NPT:	200 psi g (14 bar g) @ 392 °F (200 °C)
	ANSI 125:	125 psi g (8 bar g) @ 392 °F (200 °C)
	ANSI 250:	200 psi g (14 bar g) @ 392 °F (200 °C)
	ANSI 150:	185 psi g (12 bar g) @ 392 °F (200 °C)
	ANSI 300:	200 psi g (14 bar g) @ 392 °F (200 °C)
Maximum operating temperature	392 °F (200 °C)	

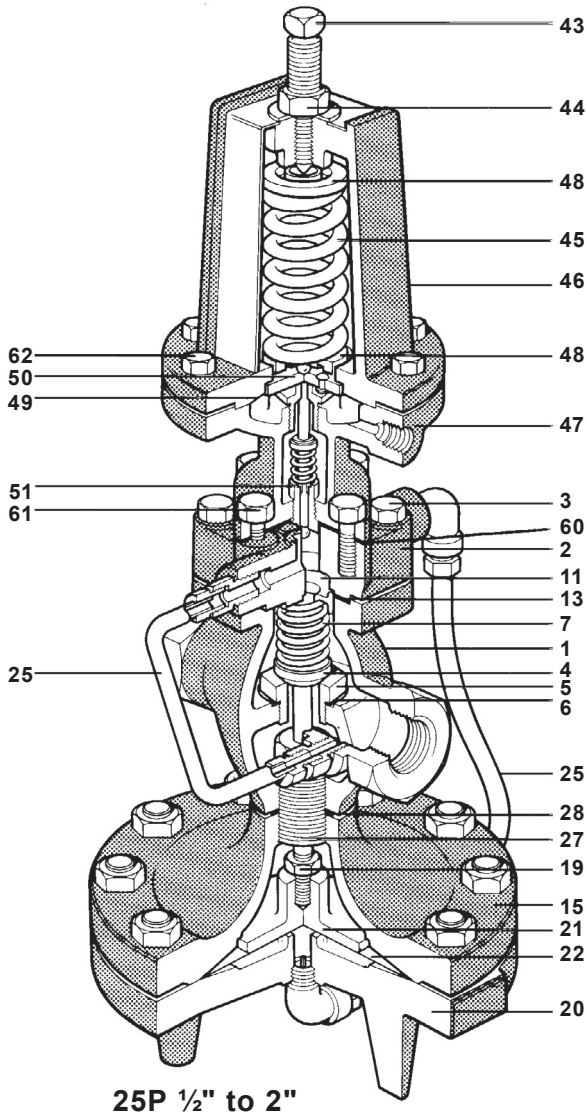


## Materials

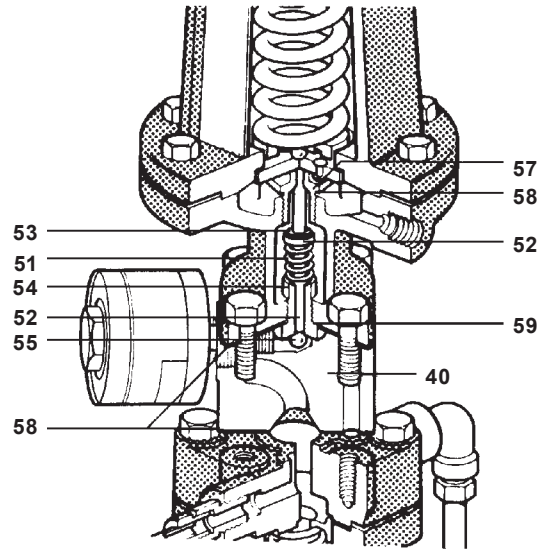
No. Part	Material
1 Valve Body	Cast Iron ASTM A 126 CL B
	Cast Steel ASTM A216 Gr WCB
2 Cover	Cast Iron ASTM A 126 CL B
	Cast Steel ASTM A216 Gr WCB
3 Cover Bolts	Steel ASTM A449
4 Main Valve Head	Stainless Steel
5 Main Valve Seat	Stainless Steel
6 Main Valve Seat Gasket	Copper
7 Valve Return Spring	Stainless Steel
8 Valve Stem	Stainless Steel
9 Strainer Screen	Stainless Steel
10 Valve Stem Sleeve	Stainless Steel
11 Spring Guide	Cast Iron ½"-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 (2½" - 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 ½" - 2"
	Steel 2"* - 4"
20 Lower Diaphragm Case	Cast Iron ASTM A 126 CL B
	Cast Steel ASTM A216 Gr WCB
21 Diaphragm Plate	Stainless steel ½" - 2"
	C.I. 2"* - 4"
22 Main Diaphragm (2 ply)	Stainless Steel
23 Bushing	CRS

\*ANSI 300 ONLY

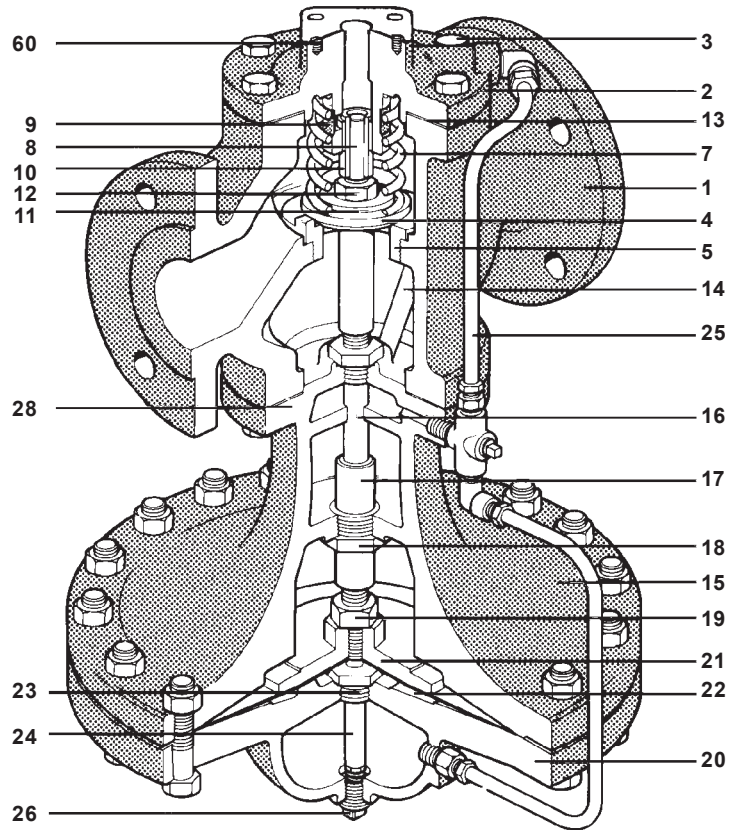
No. Part	Material
24 Tube & Orifice	Stainless Steel
25 Tubing Assembly	Copper
	Brass
26 Plug (Cast Iron)	Brass
	Plug (Cast Steel)
27 Connector Stud	Stainless Steel
28 Body Gasket	½" - 2" Copper Clad
	2"* - 4" Graphite
40 Electric Pilot Adapter	Cast Iron ASTM A 126 CL B
	Bronze ASTM B62
43 Adjustment 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	Stainless steel
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



25P 1/2" to 2"



PE Pilot  
1/2" to 4"



2" to 4"

## 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

## 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.

## Pressure Shell Design Conditions

PMA Maximum allowable pressure	Cast Iron:	250 psi g/0-450 °F	17 bar g/0-232 °C
	Cast Steel:	300 psi g/0-600 °F	21 bar g/0-316 °C
TMA Maximum allowable temperature	Cast Iron:	450 °F/0-250 psi g	232 °C/0-17 bar g
	Cast Steel:	600 °F/0-300 psi g	316 °C/0-21 bar g

## 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.

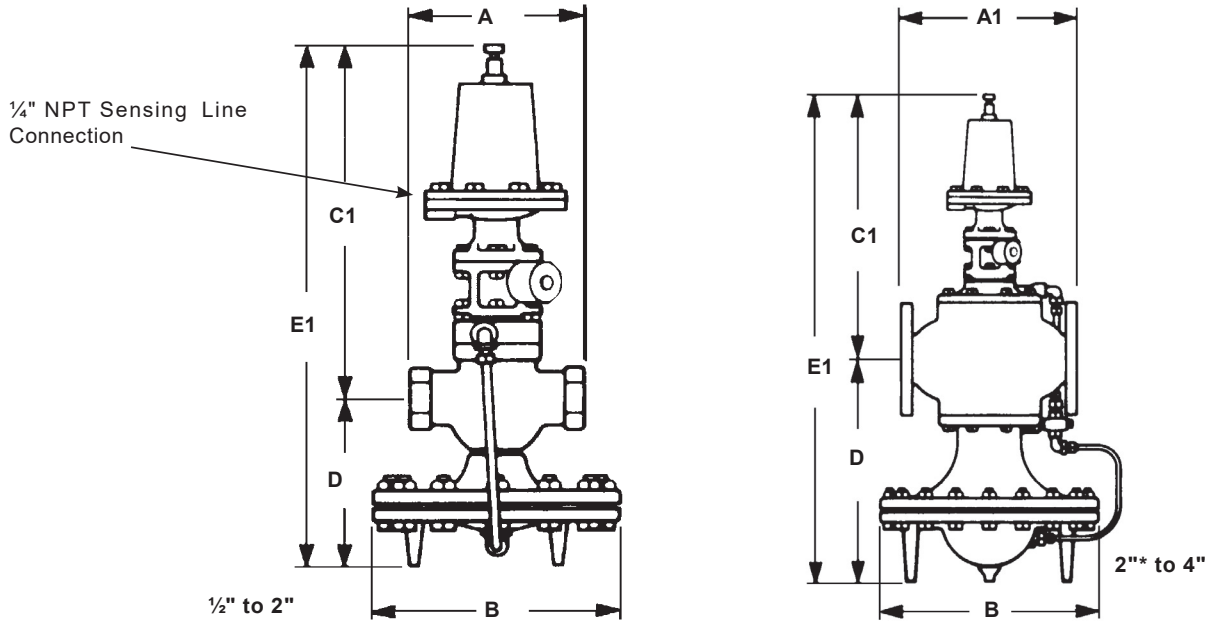
## Maintenance

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.

## 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.

**Dimensions/weights (nominal) in inches (mm) and lbs (kg)**



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