



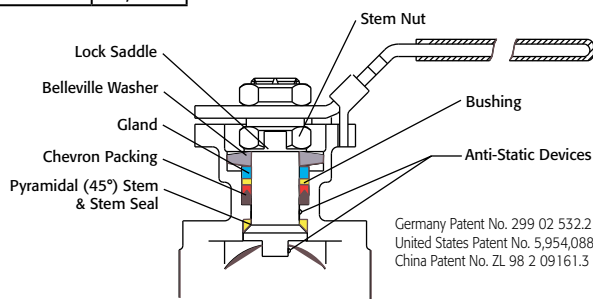
Triac 77 Series Ball Valves feature a high quality 316L investment casting. They are available with sanitary clamp or tube OD ends. Select the cavity filled or non-cavity filled design.

Superior leak protection is accomplished by using a live-loaded packing system featuring Belleville washers and double "V" ring packing. An ISO 5211 mounting pad is provided for easy automation.

VALVE SIZE	VALVE Cv
1/2"	10
3/4"	30
1"	65
1-1/2"	200
2"	410
2-1/2"	600
3"	1,050
4"	1,900

Excellent for:

- Pharmaceutical
- Food and Beverage
- Paint and Solvents
- Viscous Fluids
- Confectionaries



Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric



**Series 77
Sanitary End
3-Piece Design**

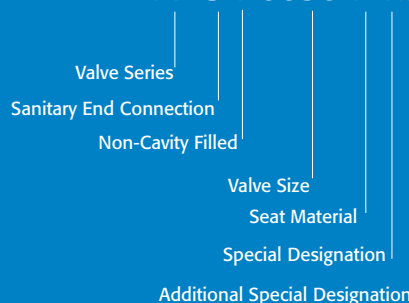
- Sizes 1/2" - 4"
- 800/1000 PSI WOG (by size)
- Available in 316L
- Cavity Filled and Non-Cavity Filled
- Sanitary Clamp Ends or Tube OD Ends
- Tube Pipe Design
- Superior Live Loaded Packing System
- ISO 5211 Actuator Mounting Pad
- Blowout Proof Stem w/ Dual Anti-Static Device
- Pyramidal Stem Seal Design
- Lockable Manual Handle

STANDARDS

Design	ANSI/ASME B16.34
End Connections	ANSI/ASME BPE-2019
Pressure Testing	API 598
Mounting	ISO 5211
Marking System for Valves	MSS SP-25, ISO 5209
CE Approval	PED 97/23/EC Module H
Safety Integrity	IEC 61508:2010; SIL 3
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015

HOW TO ORDER MANUAL VALVES

SAMPLE PART #
77-SA-0050-P-XX



See part number matrix for itemized options



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Cincinnati, Ohio 45246
www.atcontrols.com

PHONE (513) 247-5465
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sales@atcontrols.com

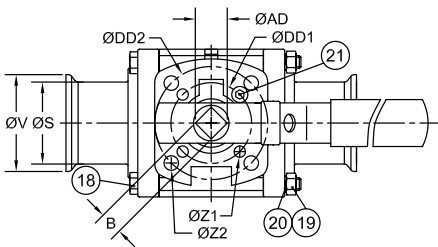
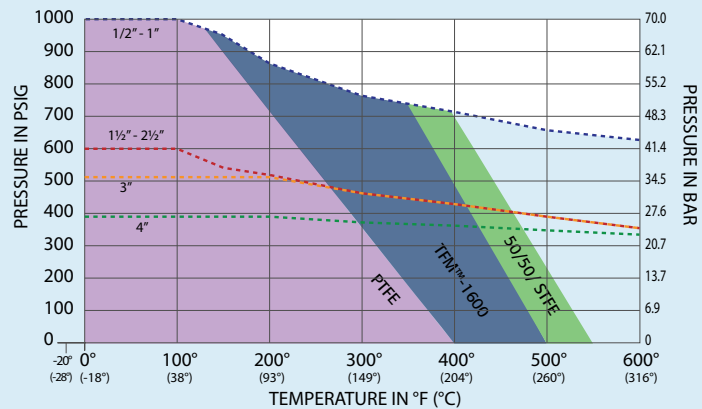
Series 77

3-Piece Sanitary End Ball Valve Tube Pipe Design

With or without cavity filler
240 Grit Internal Polish
Standard (15-20 RA)

Pressure vs. Temperature | Series 77 Body/End Cap/Seat Pressure Ratings

Temp	Pressure			
	1/2" - 1"	1 1/2" - 2 1/2"	3"	4"
-20°	1000	600	507	393
100°	1000	600	507	393
150°	946	539	507	393
200°	861	516	507	393
300°	778	467	467	382
400°	713	429	429	378
500°	665	396	396	352
600°	625	366	366	334



Breakaway Torques for PTFE

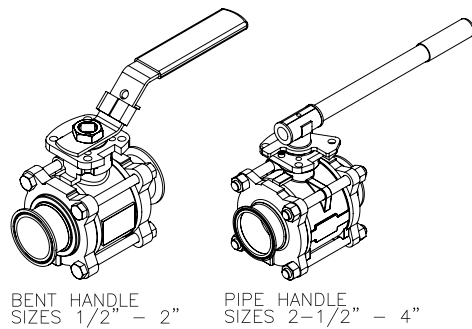
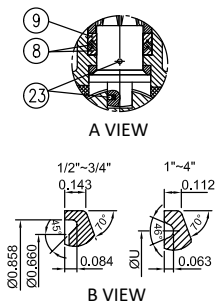
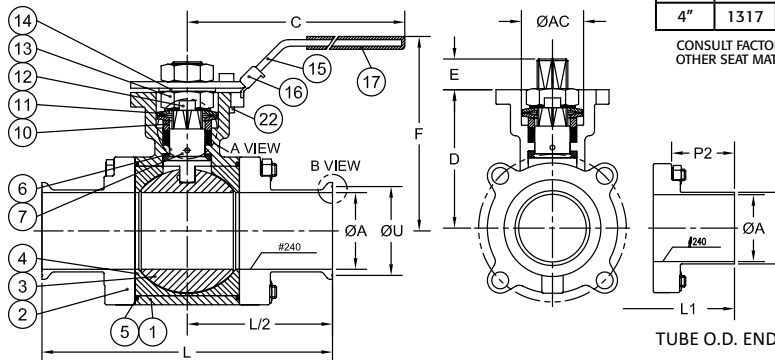
Size	Non-Cavity Filled	Cavity Filled
1/2"	80	95
3/4"	90	100
1"	142	160
1-1/2"	319	410
2"	390	490
2-1/2"	806	1010
3"	921	1075
4"	1317	1400

CONSULT FACTORY FOR OTHER SEAT MATERIALS

MATERIALS LIST

NO.	PART NAME	QTY.	MATERIAL
1	BODY	1	ASTM A351 GRADE CF3M
2	END CAP	2	ASTM A351 GRADE CF3M
3	BALL	1	ASTM A276 GRADE CF3M
4	SEAT	2	PTFE
5	JOINT GASKET	2	PTFE
6	STEM SEAL	1	PTFE
7	STEM	1	ASTM A276 SS 316L
8	GLAND PACKING	1	PTFE
9	GLAND WASHER	1	RTFE
10	GLAND BUSHING	1	AISI 304
11	BELLEVILLE WASHER	2	AISI 301
12	LOCK SADDLE	1	AISI 304
13	STEM NUT	2	AISI 304
14	STEM WASHER	1	AISI 304
15	HANDLE	1	AISI 304
16	HANDLE LOCK	1	AISI 304
17	HANDLE SLEEVE	1	VINYL
18	BODY BOLT	#	**
19	BODY BOLT NUT	&	**
20	WASHER	&	AISI 304
21	STOP BOLT	1	AISI 304
22	BOLT NUT	1	AISI 304
23	ANTI-STATIC DEVICE	2	AISI 316

FOR 1/2"-3" - 4 PCS ; FOR 4" - 6 PCS
& FOR 1/2"-2" - 4 PCS ; FOR 2-1/2"-3" - 8 PCS; FOR 4" - 12 PCS
**FOR 1/2"-2" - ASTM A193 GRADE B8; FOR 2-1/2"-4" - ISO 3506-1 A2-70
FOR 1/2"-2" - ASTM A194 GRADE 8; FOR 2-1/2"-4" - ISO 3506-2 A2-70



DIMENSIONS (IN)

SIZE	A	B	C	D	DD1	DD2	E	F	L	L1	P2	S	U	V	Z1	Z2	AC	AD	(LBS)	ISO 5211
1/2"	0.37	0.354	5.47	1.66	1.417	1.654	0.25	3.03	3.51	5.50	1.92	0.50	-	0.99	0.24	0.24	0.92	0.430	1.5	F03/F04
3/4"	0.62	0.354	5.47	1.89	1.417	1.654	0.27	3.27	4.00	5.75	1.96	0.75	-	0.99	0.24	0.24	0.92	0.430	1.8	F03/F04
1"	0.87	0.433	6.50	2.23	1.654	1.969	0.44	3.74	4.51	6.25	2.00	1.00	1.71	1.99	0.24	0.28	1.14	0.563	2.7	F04/F05
1-1/2"	1.37	0.551	8.47	3.05	1.969	2.756	0.56	5.00	5.52	7.50	2.23	1.50	1.71	1.99	0.28	0.34	1.54	0.744	7.0	F05/F07
2"	1.87	0.551	8.47	3.35	1.969	2.756	0.56	5.28	6.26	8.50	2.46	2.00	2.20	2.52	0.28	0.34	1.54	0.744	9.8	F05/F07
2-1/2"	2.37	0.669	11.81	4.28	2.756	4.016	0.67	6.54	6.85	9.75	2.55	2.50	2.78	3.05	0.34	0.47	2.07	0.885	19.6	F07/F10
3"	2.87	0.669	14.57	4.63	2.756	4.016	0.71	6.93	7.61	10.50	2.69	3.00	3.28	3.58	0.34	0.47	2.07	0.885	25.9	F07/F10
4"	3.83	0.748	14.57	5.22	2.756	4.016	0.67	7.48	8.90	12.50	3.14	4.00	4.34	4.68	0.34	0.47	2.07	0.885	47.4	F07/F10

Tube O.D. according to ASME BPE 2019



Pneumatic Double Acting Automated Ball Valve Package

Series 77
Sanitary End
3-Piece Ball Valve

Sizes 1/2"-4"

800/1000 PSI WOG (by size)

Available in 316L

Cavity Filled and Non-Cavity Filled

Sanitary Clamp Ends or
Tube OD Ends

Tube Pipe Design

Superior Live Loaded Packing
System

Blowout Proof Stem w/
Dual Anti-Static Devices

PTFE Seats standard

Pyramidal Stem Seal Design

STANDARDS

Design	ANSI/ASME B16.34
End Connections	ANSI/ASME BPE-2019
Pressure Testing	API 598
Mounting	ISO 5211
Marking System for Valves	MSS SP-25, ISO 5209
CE Approval	PED 97/23/EC Module H
Safety Integrity	IEC 61508:2010; SIL 3
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015



DIMENSIONS (IN) NON-CAVITY FILLED

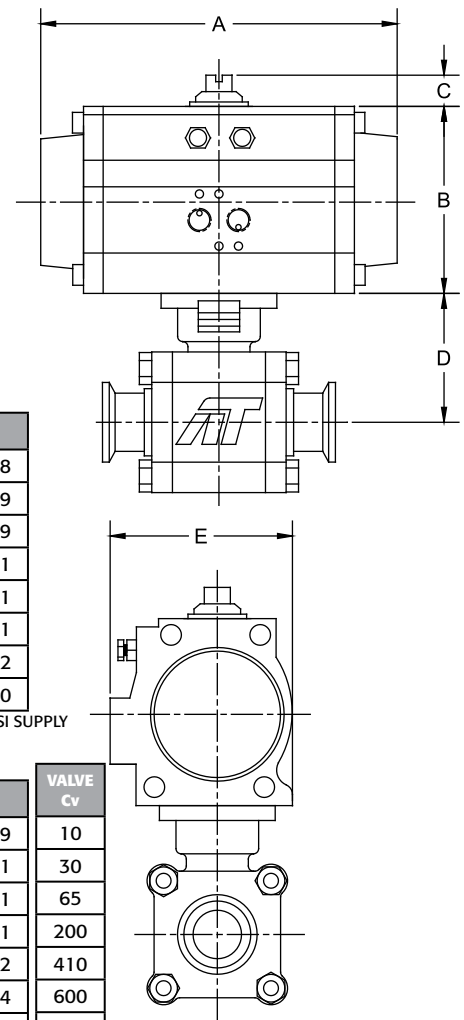
VALVE SIZE	A	B	C	D	E
1/2"	5.98	2.76	0.79	1.66	2.58
3/4"	7.95	3.43	0.79	1.89	3.29
1"	7.95	3.43	0.79	2.23	3.29
1-1/2"	9.29	4.49	0.79	3.05	4.41
2"	9.29	4.49	0.79	3.35	4.41
2-1/2"	9.29	4.49	0.79	4.28	4.41
3"	10.87	4.88	0.79	4.63	4.82
4"	11.46	5.28	0.79	5.22	5.20

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

CAVITY FILLED

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	7.95	3.43	0.79	1.66	3.29	10
3/4"	9.29	4.49	0.79	1.89	4.41	30
1"	9.29	4.49	0.79	2.23	4.41	65
1-1/2"	9.29	4.49	0.79	3.05	4.41	200
2"	10.87	4.88	0.79	3.35	4.82	410
2-1/2"	13.90	6.18	0.79	4.28	6.04	600
3"	13.90	6.18	0.79	4.63	6.04	1,050
4"	15.16	6.93	1.18	5.22	6.69	1,900

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY



SERIES 77 Sanitary Ends

NON-CAVITY FILLED

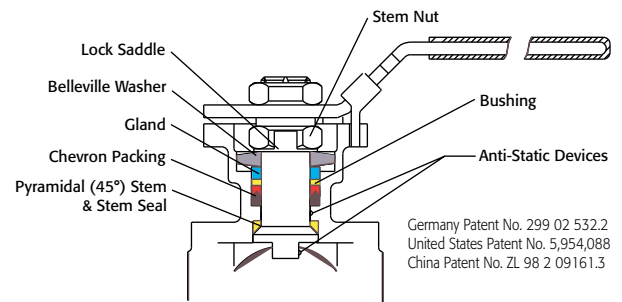
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-C1-050/TR1D-XX
3/4"	77-C1-075/2R2D-XX
1"	77-C1-100/2R2D-XX
1-1/2"	77-C1-150/2R3D-XX
2"	77-C1-200/2R3D-XX
2-1/2"	77-C1-250/2R3D-XX
3"	77-C1-300/2R4D-XX
4"	77-C1-400/2R5D-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-C1-050/TR1D-XX
3/4"	77-C1-075/2R2D-XX
1"	77-C1-100/2R2D-XX
1-1/2"	77-C1-150/2R3D-XX
2"	77-C1-200/2R3D-XX
2-1/2"	77-C1-250/2R3D-XX
3"	77-C1-300/2R4D-XX
4"	77-C1-400/2R5D-XX

CAVITY FILLED

SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-CF-050/2R2D-XX
3/4"	77-CF-075/2R3D-XX
1"	77-CF-100/2R3D-XX
1-1/2"	77-CF-150/2R3D-XX
2"	77-CF-200/2R4D-XX
2-1/2"	77-CF-250/2R6D-XX
3"	77-CF-300/2R6D-XX
4"	77-CF-400/2R7D-XX

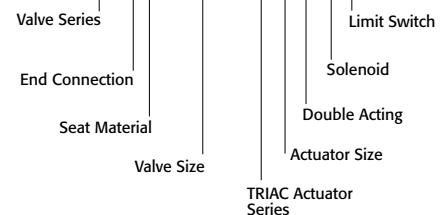
SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-CF-050/2R2D-XX
3/4"	77-CF-075/2R3D-XX
1"	77-CF-100/2R3D-XX
1-1/2"	77-CF-150/2R3D-XX
2"	77-CF-200/2R4D-XX
2-1/2"	77-CF-250/2R6D-XX
3"	77-CF-300/2R6D-XX
4"	77-CF-400/2R7D-XX



Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

SAMPLE PART #

77-CF-150/2R3D-XX



See valve part number matrix for complete part number and options.

OPTIONS

DESCRIPTION	SUFFIX	DESCRIPTION	SUFFIX
Type 4 Solenoid	(A)	Type 4 Limit Switch (2) spdt	(A)
Type 7 Solenoid	(B)	Type 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

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Other options available - call for details
Actuators are sized based on clean/clear fluid.



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Pneumatic Spring Return Automated Ball Valve Package

Series 77
Sanitary End
3-Piece Ball Valve

Sizes 1/2"-4"

800/1000 PSI WOG (by size)

Available in 316L

Cavity Filled and Non-Cavity Filled

Sanitary Clamp Ends or
Tube OD Ends

Tube Pipe Design

Superior Live Loaded Packing
System

Blowout Proof Stem w/
Dual Anti-Static Devices

PTFE Seats standard

Pyramidal Stem Seal Design

STANDARDS

Design	ANSI/ASME B16.34
End Connections	ANSI/ASME BPE-2019
Pressure Testing	API 598
Mounting	ISO 5211
Marking System for Valves	MSS SP-25, ISO 5209
CE Approval	PED 97/23/EC Module H
Safety Integrity	IEC 61508:2010; SIL 3
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015



DIMENSIONS (IN)

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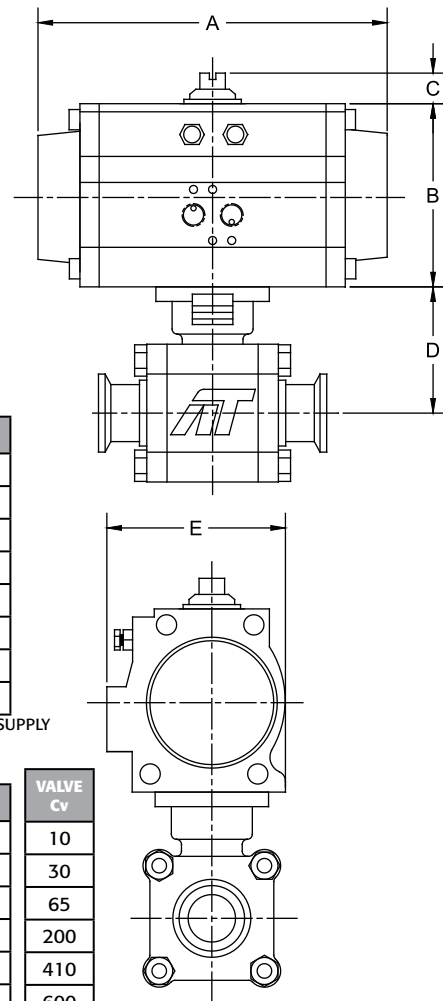
VALVE SIZE	A	B	C	D	E
1/2"	7.95	3.43	0.79	1.66	3.29
3/4"	9.29	4.49	0.79	1.89	4.41
1"	9.29	4.49	0.79	2.23	4.41
1-1/2"	9.29	4.49	0.79	3.05	4.41
2"	10.87	4.88	0.79	3.35	4.69
2-1/2"	11.46	5.28	0.79	4.28	4.82
3"	13.90	6.18	0.79	4.63	5.20
4"	13.90	6.18	0.79	5.22	6.04

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

CAVITY FILLED

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	9.29	4.49	0.79	1.66	4.41	10
3/4"	9.29	4.49	0.79	1.89	4.41	30
1"	9.29	4.49	0.79	2.23	4.41	65
1-1/2"	10.87	4.88	0.79	3.05	4.82	200
2"	11.46	5.28	0.79	3.35	5.20	410
2-1/2"	15.16	6.93	1.18	4.28	6.69	600
3"	15.16	6.93	1.18	4.63	6.69	1,050
4"	22.68	9.17	1.18	5.22	8.43	1,900

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY



SERIES 77 Sanitary Ends

NON-CAVITY FILLED

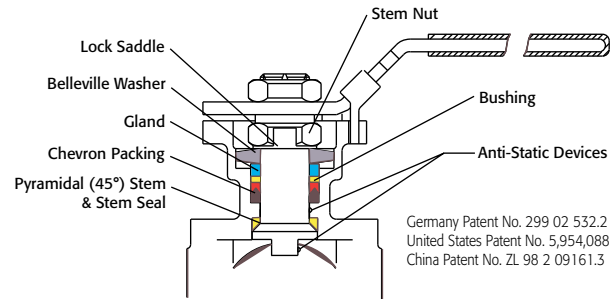
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-C1-050/2R2S-XX
3/4"	77-C1-075/2R3S-XX
1"	77-C1-100/2R3S-XX
1-1/2"	77-C1-150/2R3S-XX
2"	77-C1-200/2R4S-XX
2-1/2"	77-C1-250/2R6S-XX
3"	77-C1-300/2R6S-XX
4"	77-C1-400/2R7S-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-C1-050/2R2S-XX
3/4"	77-C1-075/2R3S-XX
1"	77-C1-100/2R3S-XX
1-1/2"	77-C1-150/2R3S-XX
2"	77-C1-200/2R4S-XX
2-1/2"	77-C1-250/2R6S-XX
3"	77-C1-300/2R6S-XX
4"	77-C1-400/2R7S-XX

CAVITY FILLED

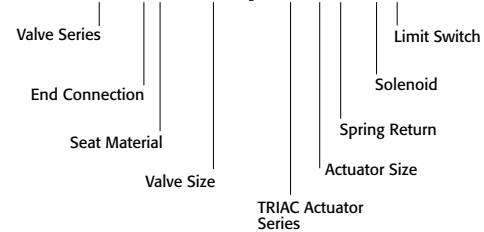
SIZED FOR 80 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-CF-050/2R3S-XX
3/4"	77-CF-075/2R3S-XX
1"	77-CF-100/2R3S-XX
1-1/2"	77-CF-150/2R4S-XX
2"	77-CF-200/2R5S-XX
2-1/2"	77-CF-250/2R7S-XX
3"	77-CF-300/2R7S-XX
4"	77-CF-400/2R9S-XX

SIZED FOR 60 psi AIR SUPPLY	
SIZE	MODEL
1/2"	77-CF-050/2R3S-XX
3/4"	77-CF-075/2R3S-XX
1"	77-CF-100/2R3S-XX
1-1/2"	77-CF-150/2R4S-XX
2"	77-CF-200/2R5S-XX
2-1/2"	77-CF-250/2R7S-XX
3"	77-CF-300/2R7S-XX
4"	77-CF-400/2R9S-XX



Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

SAMPLE PART # 77-C1-050/2R2S-XX



See valve part number matrix for complete part number and options.

OPTIONS

DESCRIPTION	SUFFIX	DESCRIPTION	SUFFIX
Type 4 Solenoid	(A)	Type 4 Limit Switch (2) spdt	(A)
Type 7 Solenoid	(B)	Type 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

Other options available - call for details
Actuators are sized based on clean/clear fluid.



Electric Automated Ball Valve Package

Series 77
Sanitary End
3-Piece Ball Valve

- Sizes 1/2"-4"
- 800/1000 PSI WOG (by size)
- Available in 316L
- Cavity Filled and Non-Cavity Filled
- Sanitary Clamp Ends or Tube OD Ends
- Tube Pipe Design
- Superior Live Loaded Packing System
- Blowout Proof Stem w/ Dual Anti-Static Devices
- PTFE Seats standard
- Pyramidal Stem Seal Design

STANDARDS

Design	ANSI/ASME B16.34
End Connections	ANSI/ASME BPE-2019
Pressure Testing	API 598
Mounting	ISO 5211
Marking System for Valves	MSS SP-25, ISO 5209
CE Approval	PED 97/23/EC Module H
Safety Integrity	IEC 61508:2010; SIL 3
Material Certification	EN 10204-3.1 MTR
Quality Assurance	ISO 9001:2015



DIMENSIONS (IN) NON-CAVITY FILLED

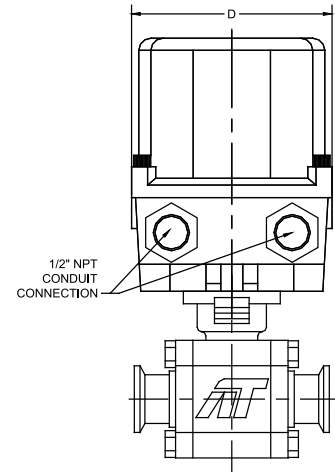
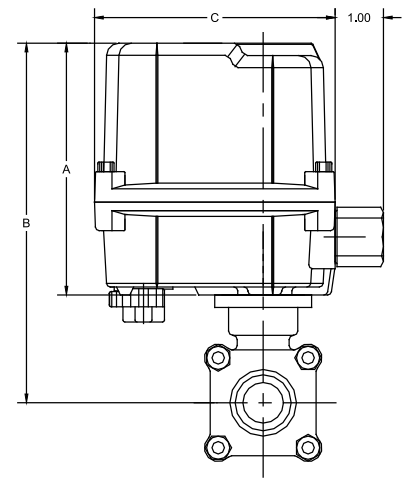
VALVE SIZE	A	B	C	D
1/2"	5.24	6.90	4.94	4.08
3/4"	5.24	7.13	4.94	4.08
1"	5.24	7.47	4.94	4.08
1-1/2"	5.24	8.29	4.94	4.08
2"	9.25	12.60	10.16	6.69
2-1/2"	10.55	14.83	13.31	9.02
3"	10.55	15.18	13.31	9.02
4"	10.55	15.77	13.31	9.02

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

CAVITY FILLED

VALVE SIZE	A	B	C	D	VALVE Cv
1/2"	5.24	6.90	4.94	4.08	10
3/4"	5.24	7.13	4.94	4.08	30
1"	5.24	7.47	4.94	4.08	65
1-1/2"	5.24	8.29	4.94	4.08	200
2"	9.25	12.60	10.16	6.69	410
2-1/2"	10.55	14.83	13.31	9.02	600
3"	10.55	15.18	13.31	9.02	1,050
4"	10.55	15.77	13.31	9.02	1,900

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

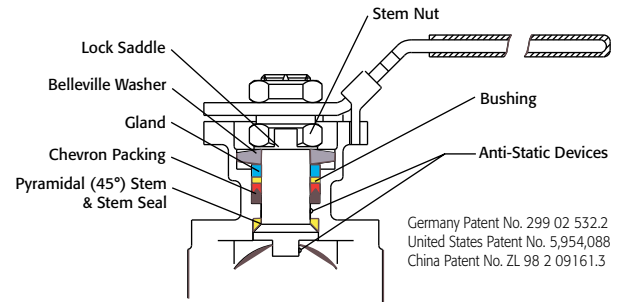


SERIES 77 Sanitary Ends

NON-CAVITY FILLED

SIZE	MODEL
1/2"	77-C1-050/WEA1-XX
3/4"	77-C1-075/WEA1-XX
1"	77-C1-100/WEA1-XX
1-1/2"	77-C1-150/WEA1-XX
2"	77-C1-200/WEB1-XX
2-1/2"	77-C1-250/WEC1-XX
3"	77-C1-300/WEC1-XX
4"	77-C1-400/WED1-XX

SIZE	MODEL
1/2"	77-C1-050/WEA2-XX
3/4"	77-C1-075/WEA2-XX
1"	77-C1-100/WEA2-XX
1-1/2"	77-C1-150/WEA2-XX
2"	77-C1-200/WEB2-XX
2-1/2"	77-C1-250/WEC2-XX
3"	77-C1-300/WEC2-XX
4"	77-C1-400/WED2-XX



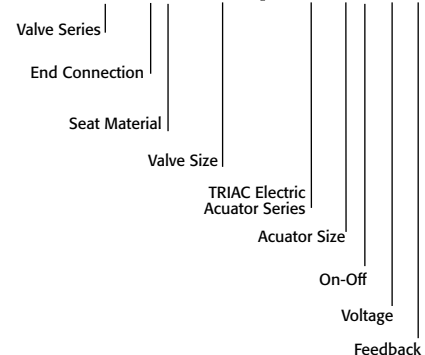
Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

CAVITY FILLED

SIZE	MODEL
1/2"	77-CF-050/WEA1-XX
3/4"	77-CF-075/WEA1-XX
1"	77-CF-100/WEA1-XX
1-1/2"	77-CF-150/WEB1-XX
2"	77-CF-200/WEC1-XX
2-1/2"	77-CF-250/WED1-XX
3"	77-CF-300/WEE1-XX
4"	77-CF-400/WEE1-XX

SIZE	MODEL
1/2"	77-CF-050/WEA2-XX
3/4"	77-CF-075/WEA2-XX
1"	77-CF-100/WEA2-XX
1-1/2"	77-CF-150/WEB2-XX
2"	77-CF-200/WEC2-XX
2-1/2"	77-CF-250/WED2-XX
3"	77-CF-300/WEE2-XX
4"	77-CF-400/WEE2-XX

SAMPLE PART # 77-C1-050/WEA1-XX



OPTIONS
DESCRIPTION
24 VAC/24 VDC/220VAC
Feedback potentiometer

NOTE: Heater and thermostat standard (2) auxiliary switches standard
Other options available - call for details
Actuators are sized based on clean/clear fluid.

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Valve Options

Various Seat Materials

PTFE, RTFE, 50/50 STFE, 25% CTFE, Delrin, PEEK, UHMWPE, TFM-1600

Operator Options

Quarter-turn Gear Operators
Spring Return "Deadman" Handles
Oval handles, TEE Handles

Specials and Solutions

Steam Jackets
Stem Extensions
V-ported Control Valves
Multi-port Valve Solutions
Fugitive Emissions Bonnets (TSM's)
Oxygen Cleaning
Lockout Brackets
Vented Balls
"No Play" Mounting Kits

• FM Approved Valves and Assemblies



Manual and automated valve assemblies for gas burner management applications and safety shutoff

Other Products

Special Seats Balls and Seal Designs



Steam Jacketed Valves



Floor Mounted Damper Drives



Limit Switches Mounted on Manual Valves



Fusible Link Assemblies



180° Actuators



Lockout Mounting Kits



Stem Extensions



Special Multi-Port Valves



Dual Valve Assemblies

