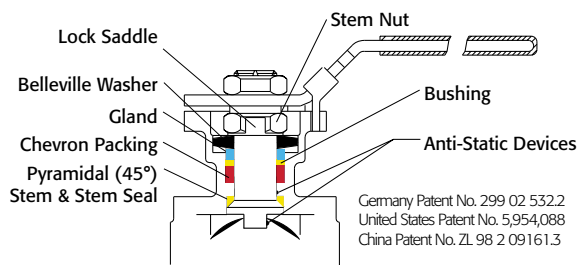




Triac 83 Series 3-Piece Ball Valves are the finest quality 3-piece valves on the market. The high quality investment castings feature a fully machined bore. The superior live-loaded packing system is accomplished with Belleville washers, "V" ring packing and a unique primary pyramidal stem seal. This advanced sealing system provides protection against stem leaks experienced by ordinary ball valves.



VALVE SIZE	VALVE CV
1/4"	7
3/8"	8
1/2"	15
3/4"	40
1"	70
1-1/4"	110
1-1/2"	250
2"	430

RTFE seats are standard, but various options are available for seat materials. The 50/50 STFE seat option is excellent for services that call for higher temperatures and more difficult applications including steam. Call us for details.

Easy to Automate!

See automated data sheets for pre-sized assemblies



Pneumatic



Electric

TRIAC
CONTROLS

Series 83

HIGH PERFORMANCE 3-Piece Design

Sizes 1/4" – 2"

Full Port Design

1500/2000 psi WOG (by size)

316SST or WCB

Threaded, Socket Weld, or Butt Weld Ends

Superior Live Loaded Packing System

ISO 5211 Actuator Mounting Pad

Blowout-Proof Stem w/Dual Anti-Static Devices

RTFE Seats Standard

Pyramidal Stem Seal Design

Lockable Manual Handle

STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, MSS SP-110, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

HOW TO ORDER MANUAL VALVES

SAMPLE PART #

83C-TH-0200-XXX

Valve Series	Carbon Steel	End Connection	Valve Size	Seat Material	Special Designation	Additional Special Designation
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See part number matrix for itemized options

A-T Controls, Inc.

9955 International Blvd.
Cincinnati, Ohio 45246
www.atcontrols.com

PHONE (513) 247-5465
FAX (513) 247-5462
sales@atcontrols.com

Series 83

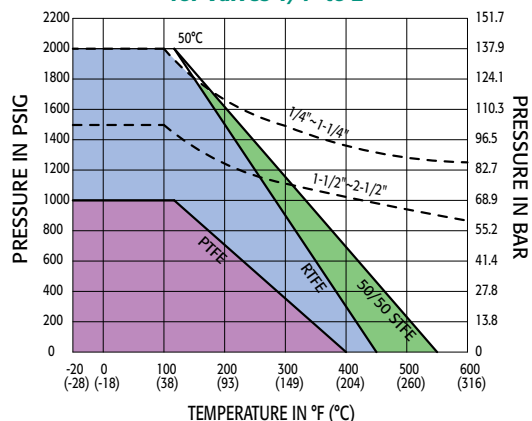
High Performance, Full Port
3-Piece Ball Valve
ISO 5211 Mounting Pad

1500 & 2000 psi WOG by size
1/4" to 2"

BREAKAWAY TORQUES RTFE SEATS	
1/4"	60
3/8"	60
1/2"	70
3/4"	90
1"	130
1-1/4"	180
1-1/2"	250
2"	325

NOTE: For other seat material, consult factory

Pressure vs. Temperature Chart
for Valves 1/4" to 2"



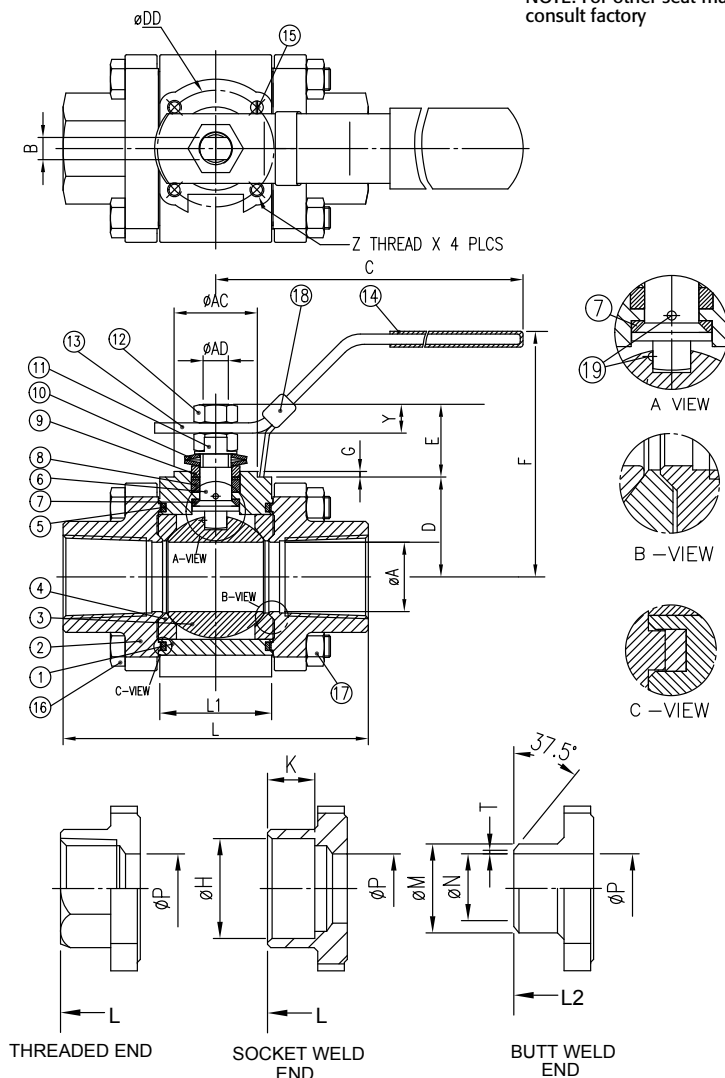
NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials.

MATERIALS LIST

NO.	PART NAME	QTY	STAINLESS STEEL	CARBON STEEL
1	BODY	1	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	TH END CAP	2	ASTM A351 GRADE CF8M	ASTM A216 GRADE WCB
2	SW/BW END CAP	2	ASTM A351 GRADE CF3M	ASTM A216 GRADE WCB
3	BALL	1	1/4" THRU 3/8" ASTM A276 SS 316	1/4" THRU 3/8" ASTM A276 SS 316
3	BALL	1	1/2" THRU 2" ASTM A351 GRADE CF8M	1/2" THRU 2" ASTM A351 GRADE CF8M
4	SEAT	2	RTFE	RTFE
5	JOINT GASKET	2	PTFE	PTFE
6	STEM	1	ASTM A351 GRADE CF8M	ASTM A351 GRADE CF8M
7	STEM SEAL	1	RTFE	RTFE
8	STEM PACKING	1	MG1241	MG1241
9	GLAND BUSHING	1	AISI 304	AISI 304
10	BELLEVILLE WASHER	2	AISI 301	AISI 301
11	LOCK SADDLE	1	AISI 304	AISI 304
12	STEM NUT	2	AISI 304	AISI 304
13	HANDLE	1	AISI 304	AISI 304
14	HANDLE SLEEVE	1	VINYL	VINYL
15	STOP BOLT	1	AISI 304	AISI 304
16	BODY BOLT	*	ASTM A193 GRADE B8	ASTM A193 GRADE B8
17	BODY NUT	*	ASTM A194 GRADE 8	ASTM A194 GRADE 8
18	HANDLE LOCK	1	AISI 304	AISI 304
19	ANTI-STATIC DEVICE	2	AISI 316	AISI 316

*1/4" thru 1-1/2" — 4 pcs.

*2" — 6 pcs.



DIMENSIONS (IN)

SIZE	A	AC	AD	B	C	D	DD	E	F	G	H	K	L	L1	L2	M	N	P	T	Y	Z	ISO 5211	LBS
1/4"	0.39	0.98	0.37	0.256	5.28	1.17	1.417	0.29	2.53	0.02	0.56	0.39	2.55	0.81	2.55	0.54	0.36	0.39	0.06	0.24	M5	F03	1.5
3/8"	0.39	0.98	0.37	0.256	5.28	1.17	1.417	0.29	2.53	0.02	0.69	0.39	2.55	0.81	2.55	0.69	0.49	0.39	0.06	0.24	M5	F03	1.5
1/2"	0.59	0.98	0.37	0.256	5.28	1.14	1.417	0.63	2.81	0.08	0.86	0.39	2.85	0.81	2.95	0.85	0.59	0.59	0.06	0.29	M5	F03	1.5
3/4"	0.79	0.98	0.37	0.256	5.28	1.30	1.417	0.71	2.99	0.08	1.07	0.51	3.36	0.96	3.54	1.07	0.79	0.79	0.06	0.35	M5	F03	1.9
1"	0.98	1.18	0.44	0.315	6.69	1.42	1.654	0.97	3.24	0.08	1.33	0.51	4.15	1.24	4.33	1.34	0.98	0.98	0.06	0.43	M5	F04	3.2
1-1/4"	1.26	1.18	0.44	0.315	6.69	1.57	1.654	0.96	3.44	0.08	1.69	0.51	4.37	1.63	4.53	1.68	1.26	1.26	0.06	0.38	M5	F04	4.0
1-1/2"	1.50	1.38	0.56	0.382	8.15	1.86	1.969	1.19	4.08	0.09	1.93	0.51	5.01	1.91	5.12	1.91	1.50	1.50	0.06	0.48	M6	F05	5.7
2"	1.97	1.38	0.56	0.382	8.15	2.74	1.969	1.02	4.79	0.06	2.41	0.63	5.62	2.22	5.12	2.38	1.97	1.97	0.06	0.5	M6	F05	8.1

A-T Controls reserves the right to change product designs and technical/dimensional specifications without notice.



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9955 International Blvd.
Cincinnati, Ohio 45246
www.atcontrols.com

PHONE (513) 247-5465
FAX (513) 247-5462
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Pneumatic Double Acting

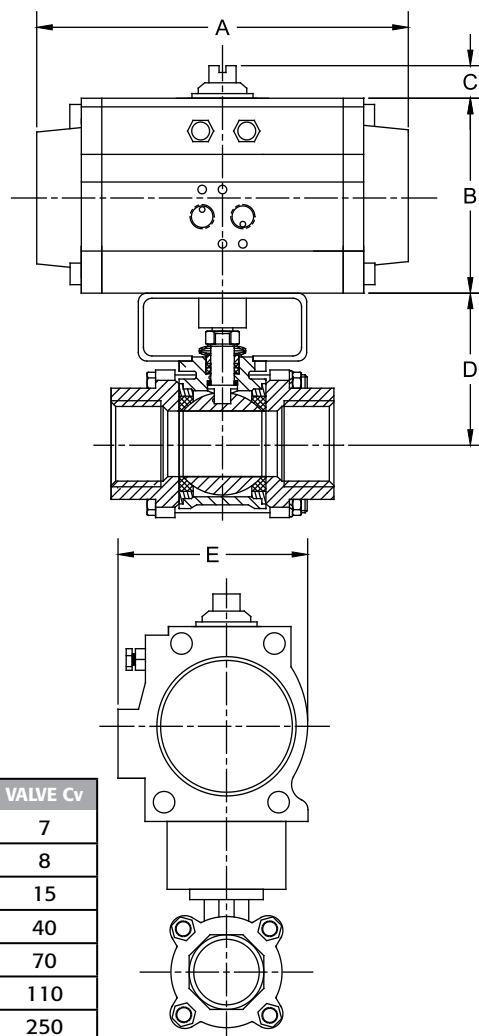
Automated Ball Valve Package

Series 83 3-Piece Ball Valve

Sizes 1/4" - 2"
Full Port Design
1500/2000 psi WOG (by size)
316SST or WCB
TH, SW, or BW Ends
Superior Live Loaded Packing
System
Blowout Proof Stem w/ Dual
Anti-Static Devices
RTFE Seats Standard
Pyramidal Stem Seal Design

STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, MSS SP-110, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008



DIMENSIONS (IN)

SIZE	A	B	C	D	E	VALVE Cv
1/4"	5.98	2.76	0.79	2.65	2.58	7
3/8"	5.98	2.76	0.79	2.65	2.58	8
1/2"	5.98	2.76	0.79	2.65	2.58	15
3/4"	7.95	3.43	0.79	2.65	3.29	40
1"	7.95	3.43	0.79	2.78	3.29	70
1-1/4"	7.95	3.43	0.79	2.90	3.29	110
1-1/2"	9.29	4.49	0.79	3.13	4.41	250
2"	9.29	4.49	0.79	3.42	4.41	430

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZED FOR 80 psi AIR SUPPLY

SIZE	MODEL
1/4"	83-TX-025/TR1D-XX
3/8"	83-TX-038/TR1D-XX
1/2"	83-TX-050/TR1D-XX
3/4"	83-TX-075/2R2D-XX
1"	83-TX-100/2R2D-XX
1-1/4"	83-TX-125/2R2D-XX
1-1/2"	83-TX-150/2R3D-XX
2"	83-TX-200/2R3D-XX

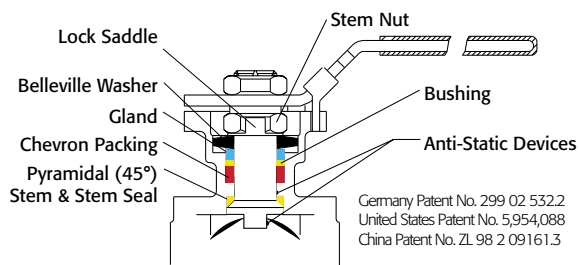
SIZED FOR 60 psi AIR SUPPLY

SIZE	MODEL
1/4"	83-TX-025/TR1D-XX
3/8"	83-TX-038/TR1D-XX
1/2"	83-TX-050/TR1D-XX
3/4"	83-TX-075/2R2D-XX
1"	83-TX-100/2R2D-XX
1-1/4"	83-TX-125/2R2D-XX
1-1/2"	83-TX-150/2R3D-XX
2"	83-TX-200/2R3D-XX

OPTIONS

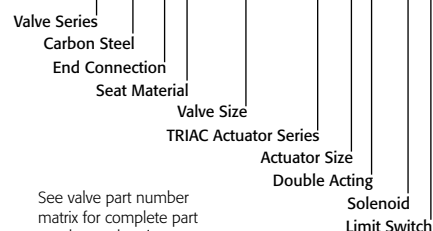
DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

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



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

SAMPLE PART # 83C-TX-100/2R2D-XX



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



Pneumatic Spring Return

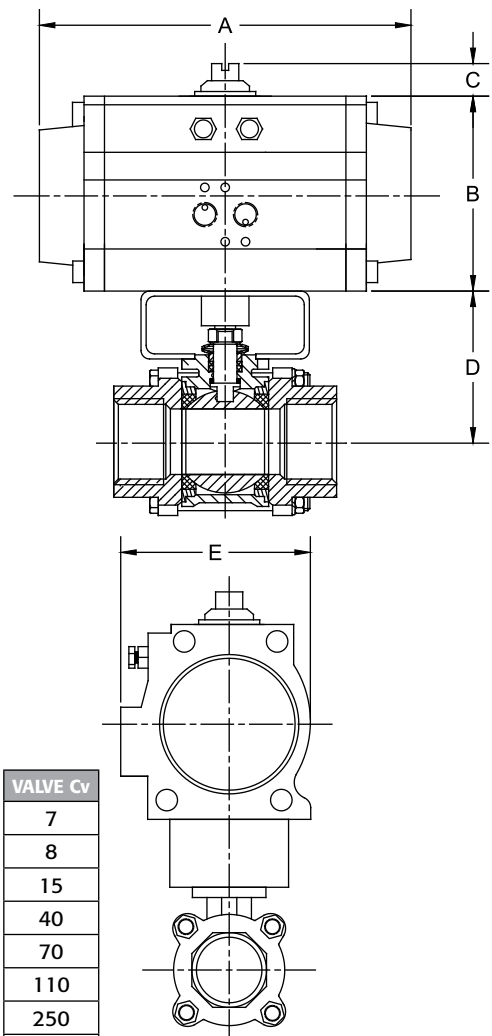
Automated Ball Valve Package

Series 83 3-Piece Ball Valve

Sizes 1/4" - 2"
Full Port Design
1500/2000 psi WOG (by size)
316SST or WCB
TH, SW, or BW Ends
Superior Live Loaded Packing
System
Blowout Proof Stem w/ Dual
Anti-Static Devices
RTFE Seats Standard
Pyramidal Stem Seal Design

STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, MSS SP-110, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008



DIMENSIONS (IN)

SIZE	A	B	C	D	E	VALVE Cv
1/4"	7.95	3.43	0.79	2.65	3.29	7
3/8"	7.95	3.43	0.79	2.65	3.29	8
1/2"	7.95	3.43	0.79	2.65	3.29	15
3/4"	7.95	3.43	0.79	2.62	3.29	40
1"	9.29	4.49	0.79	2.78	4.41	70
1-1/4"	9.29	4.49	0.79	2.90	4.41	110
1-1/2"	9.29	4.49	0.79	3.13	4.41	250
2"	10.87	4.88	0.79	3.42	4.82	430

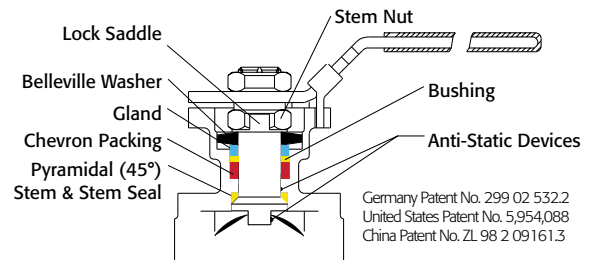
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZED FOR 80 psi AIR SUPPLY

SIZE	MODEL
1/4"	83-TX-025/2R2S-XX
3/8"	83-TX-038/2R2S-XX
1/2"	83-TX-050/2R2S-XX
3/4"	83-TX-075/2R2S-XX
1"	83-TX-100/2R3S-XX
1-1/4"	83-TX-125/2R3S-XX
1-1/2"	83-TX-150/2R3S-XX
2"	83-TX-200/2R4S-XX

SIZED FOR 60 psi AIR SUPPLY

SIZE	MODEL
1/4"	83-TX-025/2R2S-XX
3/8"	83-TX-038/2R2S-XX
1/2"	83-TX-050/2R2S-XX
3/4"	83-TX-075/2R2S-XX
1"	83-TX-100/2R3S-XX
1-1/4"	83-TX-125/2R3S-XX
1-1/2"	83-TX-150/2R4S-XX
2"	83-TX-200/2R4S-XX



SAMPLE PART

83C-TX-050/2R2S-XX

Valve Series	Carbon Steel	End Connection	Seat Material	Valve Size	TRIAC Actuator Series	Actuator Size	Spring Return	Solenoid	Limit Switch
--------------	--------------	----------------	---------------	------------	-----------------------	---------------	---------------	----------	--------------

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

OPTIONS

DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 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.

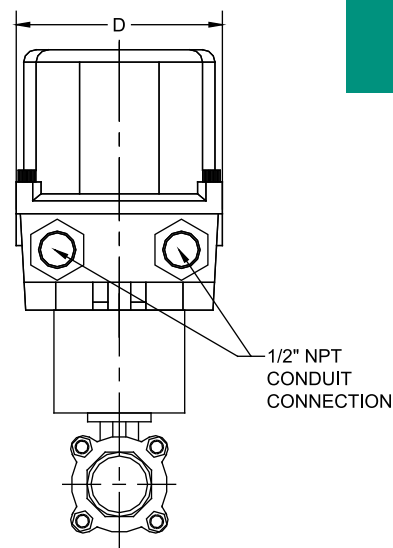
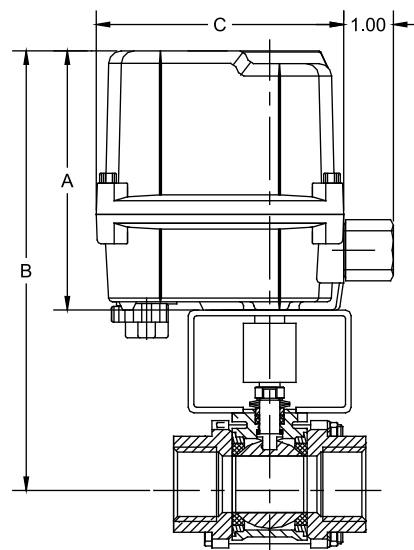


Electric Automated Ball Valve Package Series 83 3-Piece Ball Valve

Sizes 1/4" - 2"
Full Port Design
1500/2000 psi WOG (by size)
316SST or WCB
TH, SW, or BW Ends
Superior Live Loaded Packing
System
Blowout Proof Stem w/ Dual
Anti-Static Devices
RTFE Seats Standard
Pyramidal Stem Seal Design

STANDARDS

DESIGN	ANSI/ASME B16.34
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	MSS SP-25, MSS SP-110, ISO 5209
SAFETY INTEGRITY	IEC 61508:2010; SIL 3
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008



DIMENSIONS (IN)

VALVE SIZE	A	B	C	D	VALVE Cv
1/4"	5.24	7.89	4.94	4.08	7
3/8"	5.24	7.89	4.94	4.08	8
1/2"	5.24	7.89	4.94	4.08	15
3/4"	5.24	7.89	4.94	4.08	40
1"	5.24	8.02	4.94	4.08	70
1-1/4"	5.24	8.14	4.94	4.08	110
1-1/2"	5.24	8.29	4.94	4.08	250
2"	5.24	8.66	4.94	4.08	430

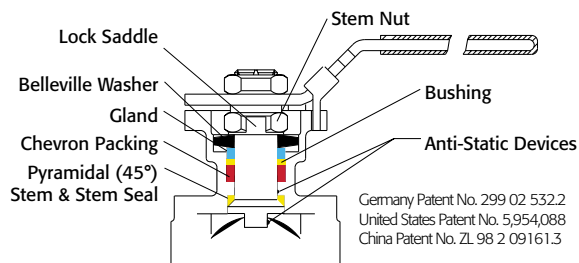
ON-OFF	
SIZE	MODEL
1/4"	83-TX-025/WEA1-XX
3/8"	83-TX-038/WEA1-XX
1/2"	83-TX-050/WEA1-XX
3/4"	83-TX-075/WEA1-XX
1"	83-TX-100/WEA1-XX
1-1/4"	83-TX-125/WEA1-XX
1-1/2"	83-TX-150/WEA1-XX
2"	83-TX-200/WEA1-XX

MODULATING	
SIZE	MODEL
1/4"	83-TX-025/WEA2-XX
3/8"	83-TX-038/WEA2-XX
1/2"	83-TX-050/WEA2-XX
3/4"	83-TX-075/WEA2-XX
1"	83-TX-100/WEA2-XX
1-1/4"	83-TX-125/WEA2-XX
1-1/2"	83-TX-150/WEA2-XX
2"	83-TX-200/WEA2-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.

83EL-20150928
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Germany Patent No. 299 02 532.2
United States Patent No. 5,954,088
China Patent No. ZL 98 2 09161.3

SAMPLE PART #
83C-TX-050/WEA1-XX

Valve Series
Carbon Steel
End Connection
Seat Material
Valve Size
TRIAC Actuator Series
Actuator Size
On-Off
Voltage
Options

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



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Cincinnati, Ohio 45246
www.atcontrols.com

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sales@atcontrols.com

SERIES 83
3-Piece

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



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Lockout Mounting Kits



Special Multi-Port Valves



Steam Jacketed Valves



Limit Switches Mounted on Manual Valves



180° Actuators



Stem Extensions



Dual Valve Assemblies

