



TI-P235-03-US
Issue 3

Direct Acting Temperature Regulator 25 MT

Description

The 25 MT is a self-actuated temperature control valve with a calibrated dial for accurate temperature setting. A variety of solid-fill sensing bulbs are available (see TI-P235-07-US). The standard capillary tubing length is 8 feet (2.4 meters), with an optional standard length of 15 feet (4.6 meters).

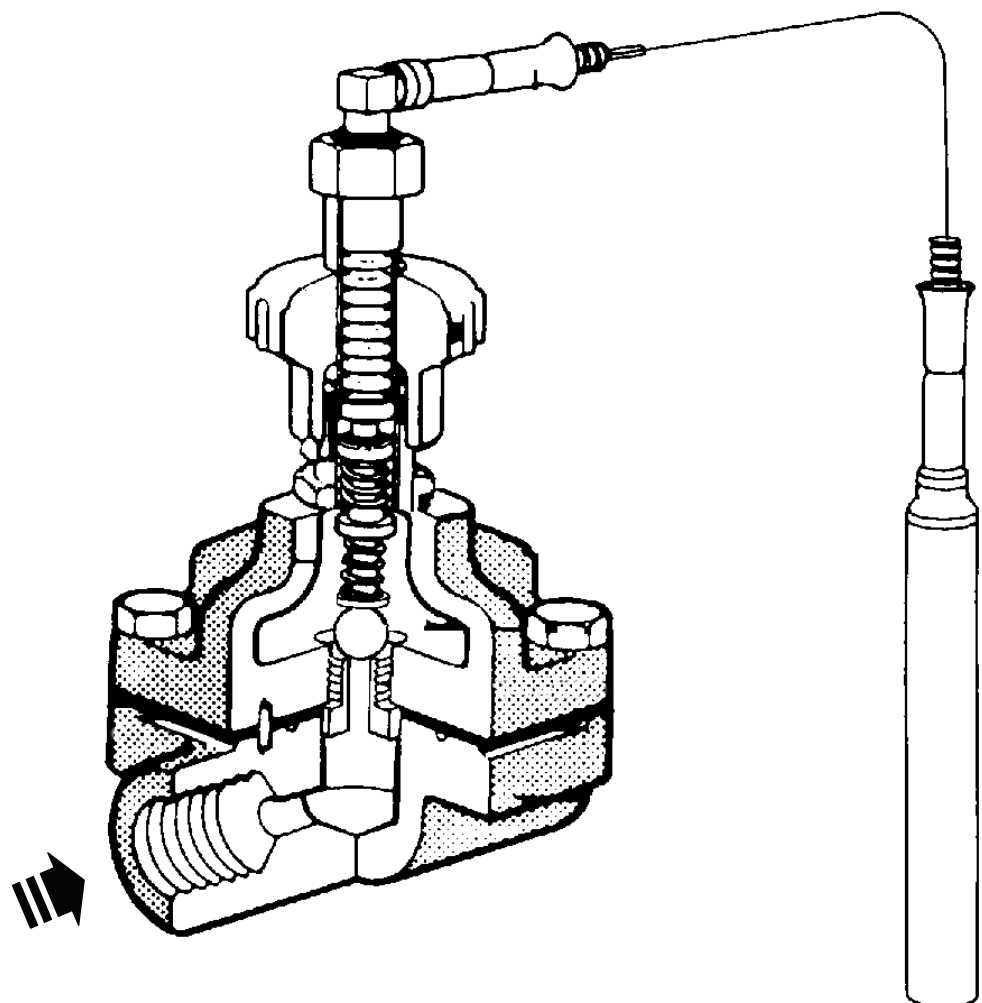
Model	25MT
Sizes	½" (DN15)
Connections	NPT
Construction	Cast Iron
Options	BSP Connections Non-standard capillary tubing lengths (see TI-P235-07-US)

Typical applications

Small storage steam water heaters, instantaneous heat exchangers and converters, air handling coils, tank heating coils, steam jacketed vessels, steam chests, molds and platens.

Sample specification

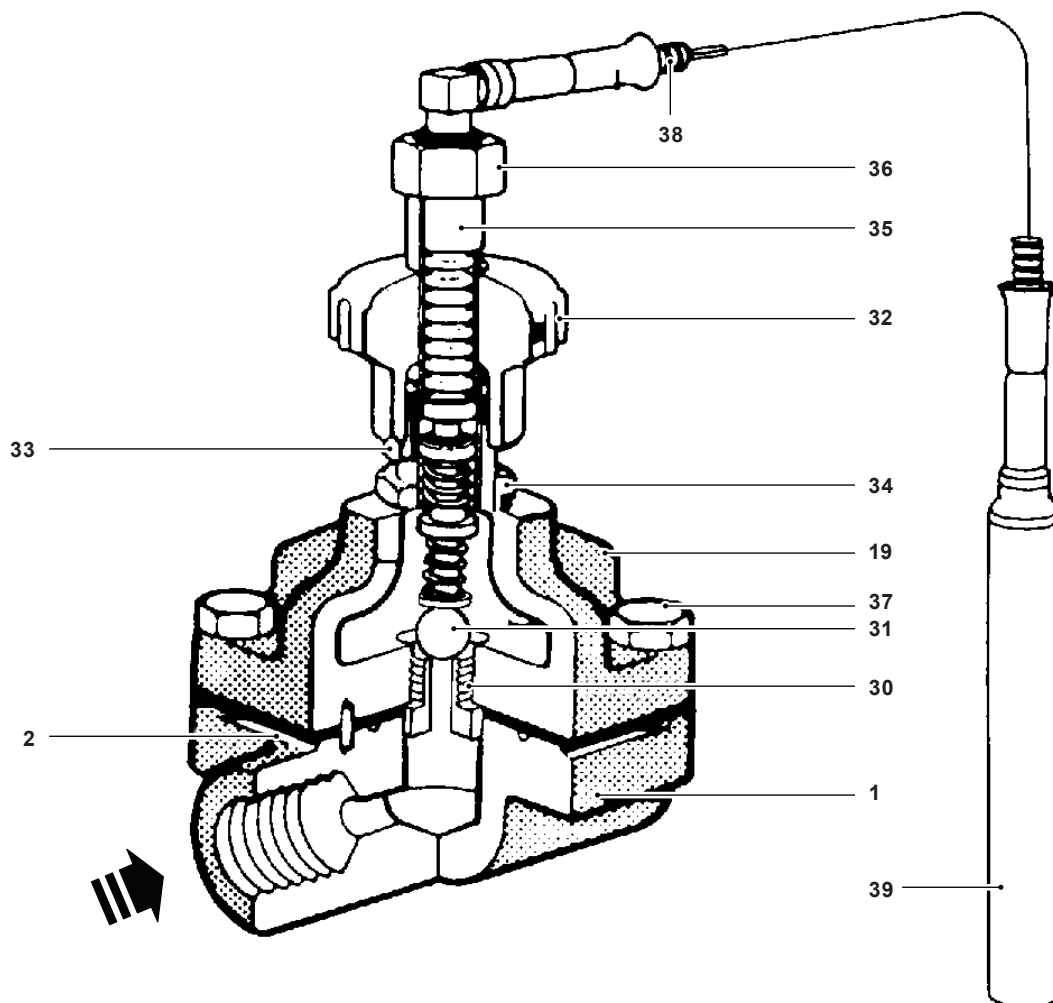
The temperature control valves shall be self-actuated. The temperature setting shall be adjustable without the use of tools, and the set point shall be indicated on a calibrated dial. Thermostatic system shall be solid fill, and shall incorporate overheat protection.



25 MT capacity Pounds of Saturated Steam per Hour

Inlet Pressure psi g (bar g)	Outlet Pressure psi g (bar g)	Capacity lb/hr (kg/hr) Vs P-Band (°F)		
		5 Cv > .134	10 .25	20 .47
10 (0.7)	0 (0)	5.3 (2.4)	9.7 (4.4)	18.5 (8.4)
10 (0.7)	3 (0.2)	4.8 (2.2)	8.8 (4.0)	16.6 (7.5)
10 (0.7)	5 (0.3)	4.3 (1.9)	7.8 (3.5)	14.8 (6.7)
25 (1.7)	0-5 (0-0.3)	8.5 (3.9)	15.6 (7.1)	29.7 (13.5)
25 (1.7)	15 (1.0)	7.4 (3.4)	13.6 (6.2)	25.8 (13.5)
25 (1.7)	20 (1.4)	5.6 (2.5)	10.4 (4.7)	19.7 (8.6)
50 (3.4)	0-18 (0-1.2)	13.9 (6.3)	25.5 (11.6)	48.3 (21.9)
50 (3.4)	35 (2.4)	11.7 (5.3)	21.5 (4.8)	40.8 (18.5)
50 (3.4)	42 (2.9)	9.1 (4.1)	16.8 (7.6)	31.8 (14.4)
75 (5.2)	0-30 (0-2.1)	19.2 (8.7)	35.3 (16.0)	67.0 (30.4)
75 (5.2)	55 (3.8)	16.0 (7.3)	29.4 (13.3)	55.8 (25.3)
75 (5.2)	65 (4.5)	12.1 (5.5)	22.2 (10.1)	42.2 (19.1)
100 (6.9)	0-43 (0-3.0)	24.6 (11.2)	45.1 (20.5)	85.7 (38.9)
100 (6.9)	75 (5.2)	20.3 (9.2)	37.3 (16.2)	70.7 (32.1)
100 (6.9)	85 (5.9)	16.6 (7.5)	30.4 (13.8)	57.8 (26.2)
150 (10.3)	0-68 (0-4.7)	35.3 (16.0)	64.8 (29.4)	123.1 (55.8)
150 (10.3)	105 (7.2)	31.5 (14.2)	57.8 (26.2)	109.7 (49.8)
150 (10.3)	130 (9.0)	23.1 (10.5)	42.3 (19.2)	80.4 (36.5)
200 (13.8)	0-93 (0-6.4)	46.0 (20.9)	84.5 (38.3)	160.4 (72.8)
200 (13.8)	140 (9.7)	41.3 (18.7)	75.8 (34.4)	144.0 (65.3)
200 (13.8)	170 (11.7)	31.9 (14.5)	58.6 (26.6)	111.2 (50.4)
250 (17.2)	0-118 (0-8.1)	56.8 (25.8)	104.2 (47.3)	197.8 (89.7)
250 (17.2)	175 (12.1)	51.1 (23.1)	93.9 (42.6)	178.3 (80.9)
250 (17.2)	210 (14.5)	40.7 (18.9)	74.6 (33.8)	141.7 (64.3)

Materials



No.	Part	Material	
1	"M" Body	Cast Iron	ASTM A 126 CL B
2	Gasket	Graphite	
19	"T" Body	Cast Iron	ASTM A 126 CL B
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	ASTM A449
38	Capillary Tube	Varies with style selected	
39	Bulb	Varies with style selected	

Limiting operating conditions

Maximum operating pressure (PMO)	250 psi g (17 bar g)
Maximum operating temperature*	450 °F (232 °C)

*The temperature of the sensing bulb must not exceed 350 °F (177 °C)

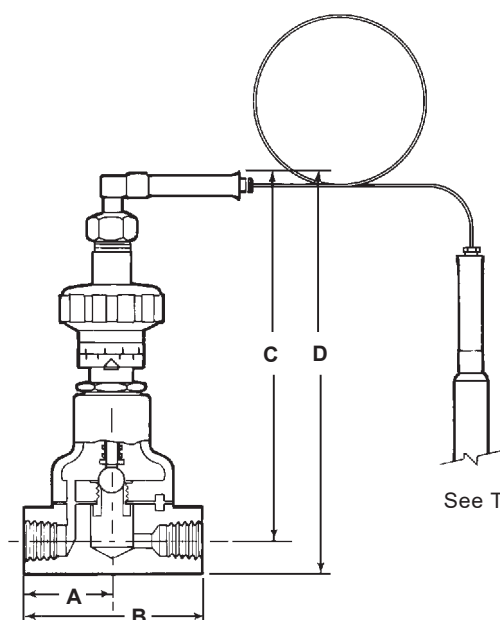
Standard temperature ranges

30 °F to 90 °F	(-1 °C to 32 °C)
60 °F to 120 °F	(16 °C to 49 °C)
100 °F to 160 °F	(38 °C to 71 °C)
120 °F to 180 °F	(49 °C to 82 °C)
160 °F to 220 °F	(71 °C to 104 °C)
200 °F to 260 °F	(93 °C to 127 °C)
260 °F to 320 °F	(127 °C to 160 °C)

Pressure shell design conditions

PMA	Maximum allowable pressure	250 psi g/0-450 °F	(17 bar g/0-232 °C)
TMA	Maximum allowable temperature	450 °F/0-250 psi g	(232 °C/0-17 bar g)

Dimensions/weight (approximate) in inches (mm) and lbs (kg)



Size	A	B	C	D	Weight
1/2"	1.75	3.5	7.38	8.06	5.25 lb
	(44)	(89)	(187)	(205)	(2.4 kg)

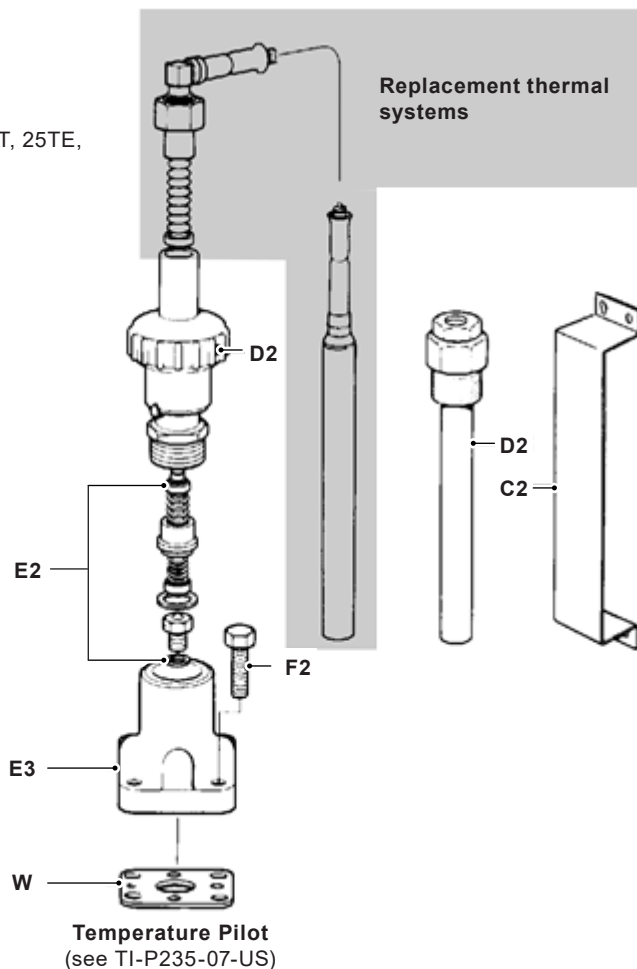
Installation and maintenance

The regulator should be installed in a horizontal pipe with suitable by-pass and isolating valves. A steam trap must be installed upstream to prevent condensate from reaching the regulator. 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 and maintenance instructions are given in IM-1-1125-US, which accompanies the product.

Spare parts

Exploded view

Temperature pilot parts for 25T, 25PT, 25TE, 25PTE and 25MT



Thermal System (T1, T2, T10, T11) State bulb style, capillary tube length and temperature range	A2
Well (T5, T6, T7, T8) (Specify bulb style)	B2
Wall Mounting Bracket (T9) (State bulb size)	C2
Pilot Adjustment Assembly	D2
Body with Cap Screws and Gaskets (Specify 15 psi g (1 bar) or below assembly or standard assembly)	E2, F2, W
Head & Guide Assembly w/ Gasket, Seat & Seat Gasket (Specify 15 psi g (1 bar) or below assembly or standard assembly)	E2