

spirax sarco

Pilot Operated Temperature Regulator w/ Electric Override 1/2" to 4" 25TE

The 25TE has all of the features of the 25T, with the addition of an electric pilot. An electrical signal can override the temperature 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	25TE			
Sizes	1/2" to 2"	2-1/2", 3", 4"	1/2" to 2"	2", 2-1/2", 3", 4"
Connections	NPT	ANSI 125	NPT	ANSI 300
Construction	Cast Iron		Cast Steel	
Options	ANSI 250		ANSI 150 (excludes 2")	
	Non-Standard Capillary tubing length in 5 ft. increments to a maximum of 50 ft. (see TIS 1.1123)			
Electric Pilot Specifications	Enclosure: NEMA 4 & 7 (C&D) 115v/60Hz; Holding: 23 VA Inrush: 45VA; Normally closed 200 psig Max. operating pressure			
Electric Pilot Options	140 psig Max. operating pressure (for faster response time) 230 volt coil			

Capacities

The valve is sized according to the temperature control requirements.

For selection & sizing data, see TIS 1.1114

Sample Specification

The pressure reducing valves shall be of the pilot-actuated diaphragm operated type with electric override. The main valve shall be single-seated with hardened stainless steel trim; the valve body shall be cast iron (cast steel). The pilots shall be bolted directly to the valve body and shall be removable without disturbing the control connections. The temperature setting shall be adjustable without the use of tools, and the set point shall be indicated on a calibrated dial. The thermostatic system shall be solid-fill, and shall incorporate over heat protection. 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)
*The temperature of the sensing bulb must not exceed 350°F (177°C)

Standard Temperature Ranges

30°F to 90°F	0°C to 32°C		
60°F to 120°F	15°C to 50°C	100°F to 160°F	40°C to 70°C
120°F to 180°F	50°C to 80°C	160°F to 220°F	70°C to 105°C
200°F to 260°F	95°C to 125°C	260°F to 320°F	125°C to 160°C

Pressure Shell Design Conditions

PMA Cast Iron: 250 psig/0-450°F 17 barg/0-232°C
Max. allowable pressure Cast Steel: 300 psig/0-450°F 20 barg/0-232°C

TMA Cast Iron: 450°F/0-250 psig 232°C/0-17 barg
Max. allowable temperature Cast Steel: 450°F/0-300 psig 232°C/0-20 barg

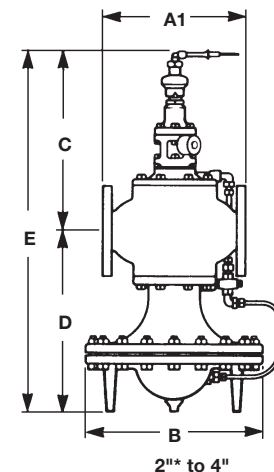
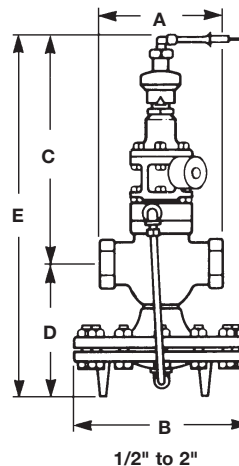
Typical Applications

Temperature control applications where the valve must also respond to an electrical program timer, safety or limit switch, or remote manual switch.

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 valve. The trap and regulator should both be protected with a strainer. The thermostatic bulb must be carefully located in the medium being heated. Complete installation instructions are given in IMI 650-D76.

Maintenance Complete installation and maintenance instructions are given in IMI 650-D76, a copy of which is supplied with each valve. Available spare parts are shown on TI-1-1120-US and TI-3-0271-US.



Dimensions (nominal) in inches and millimeters

Size	Ansi 125 Ansi 150		Ansi 250 Ansi 300		Weight				
	A	A1	A1	B	C	D	E	Cast Iron	Cast Steel
1/2", 3/4"	5.5	-	-	7.6	12.1	6.2	18.25	30.5 lb	33 lb
	140	-	-	194	306	157	464	13.8 kg	15 kg
1"	6.0	-	-	8.6	12.0	6.75	18.75	37.5 lb	41 lb
	152	-	-	219	305	171	476	17 kg	15 kg
1-1/4", 1-1/2"	7.25	-	-	8.6	12.6	7.1	19.6	43 lb	47 lb
	184	-	-	219	319	179	498	19.5 kg	21.3 kg
2"	8.5	-	9.0	10.6	13.2	8.2	21.4	67.5 lb	74 lb
	216	-	228	270	335	208	543	30.6 kg	33.6 kg
2-1/2"	-	10.9	11.5	13.6	13.9	13.9	27.9	156 lb	170 lb
	-	276	292	346	354	354	708	70.8 kg	77.1 kg
3"	-	11.75	12.5	13.6	13.9	14.4	28.4	187 lb	204 lb
	-	298	318	346	351	367	721	84.8 kg	92.5 kg
4"	-	13.9	14.5	15.6	15.1	16.1	31.2	283 lb	308 lb
	-	352	368	397	383	410	792	128 kg	140 kg

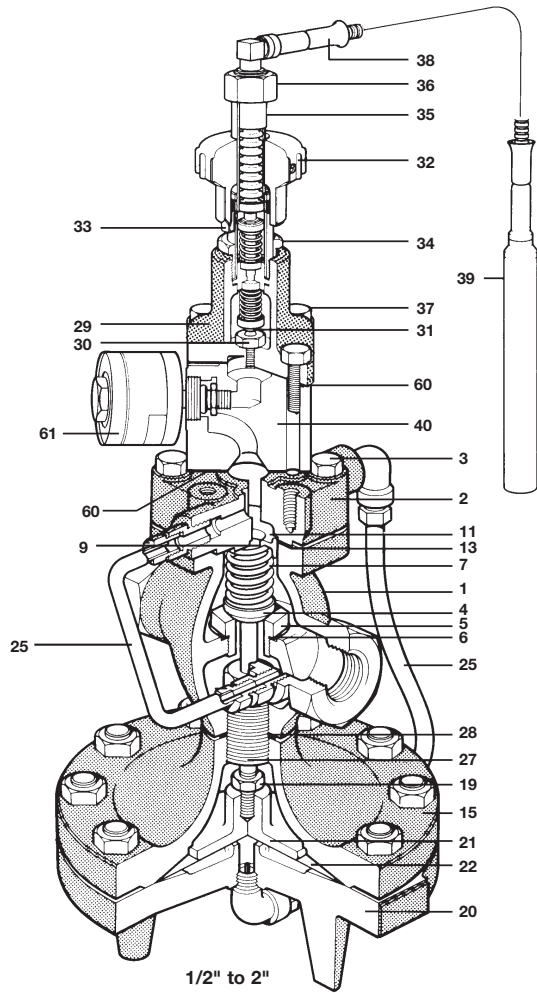
Local regulation may restrict the use of this product below the conditions quoted. Limiting conditions refer to standard connections only.

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

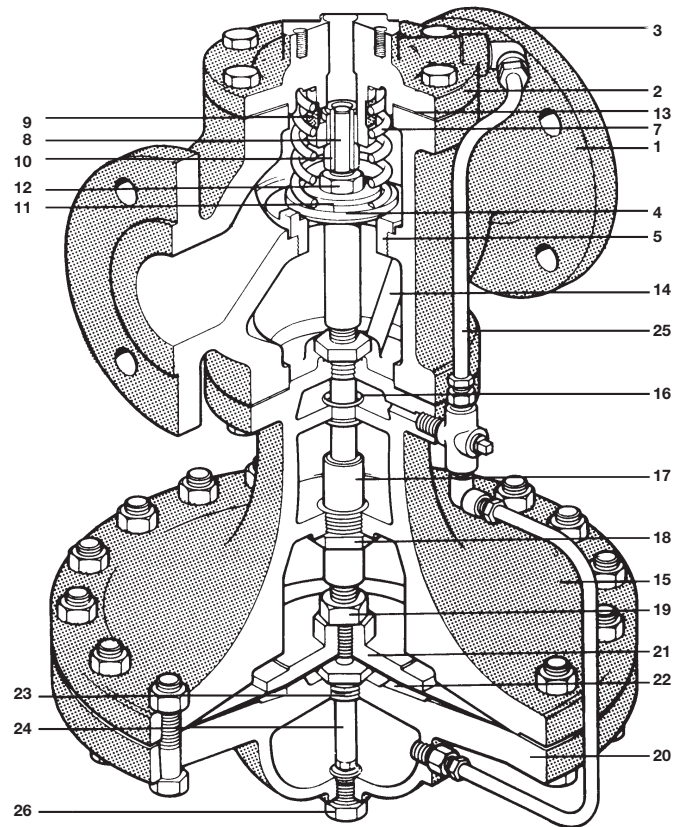
TI-1-11161-US

Pilot Operated Temperature Regulator w/ Electric Override

1/2" to 4" 25TE



1/2" to 2"



2" to 4" *ANSI 300 ONLY

Construction Materials

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
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 Cast Steel ASTM A 126 CL B ASTM A216 Gr WCB
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" - 4"
20	Lower Diaphragm Case	Cast Iron Cast Steel ASTM A126CL B ASTM A216 Gr WCB
21	Diaphragm Plate	Brass 1/2" - 2" C.I. 2" - 4"
22	Main Diaphragm (2 ply)	Stainless Steel ASTM A240
23	Bushing	CRS
24	Tube & Orifice	Stainless Steel
25	Tubing Assembly	Copper Brass

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" - 4" Graphite
29	Pilot Valve Body	Cast Iron Cast Steel ASTM A 126 CL B ASTM A216 Gr WCB
30	Pilot Valve Seat	Stainless Steel
31	Pilot Valve Head	Stainless Steel
32	Adjustment Knob	Phenolic
33	Pointer	Stainless Steel
34	Extension Nut	Brass
35	Case Tube	Brass
36	Retaining Nut	Brass
37	Pilot Mounting Screws	Steel
38	Capillary Tube	Varies with style selected
39	Bulb	Varies with style selected
40	Electric Pilot Body	Cast Iron Cast Bronze
60	Pilot Gasket	Graphite
61	Electric Solenoid Valve	