

Baumann™ 24000 Little Scotty™ Bronze Control Valve

Baumann Little Scotty industrial control valves are intended for general utility service in pressure, flow, and temperature control applications. This control valve is positioned to take advantage of the trend toward industrial grade requirements spanning general utility to special applications. Little Scotty 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.

Features

- Compact and light weight design reduces installed piping costs
- High quality S31600 austenitic stainless steel trim materials
- S41600 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
- Fisher™ FIELDVUE™ digital valve controller available for remote calibration and diagnostics in facilities utilizing the PlantWeb™ architecture



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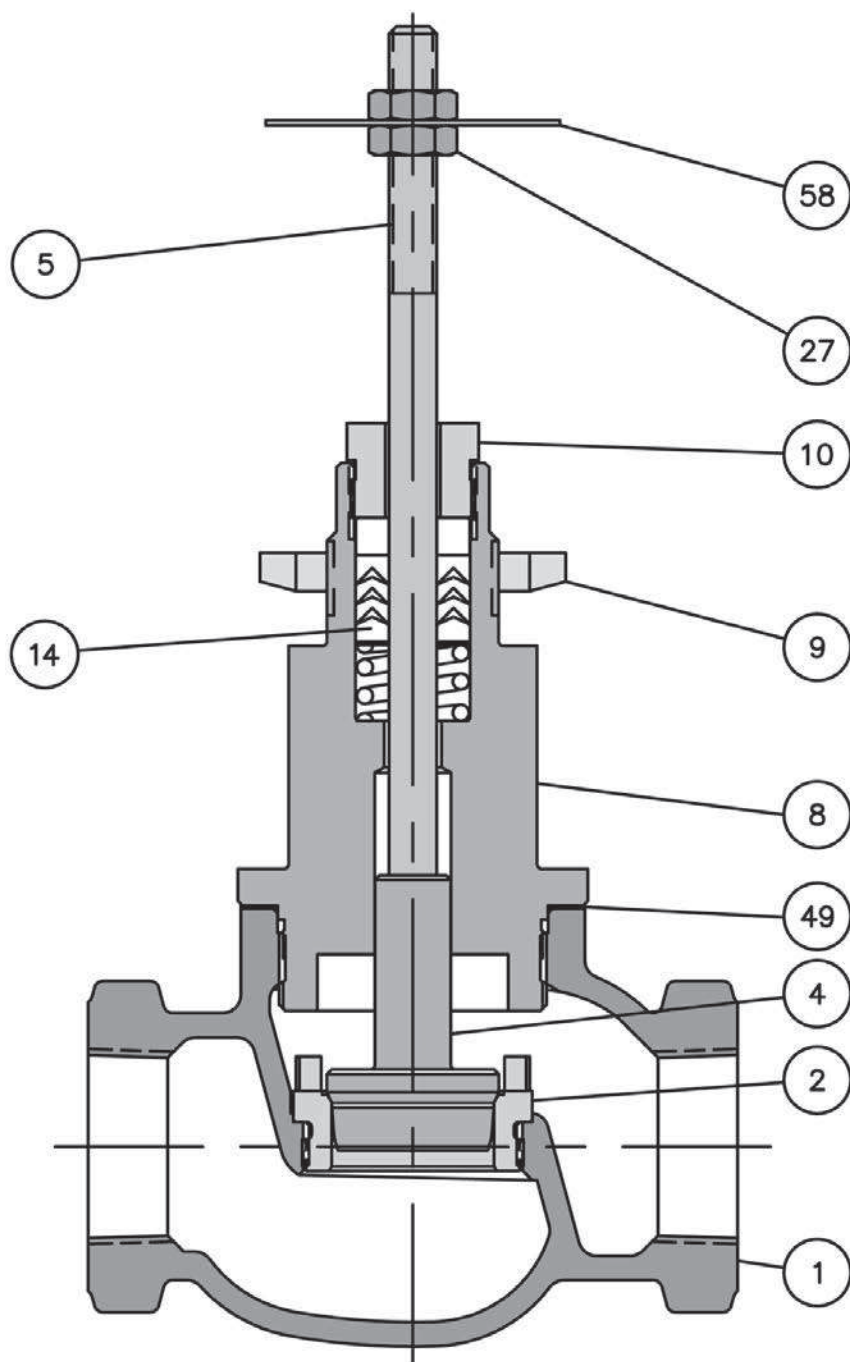
**24000 Little Scotty Control Valve with
Baumann 32 Actuator**



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**24000 Little Scotty Control Valve with
Baumann 32 Actuator and
FIELDVUE DVC2000 Digital Valve Controller**

Figure 1. Baumann Little Scotty Valve Body Subassembly with Standard PTFE Spring-Loaded Packing



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Table 1. Materials of Construction

Key No.	Description		Material
1	Valve Body		ASTM B62 Grade C83600
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
		Optional	ASTM A582 S41600 Condition T
	Plug (Metal Seat) Cv > 4.0	Standard	ASTM A276 S31600/ S31603
		Optional	ASTM A582 S41600 Condition T
	Plug (Soft Seat)		ASTM A276 S31600/ S31603 with PTFE (Polytetrafluoroethylene) insert
5	Stem		ASTM A276 S31600
8	Bonnet		ASTM B148 Alloy C95500
9	Drive Nut (Yoke)		S30400
10	Packing Follower		ASTM A276 S31600/ S31603 Dual Certified
14	Packing	Standard	V-Ring, see figure 2
		Optional	Molded Graphite, see figure 3
27	Locknuts		Stainless Steel (18-8 SST)
49	Body Gasket	Standard	Annealed Soft Copper
		Optional	Graphite Grade GHR with S31600 Insert
58	Travel Indicator		ASME SA240 S30400

Table 2. 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	0.20, 0.05, 0.10, 0.20	---	0.2, 0.5 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	0.50	---	4, 6	4, 6	5	4, 6
3/4	0.25	0.50	0.20, 0.05, 0.10, 0.20	---	0.2, 0.5 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	0.50	---	4, 7.5	4, 8	5	4, 8
1	0.25	0.50	0.20, 0.05, 0.10, 0.20	---	0.2, 0.5 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	0.50	---	4, 8.5	4, 9	5	4, 9
	1.0625	0.50	---	13	13	---	13
1-1/2	1.25	0.75	---	20	10, 20	20	10, 20
	1.5	0.75	---	10, 17, 28	10, 17, 28	10, 17	10, 17, 28
2	1.5	0.75	---	10, 17, 28	10, 17, 28	10, 17	10, 17, 28
	2.0	0.75	---	30	30, 50	30, 50	30, 50

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

Table 3. Technical Specifications

VALVE TYPE	EN	ASME
NOMINAL SIZE	DN 15, 20, 25, 40, & 50	NPS 1/2, 3/4, 1, 1-1/2, & 2
END CONNECTIONS	Screwed NPT	
PRESSURE RATING	400 psi @ 150°F / 250 psi @ 400°F (ASME B16.15 CL250)	
SEAT PLUG SEALING	Metal to metal or PTFE soft seat	
CHARACTERISTIC	Equal Percentage or Linear	
TEMPERATURE LIMITS	-29 to 204°C	-20 to 400°F
ACTUATOR	See Baumann 16, 32, 54, and 70 Pneumatic Actuators bulletin D104175X012	

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

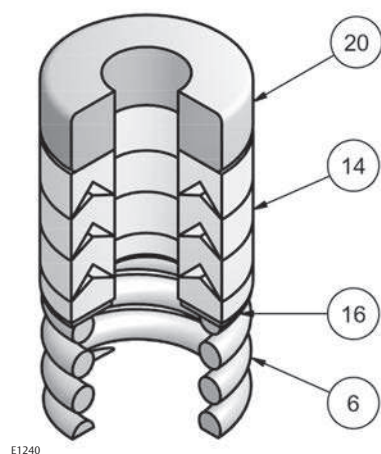


Table 4. Standard Spring-Loaded PTFE V-Ring Packing Kit

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

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

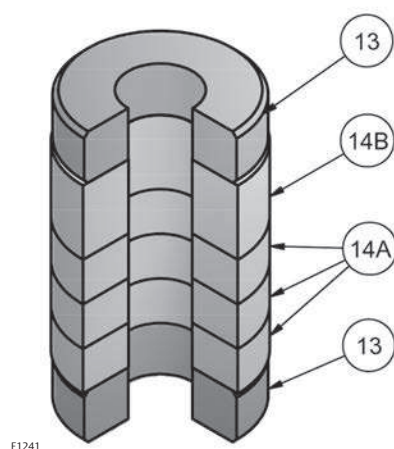
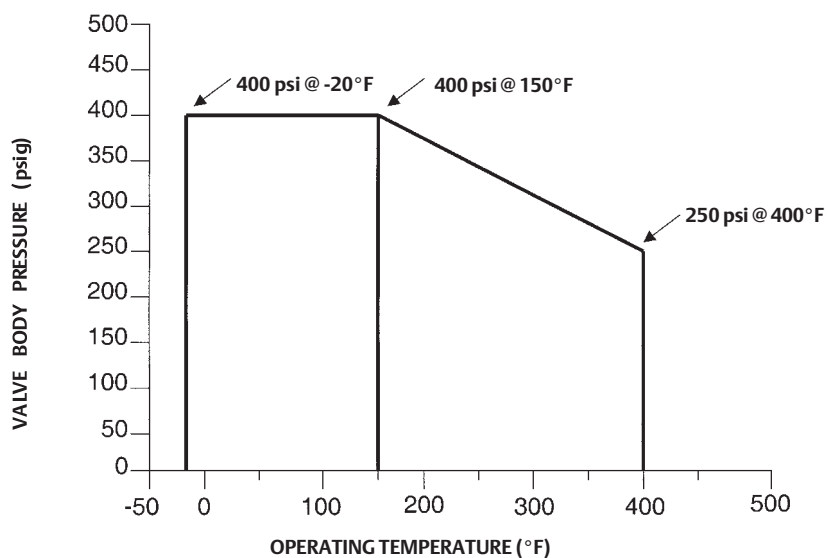


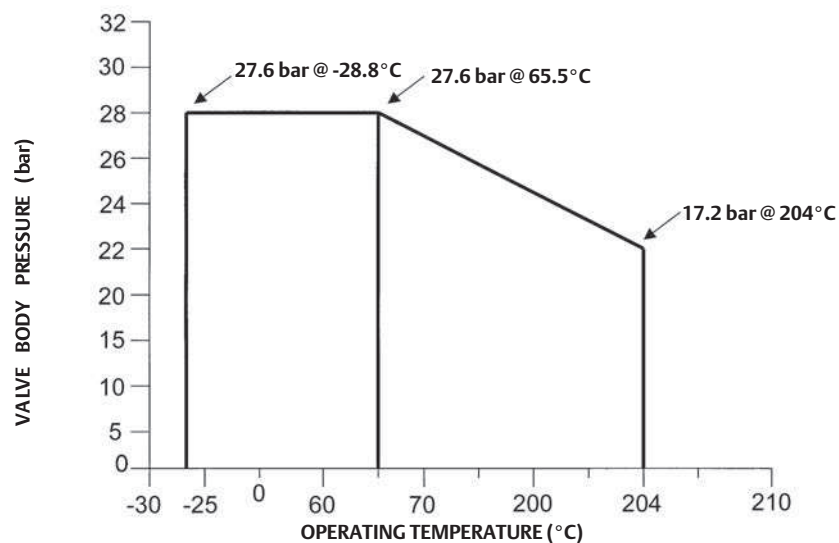
Table 5. Molded Graphite (Flexible Graphite) Packing Kit (Optional)

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

Figure 4. Baumann 24000 Pressure-Temperature Ratings

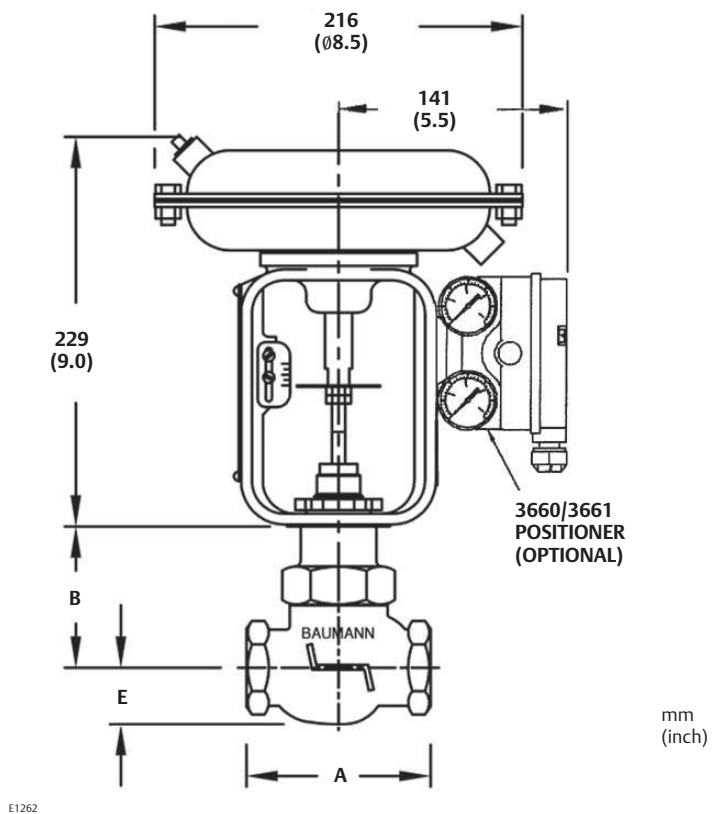


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Figure 5. Dimensional Drawing



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

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

Table 6. Dimensions

VALVE SIZE		A VALVE BODY		B BONNET		E	
DN	NPS	mm	inch	mm	inch	mm	inch
15	1/2	89	3.5	78	3.1	27	1.06
20	3/4	89	3.5	78	3.1	27	1.06
25	1	109	4.3	83	3.3	33	1.3
40	1-1/2	137	5.4	99	3.9	46	1.8
50	2	168	6.6	104	4.1	58	2.3

Table 7. Valve Assembly Weights

VALVE SIZE		WEIGHT	
DN	NPS	kg	lb
15	1/2	1.6	3.5
20	3/4	1.6	3.5
25	1	2.3	5.0
40	1-1/2	4.9	10.9
50	2	8.9	19.7

Product Bulletin

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24000 Valve
D103327X012

Table 8. Actuator Weights

ACTUATOR TYPE	WEIGHTS	
	kg	lb
MV1020	10	22
VA1020	14	30
SVX24-MFT	Reference Baumann bulletin 52.1:SVACT (D104169X012)	
SVK24-MFT		

Table 9. Electric Actuators

Actuator Type
MV1020
VA1020
SVX24-MFT
SVK24-MFT

Table 10. Model Numbering System

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

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