

# Pilot Operated Pressure Regulator ½" to 4" 25P

The 25P is a self-actuated pilotoperated 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.

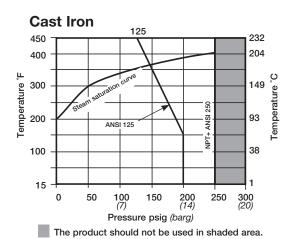
Model		2	5P		
Sizes	½" to 2"	2½", 3", 4"	½" to 2"	2", 2½", 3", 4"	
Connections	NPT	ANSI 125 flgd.	NPT	ANSI 300 flgd.	
Construction	Cas	st Iron	Cast Steel		
Options		ANSI 250 flgd.		ANSI 150 flgd. (excludes 2")	

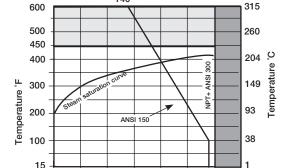
### **Typical Applications**

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.





Cast Steel

Pressure psig (barg) 285

The product should not be used in shaded area.

100 150

For operation in this region, stainless steel transmission tubing need be fitted.

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

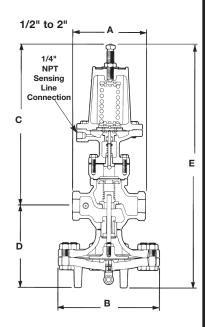
200

300 350 (20)

### 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

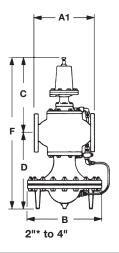


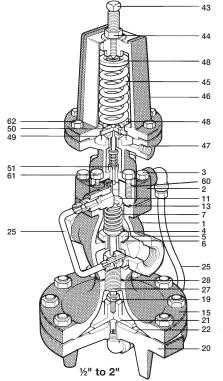
	Dimensions (nominal) in inches and millimeters							
							Weight	
Α	A1	A1	В	С	D	E	Cast Iron	Cast Steel
<b>5.5</b> 140	-	<u>-</u>	<b>7.6</b> 194	<b>12.2</b> 310	<b>6.2</b> 157	<b>18.4</b> 467	<b>32 lb</b> 14.5 kg	<b>35 lb</b> 15.9 kg
<b>6.0</b> 152	Ξ	Ξ	<b>8.6</b> 219	<b>12.1</b> 308	<b>6.75</b> 171	<b>18.9</b> <i>47</i> 9	<b>39 lb</b> 17.7 kg	<b>43 lb</b> 19.5 kg
<b>7.25</b> 184	=	=	<b>8.6</b> 219	<b>12.7</b> 322	<b>7.1</b> 179	<b>19.75</b> 502	<b>44 lb</b> 20 kg	<b>48 lb</b> 21.8 kg
<b>8.5</b> 216	=	<b>9.0</b> 228	<b>10.6</b> 270	<b>13.3</b> 338	<b>8.2</b> 208	<b>21.5</b> 546	<b>69 lb</b> 31.3 kg	<b>75 lb</b> 34 kg
-	<b>10.9</b> 276	<b>11.5</b> 292	<b>13.6</b> 346	<b>14.0</b> 356	<b>13.9</b> 354	<b>27.9</b> 710	<b>157 lb</b> 71.2 kg	<b>171 lb</b> 77.6 kg
-	<b>11.75</b> 298	<b>12.5</b> 318	<b>13.6</b> 346	<b>13.9</b> 354	<b>14.4</b> 367	<b>28.4</b> 721	<b>188 lb</b> 85.3 kg	<b>205 lb</b> 93 kg
=	<b>13.9</b> 352	<b>14.5</b> 368	<b>15.6</b> 397	<b>15.25</b> 387	<b>16.1</b> 410	<b>31.4</b> 797	<b>284 lb</b> 129 kg	<b>309 lb</b> 140 kg
	5.5 140 6.0 152 7.25 184 8.5 216 - -	ANSI 125 ANSI 150 A A1 5.5 - 140 - 152 - 7.25 - 184 - 8.5 - 216 - 10.9 - 276 - 11.75 - 298 -	ANSI 125 ANSI 250 ANSI 150 ANSI 300  A A1 A1  5.5 140 152 184 18.5 - 9.0 216 - 228  - 10.9 11.5 - 276 292  - 11.75 12.5 - 298 318  - 13.9 14.5	ANSI 125 ANSI 250 ANSI 150 ANSI 300  A A1 A1 B  5.5 7.6 140 194  6.0 8.6 152 219  7.25 8.6 184 219  8.5 - 9.0 10.6 216 - 228 270  - 10.9 11.5 13.6 - 276 292 346  - 11.75 12.5 13.6 - 298 318 346  - 13.9 14.5 15.6	ANSI 125 ANSI 250 ANSI 150 ANSI 300  A A1 A1 B C  5.5 7.6 12.2 140 194 310  6.0 - 8.6 12.1 152 219 308  7.25 8.6 12.7 184 219 322  8.5 - 9.0 10.6 13.3 216 - 228 270 338  - 10.9 11.5 13.6 14.0 - 276 292 346 356  - 11.75 12.5 13.6 13.9 - 298 318 346 354  - 13.9 14.5 15.6 15.25	ANSI 125 ANSI 250 ANSI 150 ANSI 300  A A1 A1 B C D  5.5 7.6 12.2 6.2 140 194 310 157  6.0 8.6 12.1 6.75 152 219 308 171  7.25 8.6 12.7 7.1 184 219 322 179  8.5 - 9.0 10.6 13.3 8.2 216 - 228 270 338 208  - 10.9 11.5 13.6 14.0 13.9 - 276 292 346 356 354 - 11.75 12.5 13.6 13.9 14.4 - 298 318 346 354 367  - 13.9 14.5 15.6 15.25 16.1	ANSI 125 ANSI 250 ANSI 150 ANSI 300  A A1 A1 B C D E  5.5 7.6 12.2 6.2 18.4 140 194 310 157 467  6.0 8.6 12.1 6.75 18.9 152 219 308 171 479  7.25 8.6 12.7 7.1 19.75 184 219 322 179 502  8.5 - 9.0 10.6 13.3 8.2 21.5 216 - 228 270 338 208 546  - 10.9 11.5 13.6 14.0 13.9 27.9 11.75 12.5 13.6 13.9 14.4 28.4 298 318 346 354 367 721  - 13.9 14.5 15.6 15.25 16.1 31.4	ANSI 125 ANSI 250 ANSI 300  A A1 A1 B C D E Cast Iron  5.5 7.6 12.2 6.2 18.4 32 lb 140 194 310 157 467 14.5 kg  6.0 8.6 12.1 6.75 18.9 39 lb 152 219 308 171 479 17.7 kg  7.25 8.6 12.7 7.1 19.75 44 lb 184 219 322 179 502 20 kg  8.5 - 9.0 10.6 13.3 8.2 21.5 69 lb 216 - 228 270 338 208 546 31.3 kg  - 10.9 11.5 13.6 14.0 13.9 27.9 15.2 kg  - 11.75 12.5 13.6 13.9 14.4 28.4 188 lb - 298 318 346 354 367 721 85.3 kg  - 13.9 14.5 15.6 15.25 16.1 31.4 284 lb

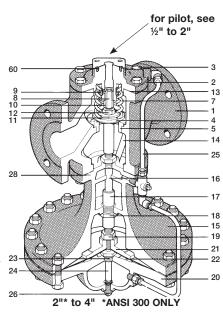
## Pilot Operated Pressure Regulator ½" to 4" 25P

### 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.







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 (2½" - 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 ½" - 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	

No.	Part	Material	
26	Plug (Cast Iron)	Brass	
	(Cast Steel)	Steel	
27	Connector Stud	Stainless Steel	
28	Body Gasket	½" - 2" Copper Clad	
		2"* - 4" Graphite	
43	Adjustment Screw	Stainless Steel	
44	Jam Nut	Brass	·
45	Pilot Valve Spring	Steel	
46 Up	Upper Diaphragm Case	Cast Iron	ASTM A 126 CL B
		Cast Steel	ASTM A216 Gr WCB
47 Lower I	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