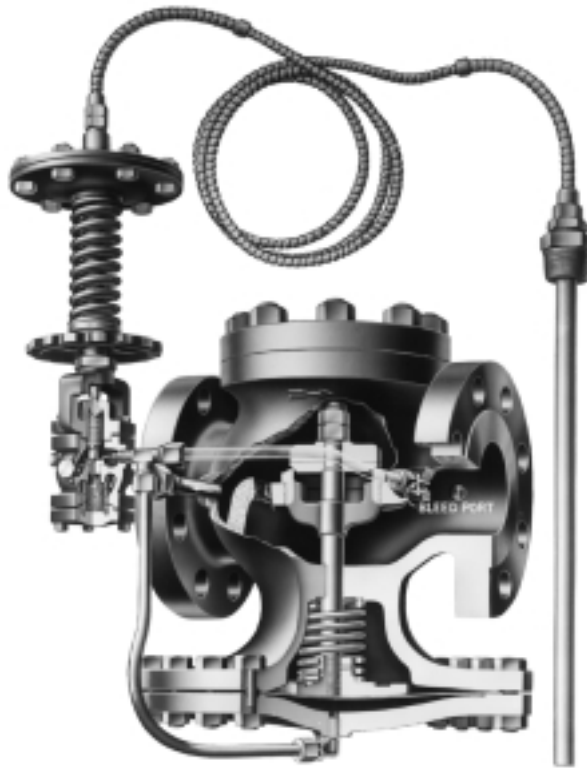


TYPE ET14 TEMPERATURE REGULATOR

CAST IRON, BRONZE or STEEL
CONTROLS 20 to 500°F



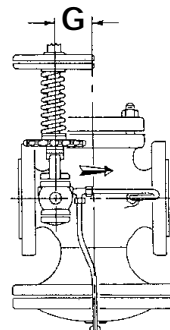
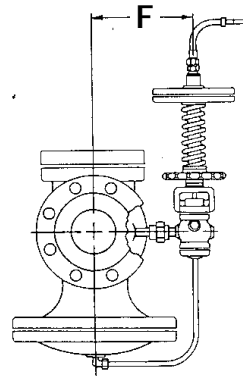
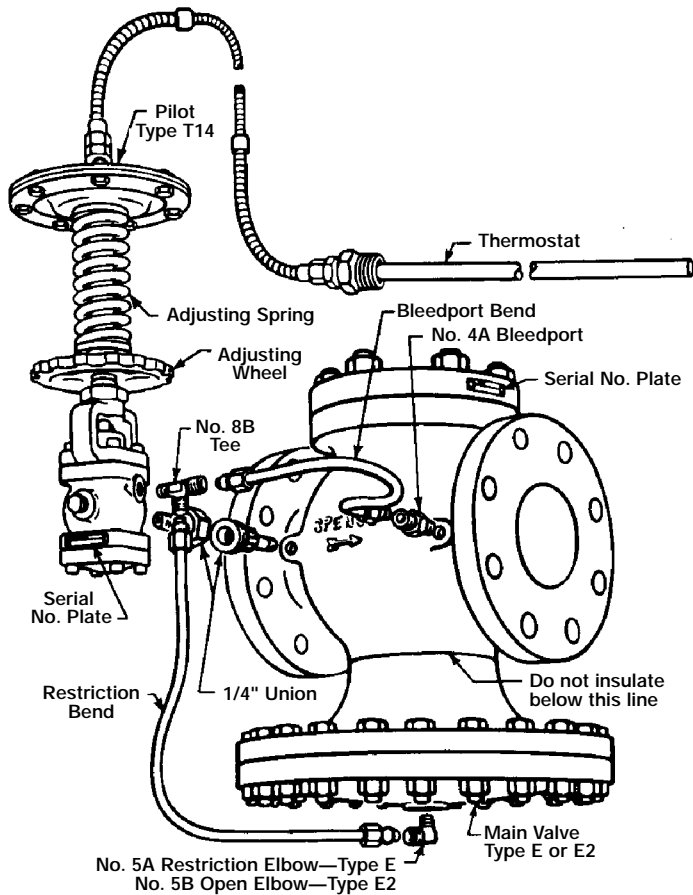
APPLICATION DATA

- Temperature Regulation for Batch Process
- Storage Heaters (Water, Fuel Oil or Chemical)
- Air Heating

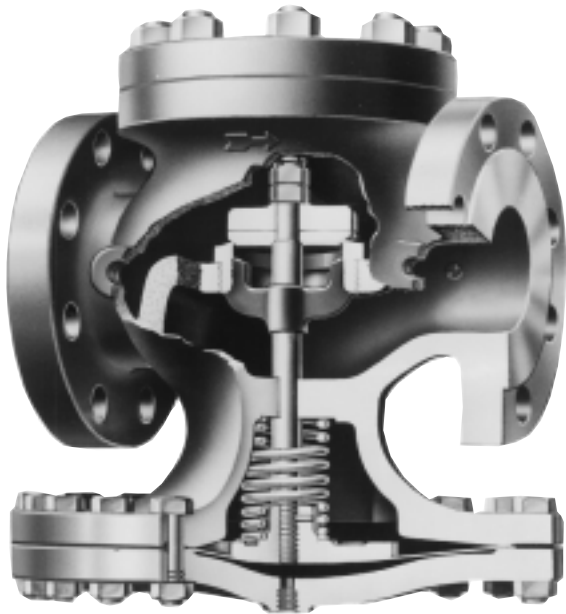
TYPE ET14 TEMPERATURE REGULATOR

DIMENSIONS inches (mm)

SIZE	F	G
3/8 (10)	5 3/8 (136)	1 1/4 (32)
1/2 (15)	5 3/8 (136)	1 1/4 (32)
3/4 (20)	5 5/8 (143)	1 3/8 (35)
1 (25)	5 3/4 (146)	1 1/2 (38)
1 1/4 (32)	6 (152)	1 7/8 (48)
1 1/2 (40)	6 1/4 (159)	2 (51)
2 (50)	6 5/8 (168)	2 1/8 (54)
2 1/2 (65)	6 3/4 (171)	2 3/8 (60)
3 (80)	7 1/4 (184)	2 3/4 (70)
4 (100)	8 (203)	3 1/2 (89)
5 (125)	9 (229)	3 1/2 (89)
6 (150)	9 7/8 (251)	4 (102)
8 (200)	10 1/2 (267)	6 1/4 (159)
10 (250)	12 1/2 (318)	6 (152)
12 (300)	14 (356)	8 1/2 (216)



Valve is tapped so that Pilot may be mounted on either side.



TYPE E MAIN VALVE

TYPE E MAIN VALVE

SIZES 3/8" – 12"

PRESSURES to 600 PSIG at 750°F

- Normally Closed
- Single Seat
- Balanced Metal Diaphragms
- Protected Main Spring
- Fluid, Gas & Vapor Applications
- Accurate Regulation Unaffected by Service Conditions
- ANSI/FCI 70-2 Class IV Shutoff
- Virtually Frictionless for Long Service Life
- Packless Construction
- Easy In-line Maintenance
- Wide Variety of Pilots for Many Applications
- Minimum Operating ΔP 10 psi (.7 bar)
- Lifetime Warranty against Wiredrawing of Seat & Disc*

APPLICATION DATA

- Pressure Regulating for Steam Distribution
- Regulating for Process Control (Temperature or Pressure)
- Maintain Back Pressure or Differential Pressure
- For use with Self-contained, Pneumatic or Electronic Pilots
- Single Point or Multiple Use Applications
- Slow Start-up or Shutdown

VALVE RATINGS

Valve Ends ASME/ANSI	Pressure PSIG (bar)	Temperature °F (°C)
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CAST IRON

Class 250 NPT	250 (17.2)	@ 450 (232)
B16.1 Class 125 Flanged	125 (8.6)	@ 450 (232)
B16.1 Class 250 Flanged	250 (17.2)	@ 450 (232)

CAST STEEL

B16.34 Class 300 NPT	300 (21.0)	@ 600 (315)†
B16.34 Class 150 Flanged	150 (10.3)	@ 500 (260)†
B16.34 Class 300 Flanged	300 (21.0)	@ 600 (315)†
B16.34 Class 600 Flanged	600 (41.4)	@ 600 (315)†

†750°F (400°C) construction available on request.
 Other pressure/temperature ratings available; consult factory.
 Maximum downstream pressure is 300 psi.
 Canadian Registration # OC 0591.9C

OPTIONS

- Composition Disc
- Balanced Construction
- Insulcap Insulating Jacket
- High Temperature Construction
- Low ΔP (LP) Main Spring
- Parabolic Disc
- Integral Mount Pilot
- Secoweld
- Dashpot
- EZ Connections

TYPICAL CONFIGURATIONS

- PRESSURE REDUCINGTYPE ED SERIES
- AIR ADJUSTEDTYPE EA SERIES
- BACK PRESSURETYPE EQ SERIES
- PUMP GOVERNORTYPE EP SERIES
- LOAD ALLOCATINGTYPE EFD
- AIR CONTROLLEDTYPE EAP60
- ELECTRONIC SLOW STARTTYPE ED208D
- SOLENOID CONTROLLEDTYPE EMD
- SOLENOID ACTUATEDTYPE EM
- DIFFERENTIALTYPE EN
- TEMPERATURE CONTROLTYPE ET SERIES

RATED FLOW COEFFICIENTS (Cv)

SEAT FACTOR	REGULATOR SIZE														
	3/8	1/2	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12
Full	1.5	2.8	5.4	8.8	14.1	19.8	31	44	74	109	169	248	444	706	1113
Full 75 %	—	2.1	4.0	6.6	10.6	14.8	23.3	33	56	82	127	186	333	530	835
Full 50 %	—	1.4	2.7	4.4	7.0	9.9	15.5	22	37	55	85	124	222	353	557
Normal	.65	1.5	4.8	7.5	10.4	14.6	17.6	24	43	78	115	151	249	377	631
Normal 75 %	—	—	—	—	—	—	—	18	33	59	87	114	187	283	474
Normal 50 %	—	—	—	—	—	—	—	12	22	39	58	76	125	189	316

* When installed according to factory specifications.

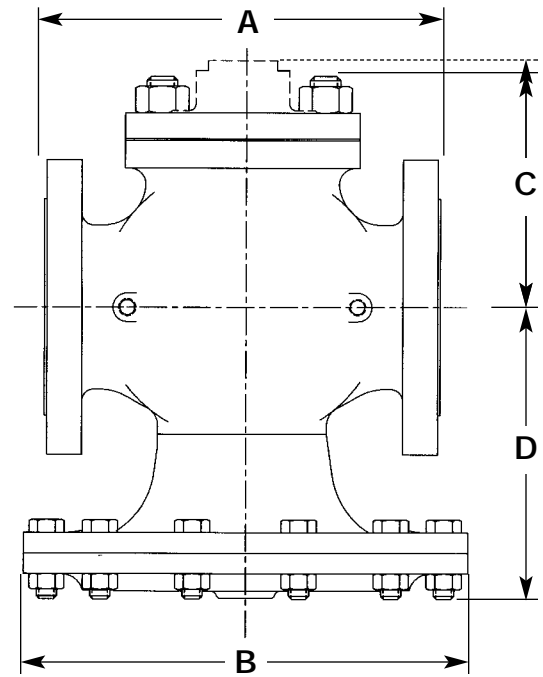
TYPE E MAIN VALVE

SPECIFICATION

The valve shall be self-operated, external pilot type, single seated, metal diaphragm actuated, normally closed design. The valve will function quickly and shut tight on dead end service. Internal parts including seats, discs, stems and diaphragms shall be of stainless steel. There shall be no springs in the steam space and no stuffing box. The valve shall be easy to maintain with all parts accessible without removal from the line.

MATERIALS OF CONSTRUCTION

Body, Cast IronASTM A126 Cl. B
 Body, Cast BronzeASTM B61 UNS C92200
 Body, Cast SteelASTM A216 WCB
 Stem303 St. Stl. ASTM A582
 Disc 3/4 - 5"420 St. Stl. ASTM A743 CA-40
 Disc 6 - 12"304 St. Stl. ASTM A167/A240
 Seat 3/4 - 5"420 St. Stl. ASTM A743 CA-40
 Seat 6 - 12"316 St. Stl. ASTM A743-79 CF-8M
 GasketNon-asbestos
 DiaphragmStainless Steel MIL-S-5059C
 SpringSteel

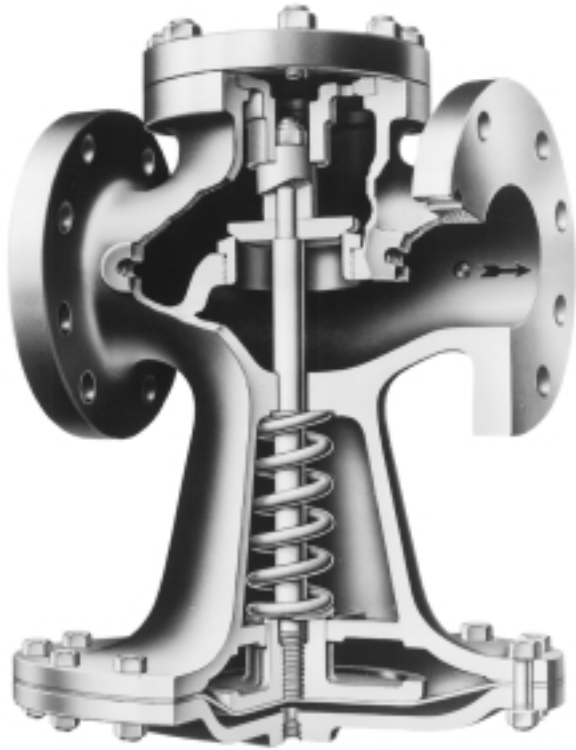


TYPE E MAIN VALVE

DIMENSIONS inches (mm) AND WEIGHTS pounds (kg)

SIZE	FACE TO FACE DIMENSIONS					B	C					D*	APPROX. WT.			
	A						Std. Mount	Integral Mount			ANSI NPT		ANSI 125,150	ANSI 250,300	ANSI 600	
	ANSI NPT	ANSI 125,150	ANSI 250	ANSI 300	ANSI 600			ANSI 600	Cl & Brz. All	Steel						Steel 600
3/8 (10)	4 3/8 (111)	—	—	—	—	5 7/8 (149)	2 3/4 (70)	—	3 1/2 (89)	3 1/2 (89)	—	5 1/4 (133)	14 (6)	—	—	—
1/2 (12)	4 3/8 (111)	—	—	—	6 (152)	5 7/8 (149)	2 3/4 (70)	2 3/4 (70)	3 1/2 (89)	3 1/2 (89)	3 5/8 (92)	5 1/4 (133)	14 (6)	—	—	20 (9.1)
3/4 (19)	4 3/8 (111)	—	—	—	6 3/8 (162)	6 1/2 (165)	2 7/8 (73)	3 3/8 (98)	3 5/8 (92)	3 3/4 (95)	4 1/2 (114)	5 1/2 (140)	18 (8)	—	—	28 (13)
1 (25)	5 3/8 (137)	5 1/2 (140)	6 (152)	6 1/2 (165)	6 1/2 (165)	7 (178)	3 5/8 (92)	4 1/4 (108)	4 3/8 (111)	4 3/8 (111)	4 3/4 (121)	6 1/4 (159)	23 (10)	26 (12)	31 (14)	32 (15)
1 1/4 (32)	6 1/2 (165)	6 3/4 (171)	7 1/4 (184)	7 7/8 (200)	7 7/8 (200)	7 7/8 (200)	4 1/8 (105)	4 5/8 (117)	4 (102)	4 5/8 (117)	5 (127)	6 1/2 (165)	33 (15)	37 (17)	41 (19)	45 (20)
1 1/2 (38)	7 1/4 (184)	6 7/8 (175)	7 3/8 (187)	8 (203)	8 (203)	8 3/4 (222)	4 3/8 (111)	5 1/8 (130)	4 3/8 (111)	5 (127)	—	7 1/8 (181)	43 (20)	47 (21)	55 (25)	58 (26)
2 (51)	7 1/2 (191)	8 1/2 (216)	9 (229)	10 1/4 (260)	10 1/4 (260)	9 7/8 (251)	5 1/4 (133)	5 3/4 (146)	5 (127)	5 5/8 (143)	5 3/4 (146)	7 5/8 (194)	62 (28)	73 (33)	78 (35)	83 (38)
2 1/2 (64)	—	9 3/8 (238)	10 (254)	11 1/4 (286)	11 1/4 (286)	10 7/8 (276)	5 3/4 (146)	7 7/8 (200)	5 1/2 (140)	6 (152)	8 1/4 (210)	8 3/8 (213)	—	95 (43)	100 (45)	130 (59)
3 (76)	—	10 (254)	10 3/4 (273)	12 1/4 (311)	12 1/4 (311)	11 3/4 (298)	6 5/8 (168)	9 1/8 (232)	6 3/8 (162)	7 1/8 (181)	—	9 1/4 (235)	—	125 (57)	140 (64)	175 (80)
4 (102)	—	11 7/8 (302)	12 1/2 (318)	12 1/2 (318)	14 1/2 (368)	14 3/4 (375)	7 5/8 (194)	10 5/8 (270)	7 1/4 (184)	8 (203)	—	11 7/8 (302)	—	210 (95)	230 (105)	310 (141)
5 (127)	—	13 5/8 (346)	14 1/2 (368)	14 1/2 (368)	16 1/2 (419)	16 7/8 (429)	8 1/2 (216)	12 1/2 (318)	8 1/8 (206)	8 1/2 (216)	—	12 1/2 (318)	—	295 (134)	310 (141)	490 (223)
6 (152)	—	15 1/8 (384)	16 (406)	16 (406)	17 3/8 (441)	19 3/4 (502)	10 (254)	13 3/4 (349)	9 1/2 (241)	9 1/2 (241)	13 5/8 (346)	14 1/8 (359)	—	420 (191)	470 (214)	655 (298)
8 (203)	—	19 (483)	20 (508)	20 (508)	21 5/8 (549)	22 1/2 (572)	11 1/2 (292)	15 3/8 (391)	11 1/4 (286)	11 3/4 (298)	—	17 1/4 (438)	—	700 (318)	710 (323)	1070 (486)
10 (254)	—	23 5/8 (600)	25 (635)	25 (635)	—	28 (711)	13 3/4 (349)	—	—	—	—	23 3/8 (594)	—	1240 (563)	1300 (591)	—
12 (305)	—	26 1/2 (673)	28 (711)	28 (711)	—	33 (838)	15 7/8 (403)	—	—	—	—	25 1/4 (641)	—	2060 (936)	2140 (972)	—

*Add 65% to D dimension for stem removal clearance.



TYPE E2 MAIN VALVE

APPLICATION DATA

- Pressure Regulating for Steam Distribution
- Regulating for Process Control (Temperature or Pressure)
- Maintain Back Pressure or Differential Pressure
- For use with Self-contained, Pneumatic or Electronic Pilots
- Single Point or Multiple Use Applications
- Slow Start-up or Shutdown

VALVE RATINGS

Valve Ends ASME/ANSI	Pressure PSIG (bar)	Temperature °F (°C)
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CAST IRON

B16.4 Class 250 NPT	15 (1.03)	250°F (121°C)
B16.1 Class 125 Flanged	15 (1.03)	250°F (121°C)

Canadian Registration # OC 0591.9C

TYPE E2 MAIN VALVE

**LOW PRESSURE
LOW DIFFERENTIAL**

SIZES 3/4" – 12"

PRESSURES to 15 PSIG at 250°F

- Normally Closed
- Single Seat
- Hycar Diaphragm
- Protected Main Spring
- Gas & Steam Applications
- Accurate Regulation Unaffected by Service Conditions
- ANSI/FCI 70-2 Class IV Shutoff
- Virtually Frictionless for Long Service Life
- Packless Construction
- Easy In-line Maintenance
- Wide Variety of Pilots for Many Applications
- Minimum Operating ΔP 3 psi (.2 bar)
- Lifetime Warranty against Wiredrawing of Seat & Disc *

OPTIONS

- Composition Disc for liquid, air or gas service
- Insulcap Insulating Jacket
- Integral Mount Pilot
- EZ Connections

TYPICAL CONFIGURATIONS

- PRESSURE REDUCINGTYPE E2**D**
- AIR ADJUSTEDTYPE E2**A** SERIES
- BACK PRESSURETYPE E2**Q**
- LOAD ALLOCATINGTYPE E2**FD**
- AIR CONTROLLEDTYPE E2**AP60**
- ELECTRONIC SLOW STARTTYPE E2**D208D**
- SOLENOID CONTROLLEDTYPE E2**MD**
- SOLENOID ACTUATEDTYPE E2**M**
- DIFFERENTIAL.....TYPE E2**N**
- TEMPERATURE CONTROLTYPE E2**T14**
- TEMP. & PRESSURE CONTROLTYPE E2**T134**

RATED FLOW COEFFICIENTS (Cv)

SEAT FACTOR	REGULATOR SIZE												
	3/4	1	1 1/4	1 1/2	2	2 1/2	3	4	5	6	8	10	12
Full	7.6	11.7	18.9	27.4	44	68	96	143	202	255	465	748	1118

* When installed according to factory specifications.



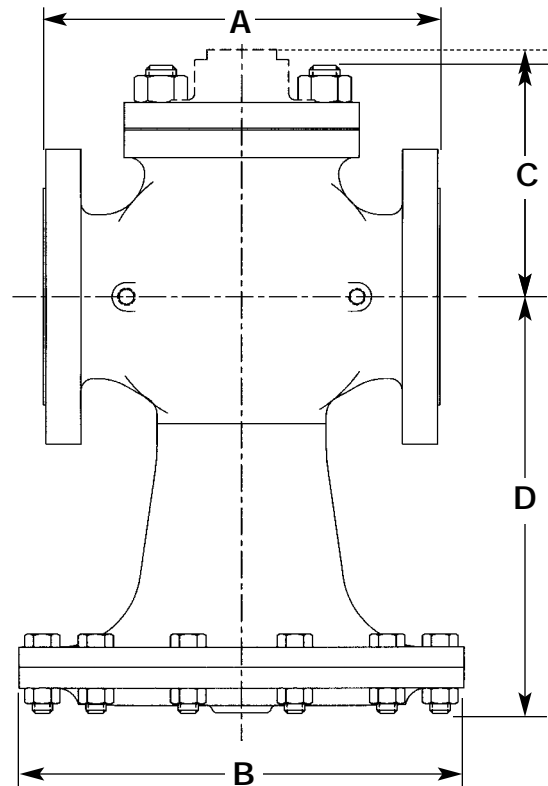
TYPE E2 MAIN VALVE

SPECIFICATION

The valve shall be self-operated, external pilot type, single seated, hycar diaphragm actuated, normally closed design. The valve will function quickly and shut tight on dead end service. Internal parts including seats, discs and stems shall be of stainless steel. There shall be no springs in the steam flow path and no stuffing box. The valve shall be easy to maintain with all parts accessible without removal from the line.

MATERIALS OF CONSTRUCTION

Body, Cast IronASTM A126 Cl. B
 Body, Cast BronzeASTM B61-80 61UNSC 92200
 Stem303 St. Stl. ASTM A582
 Disc 3/4 - 2"420 St. Stl ASTM A743 CA-40
 Disc 2-1/2 - 12"304 St. Stl. ASTM A167/A240
 Seat420 St. Stl. ASTM A743 CA-40
 GasketNon-asbestos
 DiaphragmHycar
 SpringSteel



TYPE E2 MAIN VALVE

DIMENSIONS inches (mm), **WEIGHTS** pounds (kg)

SIZE	A		OTHER DIMENSIONS				APPROX. WT.	
	Cl, BRZ ANSI NPT	CI ANSI 125	B	C		D*	Cl, BRZ ANSI NPT	CI ANSI 125
				Std. Mount	Integral Mount			
3/4 (19)	4 3/4 (121)	— —	8 (203)	2 7/8 (73)	3 5/8 (92)	7 3/4 (197)	18 (8)	— —
1 (25)	5 3/8 (137)	5 1/2 (140)	8 (203)	3 3/8 (92)	4 3/8 (111)	8 1/8 (206)	19 (9)	21 (10)
1 1/4 (32)	6 1/2 (165)	6 3/4 (171)	9 (229)	4 1/8 (105)	4 (101)	8 1/4 (210)	30 (14)	33 (15)
1 1/2 (38)	7 1/4 (184)	6 7/8 (175)	9 1/4 (248)	4 3/8 (111)	4 1/2 (118)	8 3/4 (222)	36 (16)	40 (18)
2 (51)	7 1/2 (191)	8 1/2 (216)	10 1/2 (267)	5 1/4 (133)	5 (127)	10 (254)	50 (23)	57 (26)
2 1/2 (64)	— —	9 3/8 (238)	10 1/2 (267)	5 3/4 (146)	5 3/8 (136)	11 1/2 (292)	— —	70 (32)
3 (76)	— —	10 (254)	11 1/4 (286)	6 5/8 (168)	6 3/8 (162)	12 3/4 (324)	— —	98 (45)
4 (102)	— —	11 7/8 (302)	13 1/2 (343)	6 3/4 (171)	6 5/8 (168)	13 5/8 (346)	— —	135 (61)
5 (127)	— —	13 5/8 (346)	14 1/4 (362)	7 1/2 (191)	7 3/8 (187)	15 (381)	— —	185 (84)
6 (152)	— —	15 1/8 (384)	16 (406)	7 7/8 (200)	7 (178)	16 5/8 (422)	— —	250 (114)
8 (203)	— —	19 (483)	20 (508)	9 1/2 (241)	9 1/4 (235)	19 7/8 (505)	— —	1210 (550)
10 (254)	— —	23 5/8 (600)	24 (610)	10 7/8 (276)	— —	23 7/8 (606)	— —	690 (314)
12 (305)	— —	26 1/2 (673)	28 (711)	12 3/4 (324)	— —	27 1/8 (689)	— —	1060 (482)

*Add 55% to D dimension for stem removal clearance.

TYPE T14 VAPOR TENSION TEMPERATURE PILOT

CONTROLS 20 to 500°F



TYPE T14 TEMPERATURE PILOT

- Precise, Rapid Response
- Spring Operated
- Self Contained
- Normally Open, Direct Operation (Heating)
- Packless Construction
- Fluid, Gas and Vapor Applications
- Strainer Screen Built-in
- Easy in-line Maintenance

OPTIONS

- Stainless Steel Flexible Tubing
- Stainless Steel Capillary Tubing
- Tubing longer than 10'
- Thermostat Well
- Dial Thermometer
- Integral Mount
- Thermostat other than #700 (see Options Section)

THERMOSTATS

700	706	731
701	708	732
702	711	740
703	712	
704	713	

TYPICAL CONFIGURATIONS

TEMPERATURE REGULATING	ET14
TEMPERATURE & PRESSURE	ET14D
TEMPERATURE REGULATING	E2T14
TEMPERATURE & PRESSURE	E2T14D
TEMPERATURE REGULATING	E5T14
TEMPERATURE & PRESSURE	E5T14D

APPLICATION DATA

- Storage Heaters
- Jacketed Kettles
- Vats

RATINGS (Maximum Inlet Conditions)

Construction	Pressure PSIG (bar)	Temperature °F (°C)
Cast Iron	250 (17.2) @	450 (232)
Cast Bronze	250 (17.2) @	400 (204)
Cast Steel	600 (41.4) @	750 (400)

TEMPERATURE RANGES (°F)

20-120	150-300	300-400
50-150	170-270	330-430
70-170	250-350	400-500
120-220	290-390	

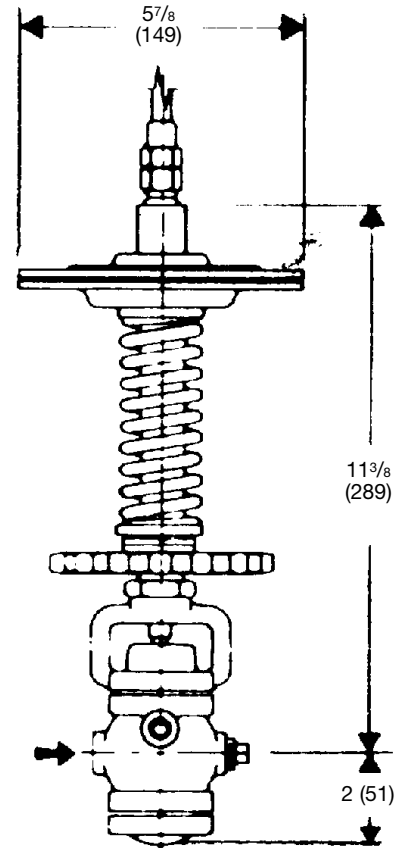
Canadian Registration # OC 0591.9C

TYPE T14 VAPOR TENSION TEMPERATURE PILOT SPECIFICATION

Pilot valve shall be separate from the main valve and connected to it by unions. Pilot seats shall be protected by built-in strainer screens. Pilot shall be interchangeable on all sizes of main valves. Thermal elements shall provide a 100°F (38°C) range of temperature adjustment and shall withstand 100°F overheating without damage. Handwheel adjustment for temperature shall be standard. Unless otherwise scheduled, thermal elements shall be equipped with 10 feet of brass flexible tubing. Number 700 bronze bulb, Number 728 bronze well shall be supplied for storage tank applications. Steel wells shall be supplied for fuel oil service.

MATERIALS OF CONSTRUCTION

Body, Cast Iron	ASTM A126 CI B
Body, Cast Bronze	ASTM B61-80 UNS C92200
Body, Cast Steel	ASTM A216 GR. WCB
Stem	2024-T4 ASTM B211-75
Disc	440 St. St. ASTM A276-75 COND A
Seat	420 St. Stl ASTM A276 COND A
Gasket	Graphite
Diaphragm	Bronze ASTM B103-77 UNS C51000
Spring	Steel



TYPE T14 TEMPERATURE PILOT
13 LBS. (6 KG)

