

Baumann™ 24000C Carbon Steel Little Scotty™ Control Valve

Baumann Little Scotty industrial control valves are intended for general utility service in pressure, flow, and temperature control applications. This compact carbon steel control valve is positioned to take advantage of the trend toward industrial grade requirements spanning general utility and special applications. These control valves exhibit low hysteresis and deadband, good control characteristics, tight shutoff, rugged construction, high performance packing, and easy maintainability. These attributes translate into reduced maintenance costs, reduced process variability, and increased process availability, resulting in lower long-term operating costs.



W9743

24000C Control Valve with Baumann 32 Actuator

Features

- Compact and light weight design reduces installed piping costs
- ASME and EN end connections are available to meet your piping standards
- High quality type 316 austenitic stainless steel trim materials
- 416 stainless steel trim available
- Dual plug and stem guiding provides increased stability during plug travel
- Multiple trim capacity reductions available to meet changing process requirements

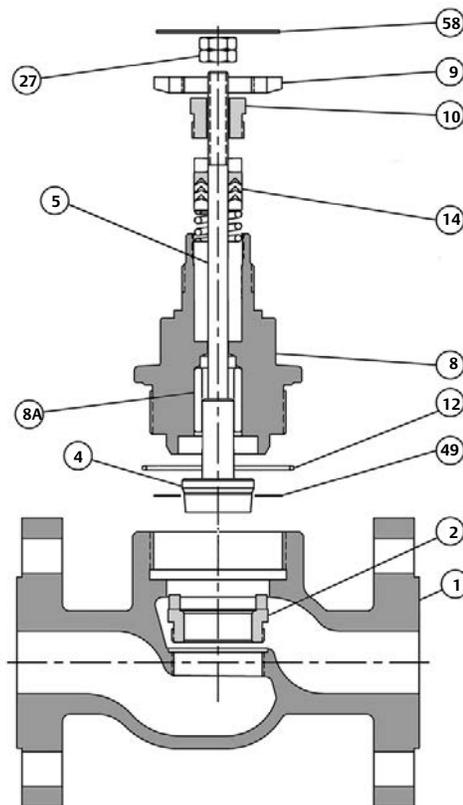


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24000C Control Valve with Baumann 32 Actuator
and Fisher 3661 I/P Positioner

- Fisher™ FIELDVUE™ digital valve controller available for remote calibration and diagnostics in facilities using the PlantWeb™ architecture

Figure 1. Baumann 24000C Valve Body Assembly with Standard PTFE Spring-Loaded Packing

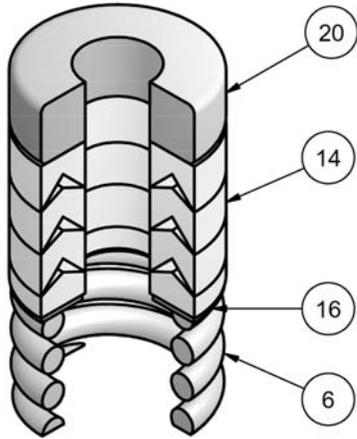


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Table 1. Materials of Construction

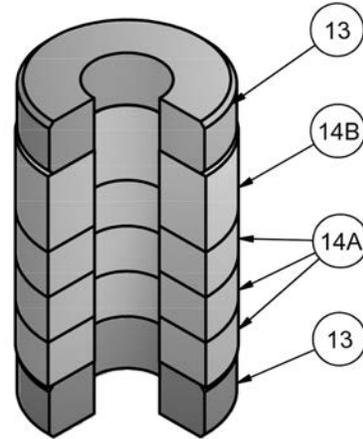
Key No.	Description	Material
1	Valve Body	Carbon Steel
2	Seat Ring	Standard ASTM A276 S31600 / S31603 Dual Certified
		Optional ASTM A582 S41600 Condition T
4	Plug (Metal Seat) Cv < 2.5	Standard ASME SA479 S21800 Annealed
		Optional ASTM A582 S41600 Condition T
	Plug (Metal Seat) Cv > 4.0	Standard ASTM A276 S31600 / S31603 Dual Certified
	Optional ASTM A582 S41600 Condition T	
	Plug (Soft Seat)	ASTM A276 S31600 / S31603 with PTFE (Polytetrafluoroethylene) Insert
5	Stem	ASTM A276 S31600 Condition A
8	Bonnet	Carbon Steel
8A	Bonnet Bushing	ASTM A276 S44004, HT 56-60 HRC or ASTM A311 Class B Stressproof 62-65 HRC
9	Drive Nut (Yoke)	S30400
10	Packing Follower	ASTM A276 S31600 / S31603 Dual Certified
12	O-Ring	FKM (Fluorocarbon)
14	Packing	Standard Refer to figure 2, table 2, shown below
		Optional Refer to figure 3, table 3, shown below
27	Locknuts	Stainless Steel
49	Body Gasket	Standard Annealed Soft Copper
		Optional Graphite Grade GHR with stainless steel Insert
58	Travel Indicator	ASME SA240 S30400

Figure 2. Standard Spring Loaded PTFE V-Ring Packing Kit



E1240

Figure 3. Molded Graphite (Flexible Graphite) Packing Kit (Optional)



E1241

Table 2. Standard Spring Loaded PTFE V-Ring Packing Kit

Key No.	Description	Material
6	Spring	ASTM A313 S30200
14	Packing Set	PTFE (Polytetrafluoroethylene)/ 25% carbon filled PTFE
16	Washer	ASME SA240 S31600
20	Spacer	J-2000 (filled Polytetrafluoroethylene)

Table 3. Molded Graphite (Flexible Graphite) Packing Kit (Optional)

Key No.	Description	Material
13	Bushings	Carbon-Graphite
14A	Packing Rings	Graphite
14B	Packing Ring	Graphite

Table 1. Cv Values at 100% Plug Opening ($K_v = 0.86 \times C_v$)⁽¹⁾

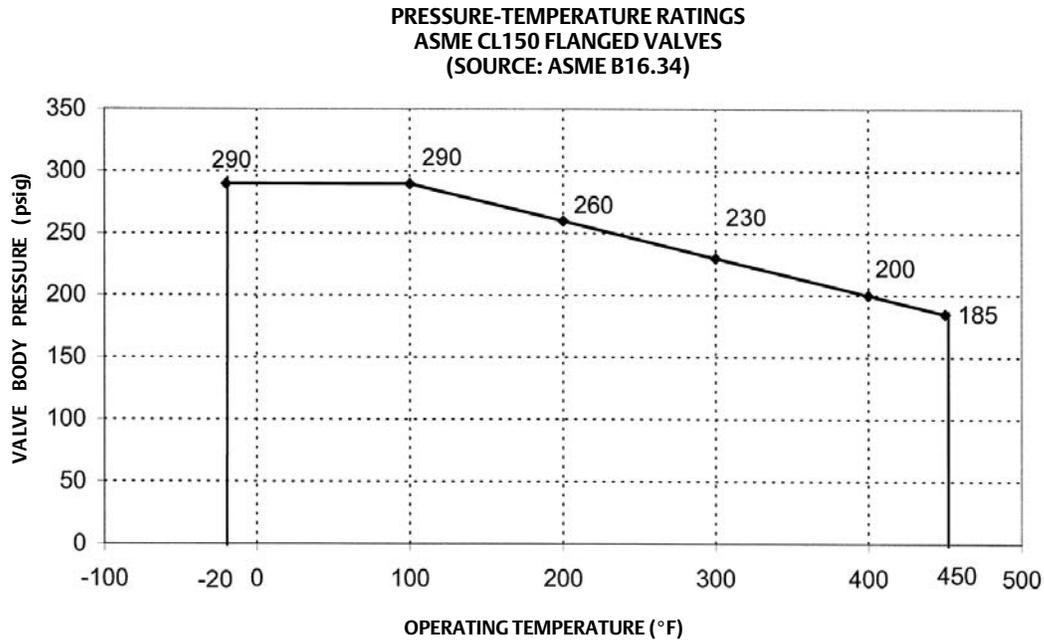
VALVE SIZE	ORIFICE DIAMETER	PLUG TRAVEL	PLUG SERIES				
			102	577	548 / 588	677	648 / 688
NPS	inch	inch	Cv	Cv	Cv	Cv	Cv
1/2	0.25	0.50	0.02, 0.05, 0.10, 0.20	---	0.20, 0.50, 1.0	---	0.50, 1.0
	0.375	0.50	---	1.0, 1.5, 2.5	1.5, 2.5	0.10, 0.20, 0.50, 1.0, 2.5	1.5, 2.5
	0.8125	0.50	---	4, 6	4, 7.7	5	4, 6
3/4	0.25	0.50	0.02, 0.05, 0.10, 0.20	---	0.20, 0.50, 1.0	---	0.5, 1.0
	0.375	0.50	---	1.0, 1.5, 2.5	1.5, 2.5	0.10, 0.20, 0.50, 1.0, 2.5	1.5, 2.5
	0.8125	0.5	---	4, 7.5	4, 10.1	5	4, 8
1	0.25	0.50	0.02, 0.05, 0.10, 0.20	---	0.20, 0.50, 1.0	---	0.5, 1.0
	0.375	0.50	---	1.0, 1.5, 2.5	1.5, 2.5	0.10, 0.20, 0.5, 1.0, 2.5	1.5, 2.5
	0.8125	0.5	---	4, 8.5	4, 10.1	5	4, 9
	1.0625	0.5	---	13	13.6	---	13
1-1/2	1.25	0.75	---	20	10, 20	20	10, 20
	1.5	0.75	---	10, 17, 28	10, 17, 32.9	10, 17	10, 17, 28
2	1.5	0.75	---	10, 17, 28	10, 17, 32.9	10, 17	10, 17, 28
	2.0	0.75	---	30	30, 52.9	30, 50	30, 50

1. See [Fisher Catalog 12](#) for a full range of flow and sizing information.

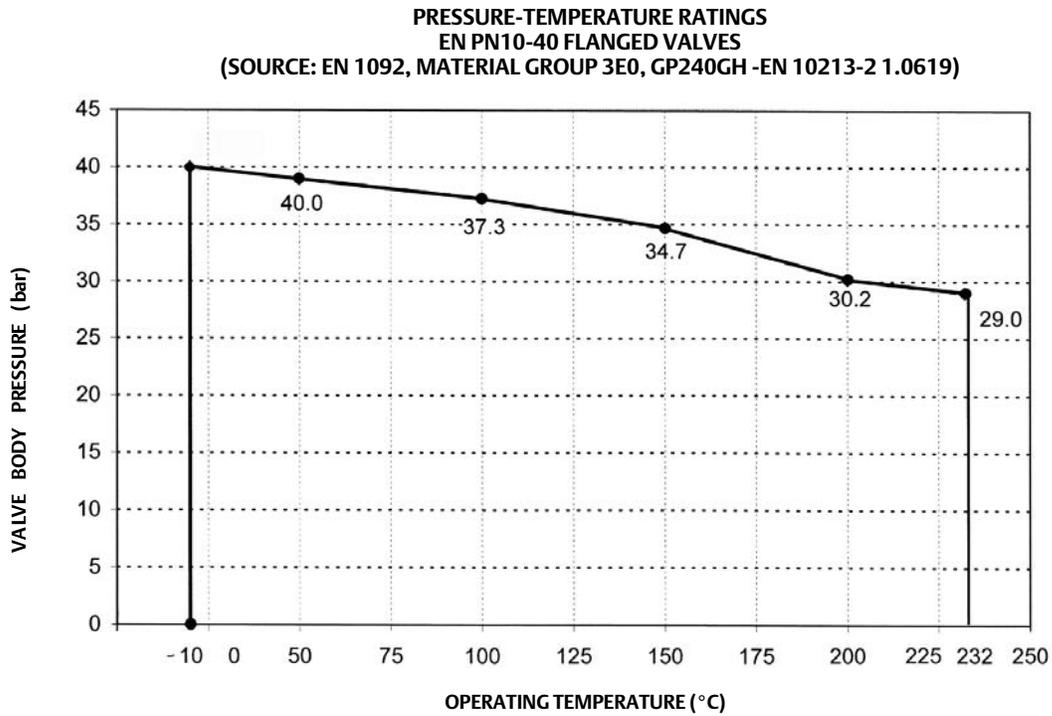
Table 4. Technical Specifications

VALVE TYPE	EN	ASME
NOMINAL SIZE	DN 15, 20, 25, 40, and 50	NPS 1/2, 3/4, 1, 1-1/2, and 2
END CONNECTIONS	Mates with PN 10-40 Flanges per EN 1092-1	Mates with ASME CL150 RF Flanges per ASME B16.5
PRESSURE RATING	PN 40 per EN 1092-2	ASME CL150 per ASME B16.34
SEAT PLUG SEALING	Metal-to-Metal or PTFE Soft Seat	Metal-to-Metal or PTFE Soft Seat
FLANGE FINISH	EN 500 to 300 Ra circular lay	ASME 250 to 125 Ra circular lay
FACE-TO-FACE DIMENSIONS	Consistent with EN 558-1	Consistent with EN 588-2 (same as ISA S75.03)
CHARACTERISTIC	Equal Percentage or Linear	Equal Percentage or Linear
TEMPERATURE LIMITS	-29°C to 232°C (-20°F to 450°F)	-29°C to 232°C (-20°F to 450°F)
ACTUATOR	See Baumann 16, 32, 54, and 70 Pneumatic Actuators Bulletin (D104175X012)	

Figure 4. Baumann Pressure-Temperature Ratings



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Table 5. Valve Dimensions

VALVE SIZE		A FACE-TO-FACE				B BONNET	
EN	ASME	EN 10-40		CL150			
DN	NPS	mm	in	mm	in	in	mm
15	1/2	130	5.1	184	7.25	3.2	80
20	3/4	150	5.9	184	7.25	3.2	80
25	1	160	6.3	184	7.25	3.3	83
40	1-1/2	200	7.9	222	8.75	3.9	99
50	2	230	9.1	254	10.00	4.2	107

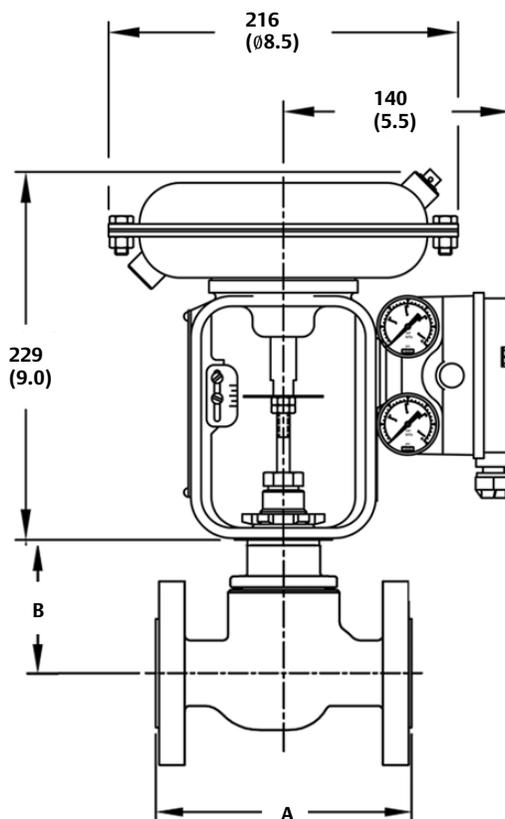
Table 6. Valve Assembly Weights

VALVE SIZE		WEIGHTS	
EN	ASME	kg	lb
DN	NPS		
15	1/2	3.9	9
20	3/4	4.8	11
25	1	6.4	14
40	1-1/2	10	22
50	2	15	33

Table 7. Actuator Weights

ACTUATOR TYPE	WEIGHTS	
	kg	lb
MV1020	10	22
VA1020	13.6	30
SVX24-MFT	Reference Baumann bulletin 52.1:SVACT (D104169X012)	
SVK24-MFT		

Figure 5. Dimensional Drawing



24000C WITH BAUMANN 32 ACTUATOR AND FISHER 3660/3661 POSITIONER

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Note: Actuator removal requires 115 mm (4.5 inches) vertical clearance.

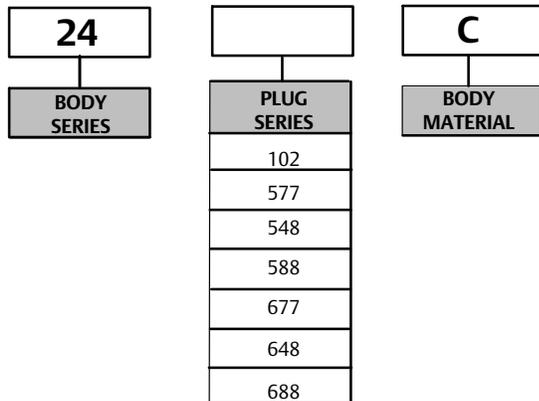
Table 8. Electric Actuators

Actuator Type
CML-250
CML-750
SVX24-MFT
SVK24-MFT

Table 9. 24000C Valve Model Numbering System

Model	Plug Series	Characteristic	Seat Leakage	Valve Body Material	
24	102	Linear / Metal Seat	IV	C	Carbon Steel
	577	Equal % / PTFE Seat	VI		
	548	Equal % / Metal Seat (S41600)	IV		
	588	Equal % / Metal Seat (S31600)	IV		
	677	Linear / PTFE Seat	VI		
	648	Linear / Metal Seat (S41600)	IV		
	688	Linear / Metal Seat (S41600)	IV		

Figure 6. 24000C Valve Model Nameplate Example



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