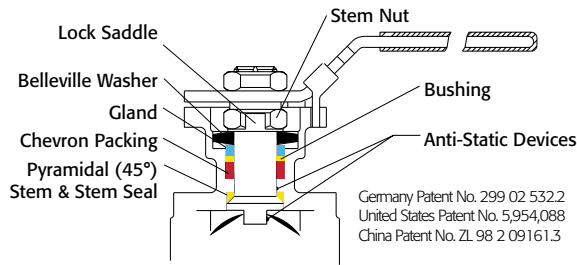




Triac 83 Series 3-Piece Ball Valves are the finest quality 3-piece valves on the market. The high quality investment castings feature a fully machined bore. The superior live-loaded packing system is accomplished with Belleville washers, "V" ring packing and a unique primary pyramidal stem seal. This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



# 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

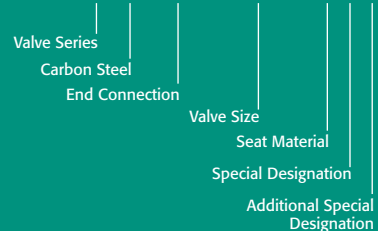
#### STANDARDS

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**



See part number matrix for itemized options



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# Series 83

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

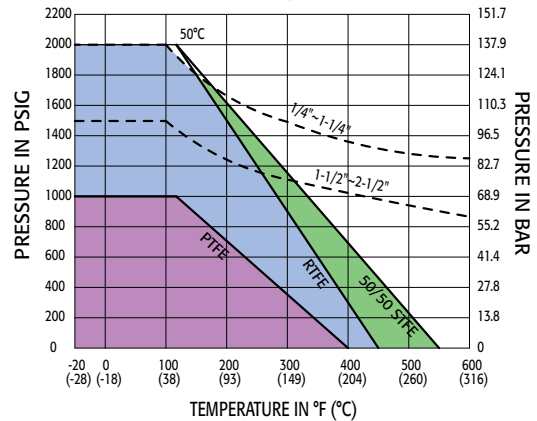
1500 & 2000 psi WOG by size  
1/4" to 2"

### 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"



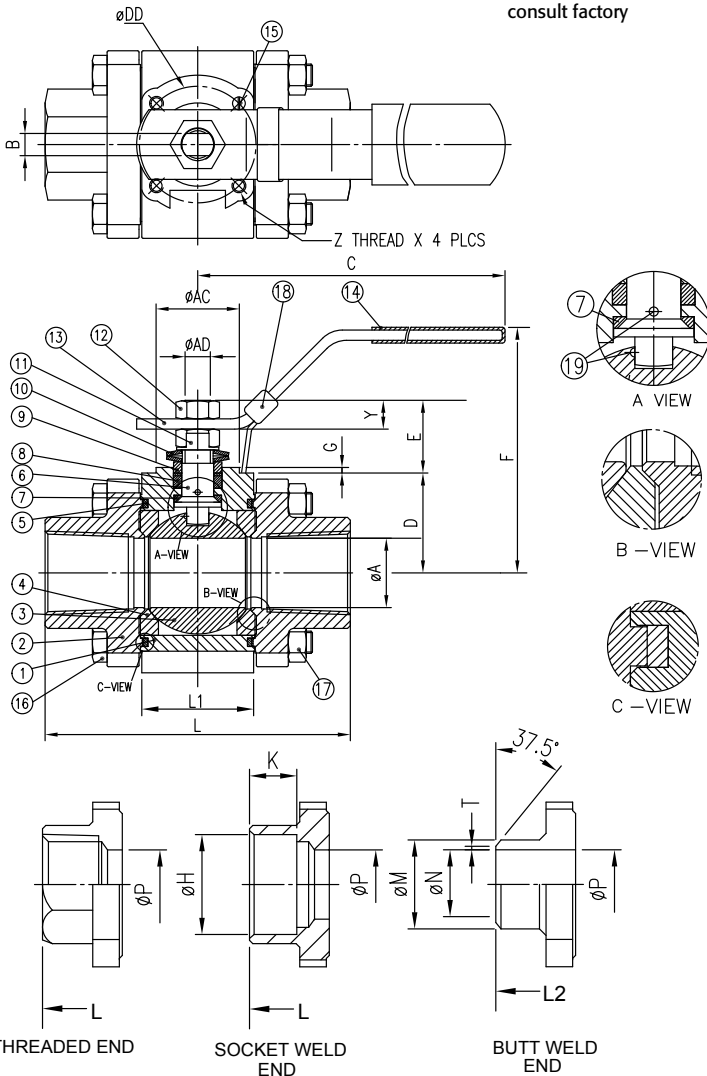
NOTE: Dotted line shows the rating for valve body. Solid line shows the rating for valve seat. Both ratings need to be considered when determining the limitation of the valve for specific application. Consult factory for other seat materials.

### 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.

**A-T Controls, Inc.**

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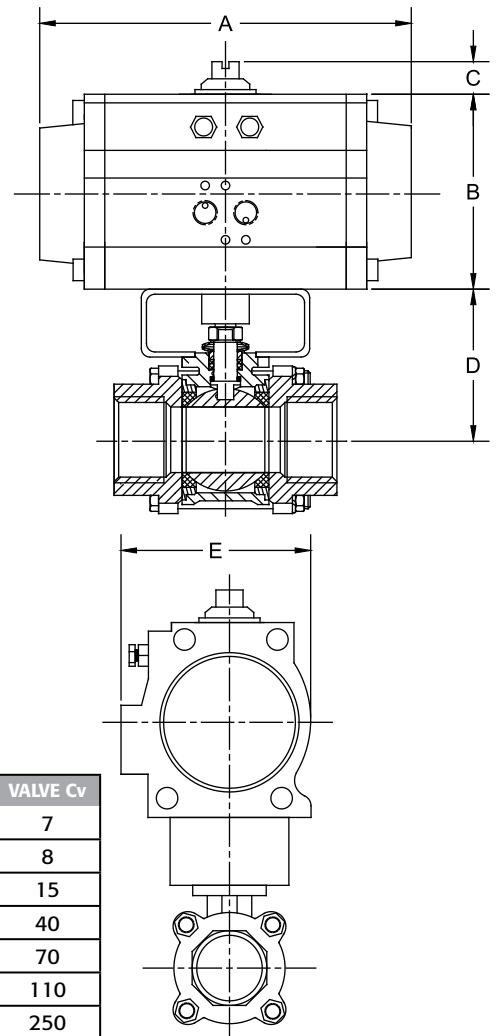


**Pneumatic  
Double Acting  
Automated  
Ball Valve Package  
Series 83  
3-Piece Ball Valve**

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



**SERIES 83  
3-Piece**

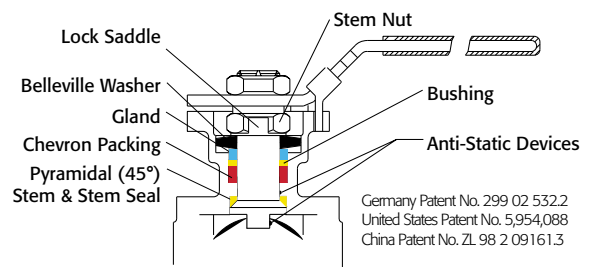
**DIMENSIONS (IN)**

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

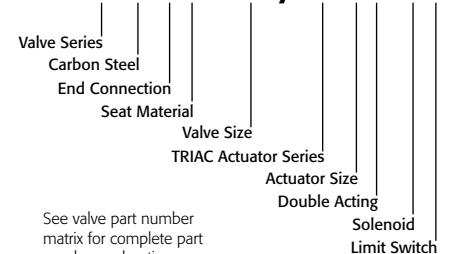
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

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



**SAMPLE PART #  
83C-TX-100/2R2D-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.



# Pneumatic Spring Return

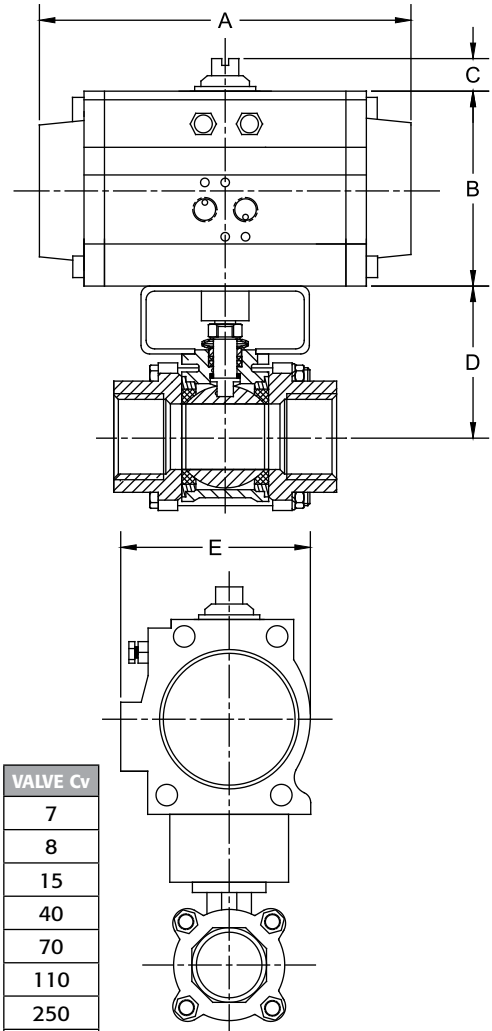
## Automated Ball Valve Package

### 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



**SERIES 83 3-Piece**

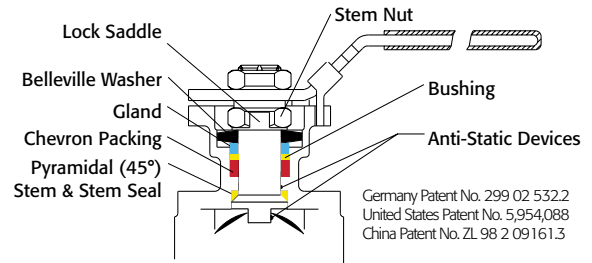
#### DIMENSIONS (IN)

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

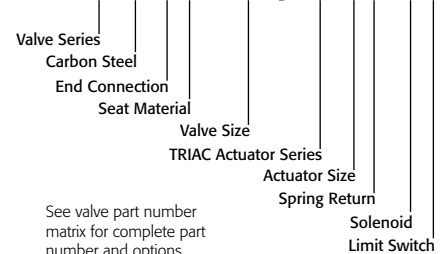
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

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



#### 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.

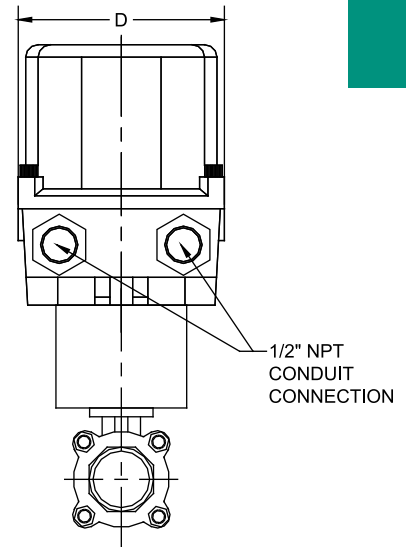
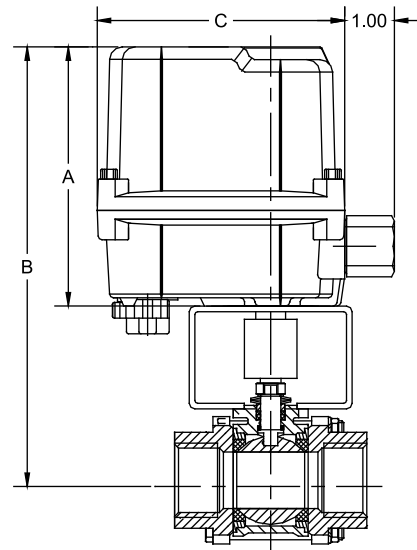


# Electric Automated Ball Valve Package Series 83 3-Piece Ball Valve

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



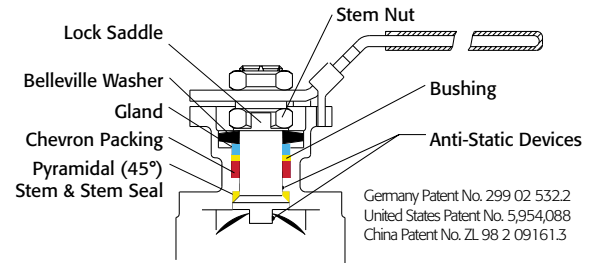
### DIMENSIONS (IN)

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

**SERIES 83  
3-Piece**

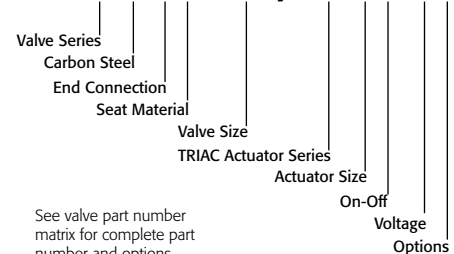
ON-OFF	
SIZE	MODEL
1/4"	83-TX-025/WEA1-XX
3/8"	83-TX-038/WEA1-XX
1/2"	83-TX-050/WEA1-XX
3/4"	83-TX-075/WEA1-XX
1"	83-TX-100/WEA1-XX
1-1/4"	83-TX-125/WEA1-XX
1-1/2"	83-TX-150/WEA1-XX
2"	83-TX-200/WEA1-XX

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



### SAMPLE PART #

**83C-TX-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.

# 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

