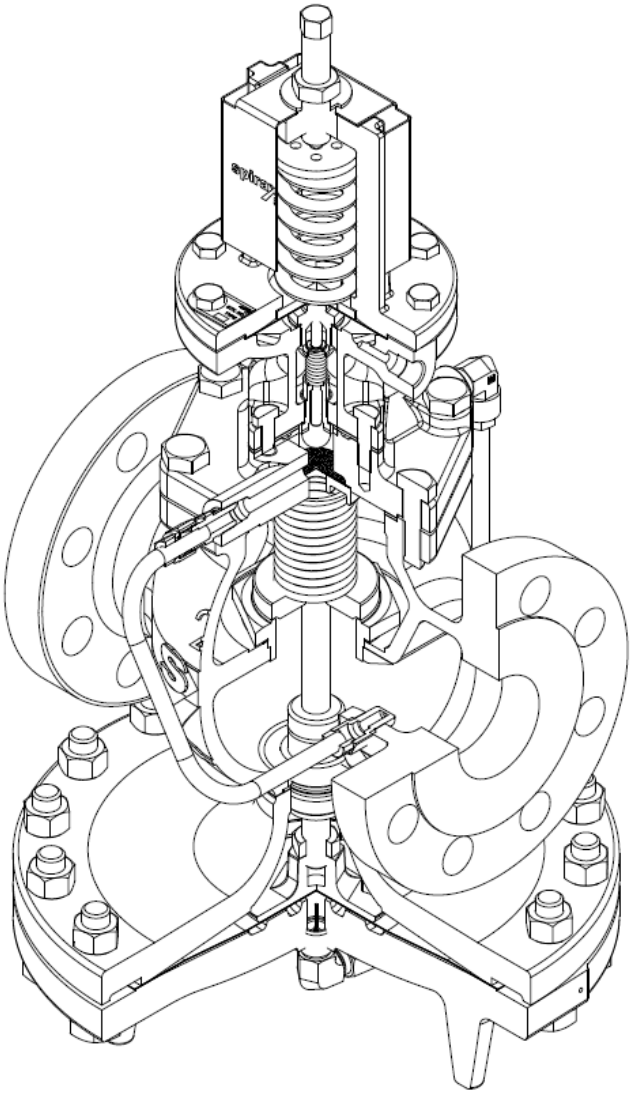
Pilot Operated Pressure Reducing Valves with Cast Iron Bodies 1" to 4" 26P, 26PA, 26PE and 26BP

Description

The 26P, 26PA, 26PE and 26BP self-actuated pilot-operated pressure regulator have been manufactured using cast iron.



Available types

26P	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.
26PA	The Pressure Pilot is loaded by an external compressed air supply rather than by a spring. The downstream pressure can be set remotely by adjusting the loading air pressure.
26PE	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 2½" and larger.
26BP	Maintains a constant upstream pressure in a piping system. The reverse-acting pressure pilot opens the main valve when the sensed upstream pressure increases. The 26BP is NOT a safety valve and should NEVER be used as such.

Sizes and pipe connections

1", 1¼", 1½"	ANSI 125, only
2", 2½", 3" and 4"	ANSI 125 and ANSI 250

Typical applications

The 26P/PA 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.

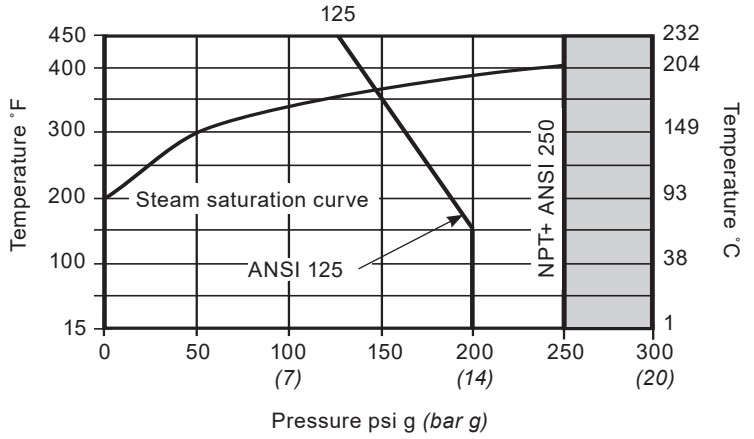
The 26PE is a steam pressure reducing applications where the PRV must also respond to an electrical program timer, safety or limit switch, or remote manual switch.

The 26BP modulates the release of surplus steam ensures that the set maximum pressure in the steam space or upstream piping will not be exceeded. Flash steam recovery systems to release excess flash steam limits the flash tank pressure. For elimination of non-critical loads, see TI-P717-07-US.

Capacities

For selection and sizing data, see TI-P717-08-US.

Pressure/temperature limits



The product should not be used in shaded area.

Downstream pressure ranges

26P, 26PE and 26BP	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
26PA			For proper selection, see TI-P717-08-US 3 to 100 psi g	

Cv values

The Cv maximum values shown below are full capacities and should be used for safety valve sizing purposes only.

½"	¾"	1"	1¼"	1½"	2"	2½"	3"	4"
3.48	6.5	10.5	14	20	35	56	74	115

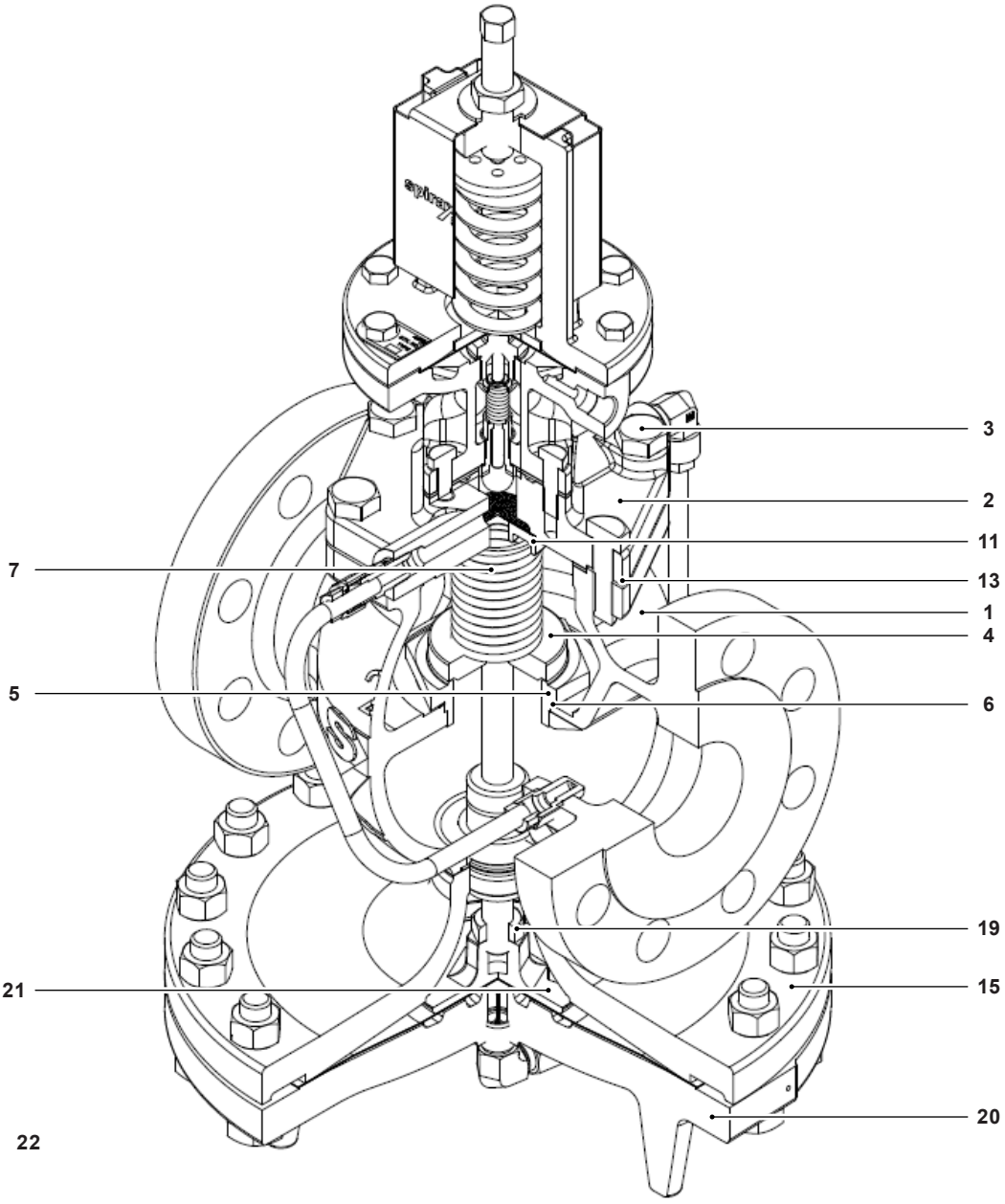
Note: Where the internal balance pipe is used the valve capacity will be reduced.

Limiting operating conditions

PMO	Maximum operating pressure	26P, 26PA and 26BP	ANSI 125: 125 psi g *(8 bar g)* @ 450 °F *(232 °C)*
			ANSI 250: 250 psi g *(17 bar g)* @ 450 °F *(232 °C)*
		26PE	ANSI 125: 125 psi g *(8 bar g)* @ 392 °F *(200 °C)*
			ANSI 250: 200 psi g *(14 bar g)* @ 392 °F *(200 °C)*
TMO	Maximum operating temperature	26P, 26PA and 26BP	450 °F *(232 °C)*
		26PE	392 °F *(200 °C)*
Pressure shell design conditions			
PMA	Maximum allowable pressure		250 psi g *(17 bar g)* @ 0-450 °F *(0-232 °C)*
TMA	Maximum allowable temperature		450 °F *(0-232 °C)* @ 0-250 psi g *(17 bar g)*

Materials

Parts 1 to 22



2" to 4"

No.	Part	Material	
1	Valve body	Cast iron	ASTM A 126 CL B
2	Cover	Cast iron	ASTM A 126 CL B
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	
11	Spring guide	Cast iron ½"-2" CRS 2"* - 4"	

No.	Part	Material	
13	Cover gasket	Graphite	
15	Upper diaphragm case	Cast iron	ASTM A 126 CL B
19	Nut	Brass ½" - 2" Steel 2"* - 4"	
20	Lower diaphragm case	Cast iron	ASTM A 126 CL B
21	Diaphragm plate	Stainless steel ½" - 2" C.I. 2"* - 4"	
22	Main diaphragm (2 ply)	Stainless steel	

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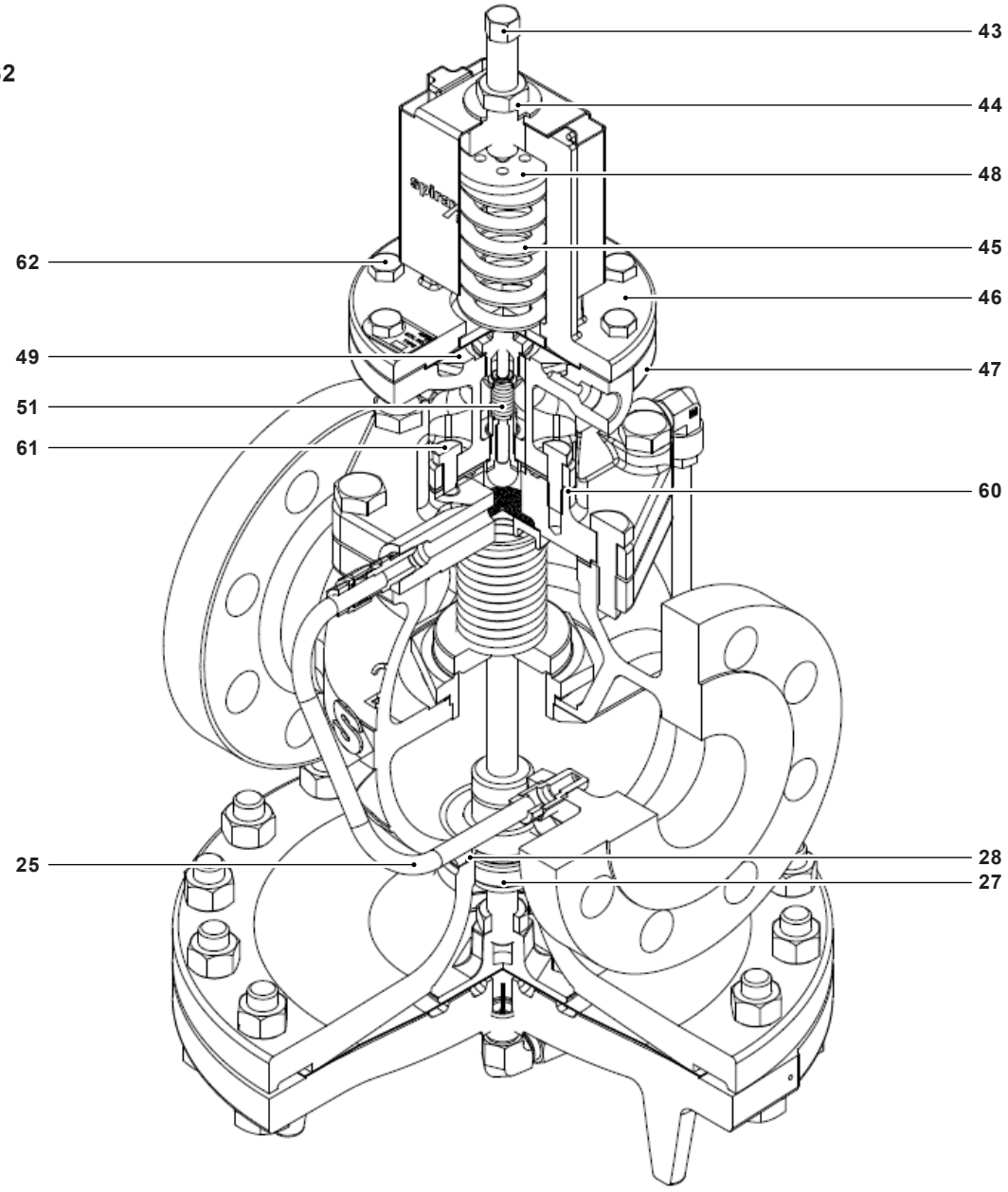
Materials

Parts 25 to 62



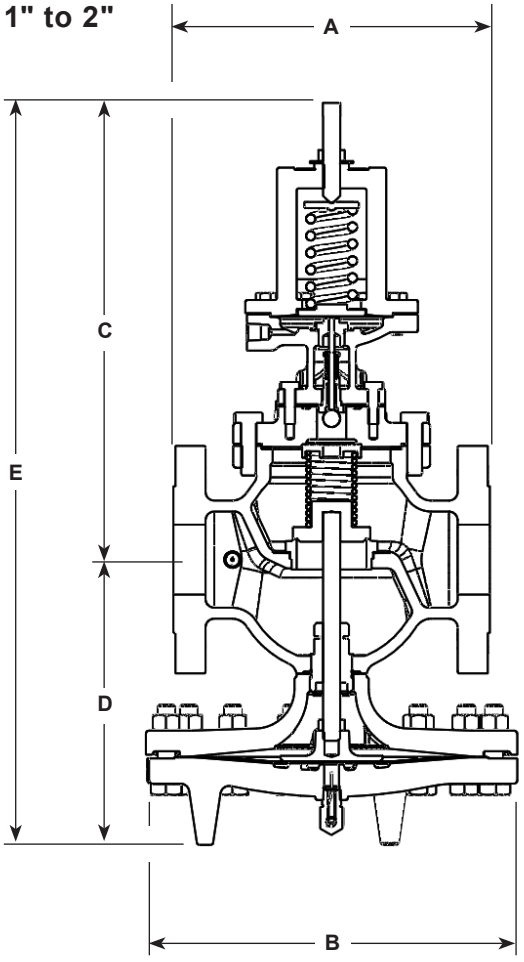
2" to 4"

No.	Part	Material
25	Tubing assembly	Copper Brass
	(optional for cast steel)	Stainless 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

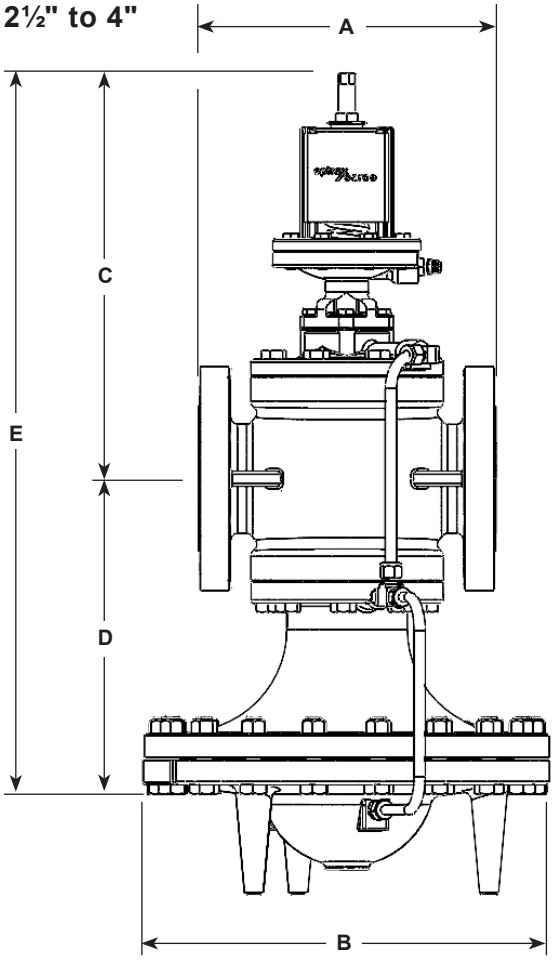
No.	Part	Material	
46	Upper diaphragm case	Cast iron	ASTM A 126 CL B
47	Lower diaphragm case	Cast iron	ASTM A 126 CL B
48	Spring plate	Steel	
49	Diaphragm (2 ply)	Stainless steel	
51	Pilot head spring	Stainless steel	
60	Pilot gasket	Graphite	
61	Pilot mounting screws	Steel	
62	Diaphragm case screws	Steel	ASTM A449

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

1" to 2"

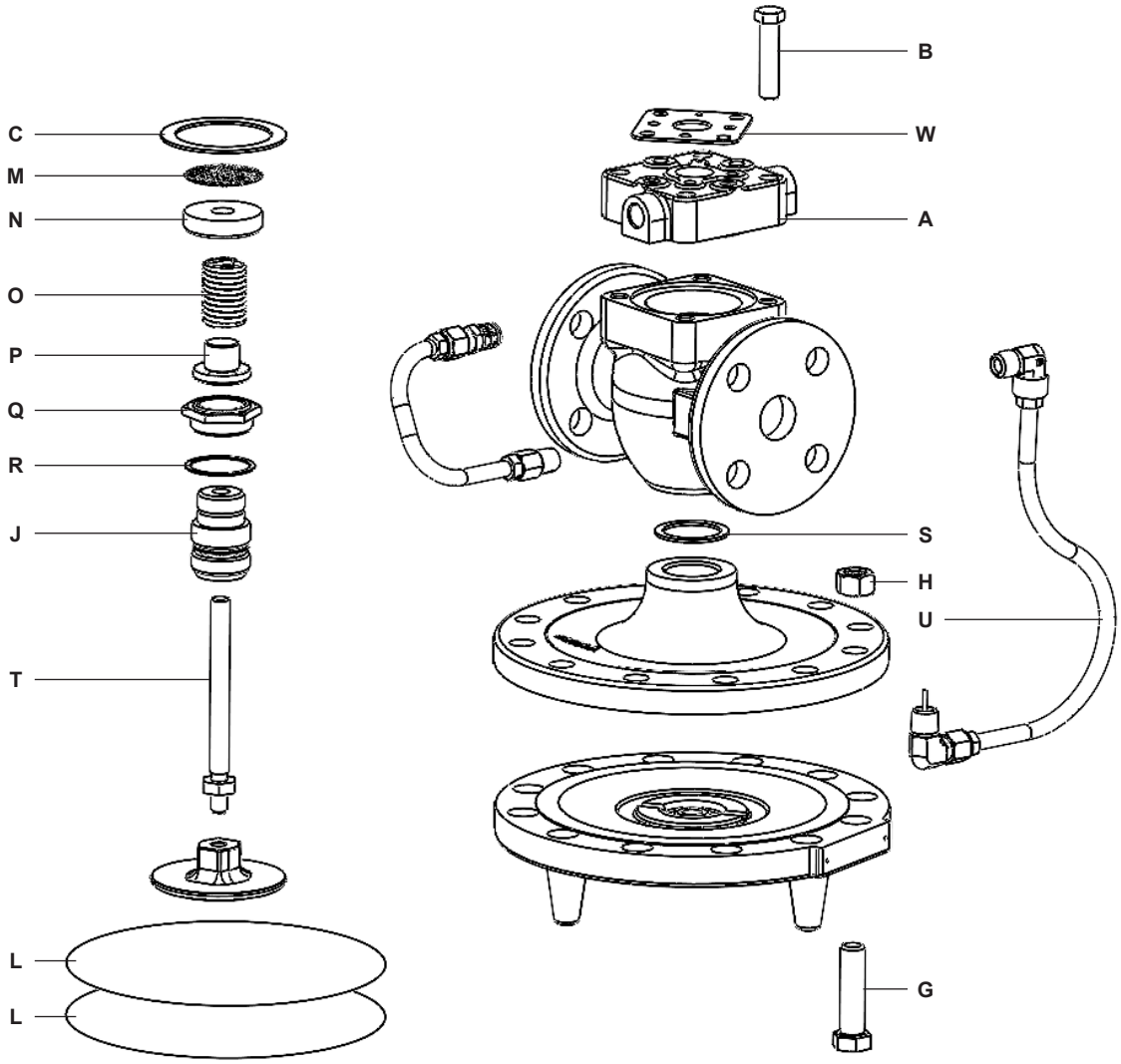


2½" to 4"



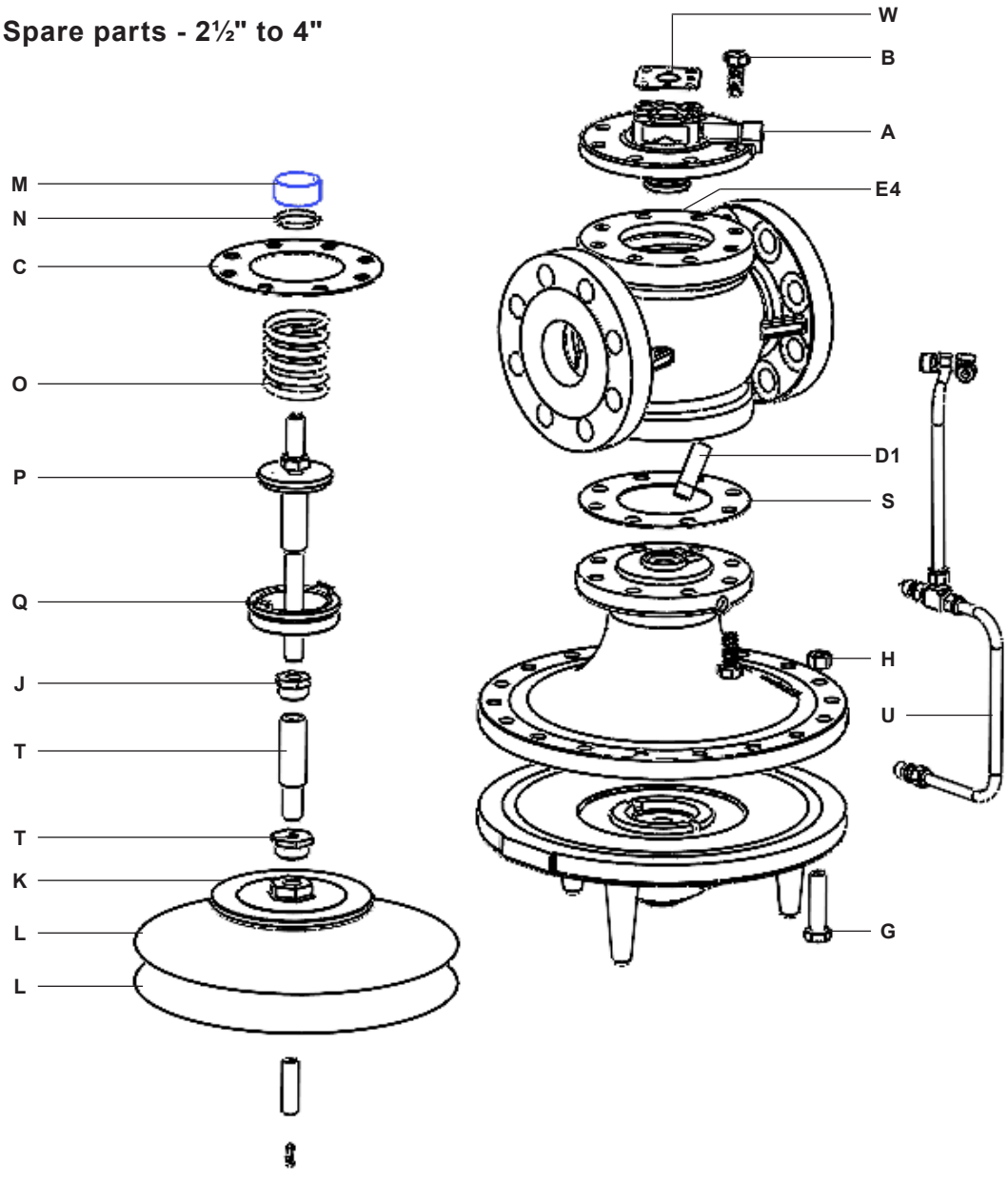
Size	ANSI 125 A	ANSI 250 A	B	C	D	E	Weight
1"	5.50		8.63	11.89	6.69	18.58	39
	139.70		*219.20*	*302.01*	*169.93*	*471.93*	*17.7*
1¼"	6.75		8.63	12.39	7.06	19.46	44
	171.45		*219.20*	*314.71*	*179.32*	*494.28*	*20*
1½"	6.87		8.63	12.39	7.06	19.46	44
	174.49		*219.20*	*314.71*	*179.32*	*494.28*	*20*
2"	8.50	9.00	10.63	13.08	8.13	21.21	69
	215.90	*228.60*	*270.00*	*332.23*	*206.50*	*538.73*	*31.3*
2½"	9.44	10.04	13.63	13.64	13.94	27.58	157
	239.78	*255.02*	*346.20*	*346.46*	*354.08*	*700.53*	*71.2*
3"	10.04	10.78	13.63	14.73	15.62	30.35	188
	255.01	*273.81*	*346.20*	*374.14*	*396.75*	*770.89*	*85.3*
4"	11.94	12.50	15.63	14.80	16.09	30.89	284
	303.28	*317.50*	*396.88*	*375.92*	*408.69*	*784.61*	*129*

Spare parts - 1" to 2"



Cover Assembly with Cap Screws and Gasket	**A,B, C**
Diaphragm Case Bolts and Nuts	**G,H**
Screen, Spring Support Disc, Valve Spring and Cap Gasket	**M, N, O, C**
Cap Gasket, Valve Head, Seat and Seat Gasket (2)	**C, P, Q, R**
Valve Stem Guide and Gasket	**J, S, T**
Diaphragm Plate	**K**
Diaphragms (2 ply)	**L**
Transmission Tubing with Assembly	**U, V**
Gasket Kit	**C, R, S, W**
Rebuild Kit	**B, C, L, M, O, P, Q, R, U, V, W**

Spare parts - 2½" to 4"



Cover Assembly with Cap Screws and Gasket	**A,B, C**
Diaphragm Case Bolts and Nuts	**G,H**
Screen, Spring Support Disc, Valve Spring and Cap Gasket	**M, N, O, C**
Cap Gasket, Valve Head, Seat and Seat Gasket (2)	**C, P, Q, X**
Diaphragms (2 ply)	**L**
Transmission Tubing with Assembly	**U**
Gasket Kit	**S, W, C**
Damping Assembly	**A1, B1, C1**
Diaphragm Plate	**K**
Lower Stem and Guide	**J, T**
Relief Tube	**D1**
Rebuild Kit	**B, C, L, M, O, P, Q, R, U, W**

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.

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-P717-06-US.

Maintenance
Complete installation and maintenance instructions are given in IM-P717-06-US, a copy of which is supplied with each regulator.

Spare parts
Available spare parts are shown on TI-P717-09-US and TI-P235-02-US.