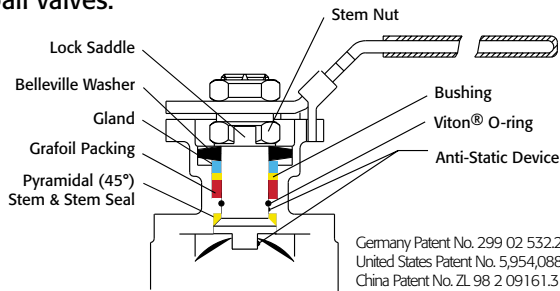




Triac C8/CR Series 3-Piece Ball Valves feature a direct mount automation pad. The high quality investment castings feature a fully machined bore. The superior live loaded packing system is accomplished with Belleville washers, "V" ring packing and a unique primary pyramidal stem seal. This advanced sealing system provides protection against stem leaks experienced by ordinary ball valves.



VALVE SIZE	VALVE Cv	
	FULL PORT	REG. PORT
1/4"	7	N/A
3/8"	8	N/A
1/2"	15	12
3/4"	40	15
1"	70	34
1-1/4"	110	56
1-1/2"	250	95
2"	430	200

PCTFE seats are standard and are excellent for services that call for low temperatures, as well as more demanding ones such as using liquid nitrogen for freezer applications. Call us for details.

### Easy to Automate!

See automated data sheets for pre-sized assemblies



**Pneumatic**



**Electric**



# Series C8/CR Cryogenic

## HIGH PERFORMANCE 3-Piece Design

**Sizes 1/4"-2", Full Port (C8)  
Sizes 1/2"-2", Regular Port (CR)**

**Stainless Steel Body**

**Vented, Upstream Ball**

**Threaded, Socket Weld or Butt Weld**

**1000 psi WOG**

**ISO 5211 Direct Mounting Pad**

**Superior Live Loaded Packing System**

**Blowout Proof Stem w/ Dual Anti-Static Devices**

**PCTFE Seats**

**17-4 PH® Stem**

**Lockable Manual Handle**

**Cleaned & Bagged from factory**

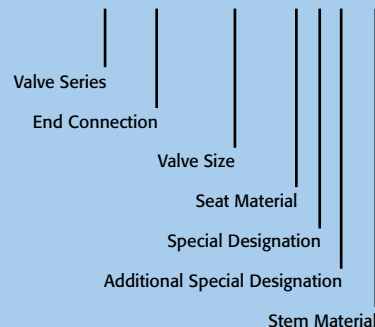
#### STANDARDS

DESIGN	ANSI/ASME B16.34, BS 6364
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	ISO 5209
CRYOGENIC SERVICE TEST	BS 6364
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2008

#### HOW TO ORDER MANUAL VALVES

SAMPLE PART #

**C8-TH-0200-KXX-A**



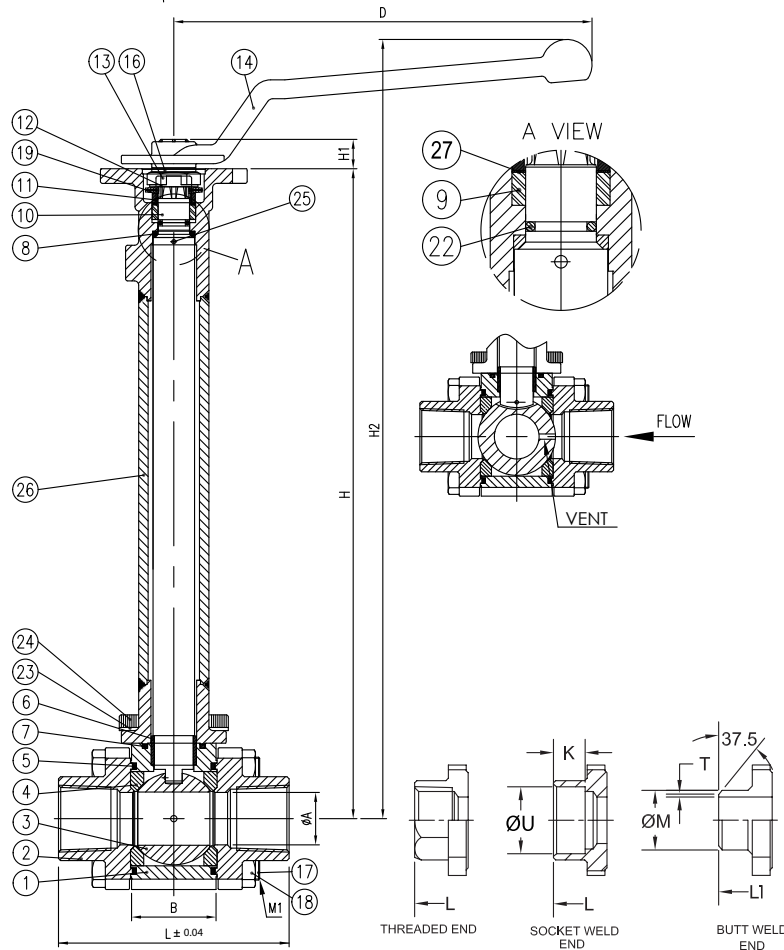
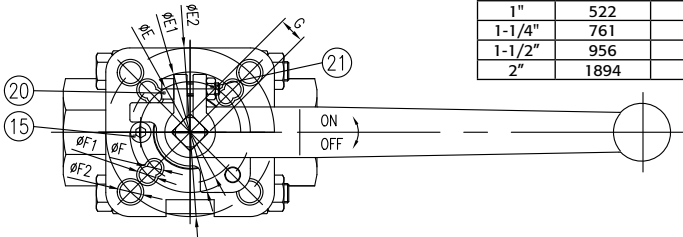
See part number matrix for itemized options

# Series C8/CR

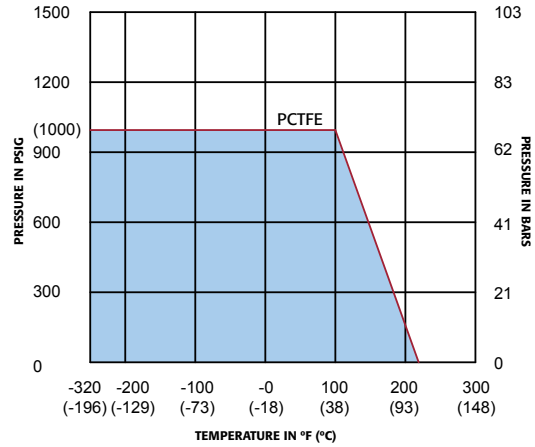
High Performance  
Full Port or Regular Port  
3-Piece Ball Valve  
ISO 5211 Direct Mount

Threaded, Socket Weld  
or Butt Weld  
1000 psi WOG  
1/4" - 2"

Valve Torque (In-Lbs) with PCTFE Seats @ 1000 psi		
Size	Full Port	Regular Port
1/4"	186	-
3/8"	186	-
1/2"	186	186
3/4"	416	186
1"	522	416
1-1/4"	761	522
1-1/2"	956	761
2"	1894	956



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



## MATERIALS LIST

NO.	PART NAME	QTY	MATERIAL
1	BODY	1	ASTM A351 GRADE CF8M*
2	END CAP	2	ASTM A351 GRADE CF8M*
3	BALL	1	1/4" THRU 3/8" ASTM A276 SS316*
3	BALL	1	1/2" THRU 2" ASTM A351 GRADE CF8M*
4	SEAT	2	PCTFE
5	JOINT GASKET	2	GRAFOIL
6	STEM BEARING	1	PTFE
7	JOINT GASKET	1	GRAFOIL
8	STEM SEAL	1	TFM-1600
9	STEM PACKING	1	GRAFOIL
10	STEM	1	17-4 PH*
11	GLAND BUSHING	1	AISI 304
12	LOCK SADDLE	1	AISI 304
13	STEM NUT	1	AISI 304
14	HANDLE	1	ASTM A351 GRADE CF8
15	STOP BOLT	1	AISI 304
16	STEM WASHER	1	AISI 304
17	BODY BOLT	4	ASTM A193 GRADE B8*
18	BODY BOLT NUT	4	ASTM A194 GRADE 8*
19	BELLEVILLE WASHER	2	AISI 301
20	HANDLE SCREW	1	AISI 304
21	HANDLE SCREW NUT	1	AISI 304
22	O-RING	1	VITON®
23	SCREW WASHER	4	AISI 304*
24	SCREW	4	AISI 304*
25	ANTI-STATIC DEVICE	2	AISI 316*
26	EXTENDED BONNET	1	ASTM A351 GRADE CF8M*
27	GLAND WASHER	1	RTFE

\*Cryogenic Treatment before Assembly.

## DIMENSIONS (IN)

SIZE	ØA		B		D		ØE		ØE1		ØE2		ØF		ØF1		ØF2		G		H		H1		H2		K		L		ØM		M1		T		ØU		(LBS)		ISO 5211	
	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R	F	R		
1/4"	0.45	-	0.96	-	6.30	-	1.417	-	1.654	-	1.969	-	0.26	-	-	-	0.28	-	0.354	-	11.81	-	0.35	-	13.60	-	0.39	-	2.95	-	0.54	-	M6	-	-	0.54	-	5	-	F03/F04/F05	-	
3/8"	0.50	-	0.96	-	6.30	-	1.417	-	1.654	-	1.969	-	0.26	-	-	-	0.28	-	0.354	-	11.97	-	0.35	-	13.60	-	0.39	-	2.95	-	0.69	-	M6	-	-	0.69	-	5	-	F03/F04/F05	-	
1/2"	0.59	0.50	0.96	0.96	6.30	6.30	1.417	1.417	1.654	1.654	1.969	1.969	0.26	0.26	-	-	0.28	0.28	0.354	0.354	11.81	11.97	0.35	0.35	13.60	13.60	0.39	0.39	2.85	2.95	0.85	0.85	M6	M7	0.06	0.06	0.85	0.85	5	5	F03/F04/F05	F03/F04/F05
3/4"	0.79	0.59	1.24	0.96	6.30	6.30	1.417	1.417	1.654	1.654	1.969	1.969	0.26	0.26	-	-	0.28	0.28	0.354	0.354	11.97	11.81	0.35	0.35	13.76	13.60	0.51	0.51	3.36	2.85	1.07	1.07	M8	M6	0.06	0.06	1.07	1.07	6	5	F03/F04/F05	F03/F04/F05
1"	0.98	0.79	1.63	1.24	7.87	6.30	1.654	1.417	1.969	1.654	2.756	2.756	0.24	0.26	0.28	-	0.35	0.28	0.433	0.354	12.20	11.97	0.43	0.35	14.57	13.76	0.51	0.51	4.15	3.36	1.34	1.34	M8	M8	0.06	0.06	1.34	1.34	9	6	F04/F05/F07	F03/F04/F05
1-1/4"	1.26	0.98	1.91	1.63	7.87	7.87	1.654	1.654	1.969	1.969	2.756	2.756	0.24	0.24	0.28	0.28	0.35	0.35	0.433	0.433	12.36	12.20	0.43	0.43	14.72	14.57	0.51	0.51	4.37	4.15	1.68	1.68	M10	M8	0.06	0.06	1.68	1.68	11	9	F04/F05/F07	F04/F05/F07
1-1/2"	1.50	1.26	2.22	1.91	9.84	7.87	1.969	1.654	2.756	1.969	-	2.756	0.30	0.24	0.35	0.28	-	0.35	0.551	0.433	12.94	12.36	0.55	0.43	15.66	14.72	0.51	0.51	5.01	4.37	1.91	1.91	M10	M10	0.06	0.06	1.91	1.91	16	10	F05/F07	F04/F05/F07
2"	1.97	1.50	2.81	2.22	9.84	9.84	1.969	1.969	2.756	2.756	-	-	0.30	0.30	0.35	0.35	-	-	0.551	0.551	13.91	12.94	0.55	0.55	16.63	15.66	0.63	0.63	5.71	5.01	2.38	2.38	M12	M10	0.06	0.06	2.38	2.38	22	16	F05/F07	F05/F07

F denotes Full Port Dimensions

R denotes Regular Port Dimensions

Viton® is a registered trademark of E.I. DuPont de Nemours.

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

For Oxygen Service, call for details.



9955 International Blvd. PHONE (513) 247-5465  
Cincinnati, Ohio 45246 FAX (513) 247-5462  
www.atcontrols.com sales@atcontrols.com



# Pneumatic Double Acting

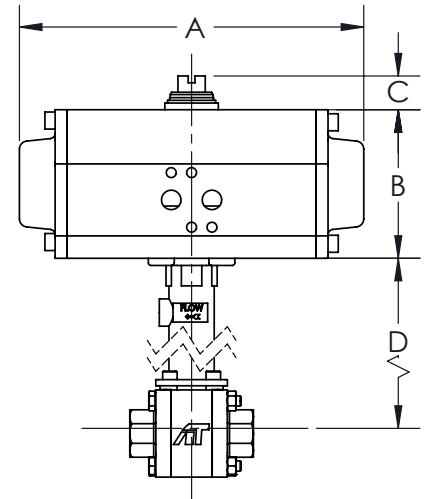
## Automated Ball Valve Package

### Series C8/CR Cryogenic Ball Valve

- Sizes 1/4"-2", Full Port (C8)
- Sizes 1/2"-2", Regular Port (CR)
- Stainless Steel Body
- Vented, Upstream Ball
- Threaded, Socket Weld or Butt Weld
- 1000 psi WOG
- Superior Live Loaded Packing System
- Blowout Proof Stem w/ Dual Anti-Static Devices
- PCTFE Seats
- 17-4 PH<sup>®</sup> Stem

#### STANDARDS

DESIGN	ANSI/ASME B16.34, BS 6364
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	ISO 5209
CRYOGENIC SERVICE TEST	BS 6364
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015



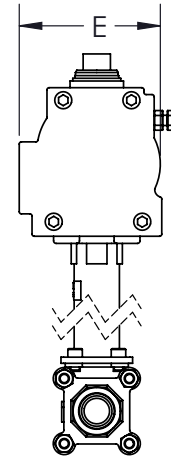
#### DIMENSIONS (IN) Full Port

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/4"	7.95	3.43	0.79	11.81	3.21	7
3/8"	7.95	3.43	0.79	11.97	3.21	8
1/2"	7.95	3.43	0.79	11.81	3.21	15
3/4"	9.29	4.49	0.79	11.97	4.17	40
1"	9.29	4.49	0.79	12.20	4.17	70
1-1/4"	10.87	4.88	0.79	12.36	4.83	110
1-1/2"	10.87	4.88	0.79	12.94	4.83	250
2"	13.9	6.18	0.79	13.91	6.05	430

#### Regular Port

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	7.95	3.43	0.79	11.97	3.21	12
3/4"	7.95	3.43	0.79	11.81	3.21	15
1"	9.29	4.49	0.79	11.97	4.17	34
1-1/4"	9.29	4.49	0.79	12.20	4.17	56
1-1/2"	10.87	4.88	0.79	12.36	4.83	95
2"	10.87	4.88	0.79	12.94	4.83	200

DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY



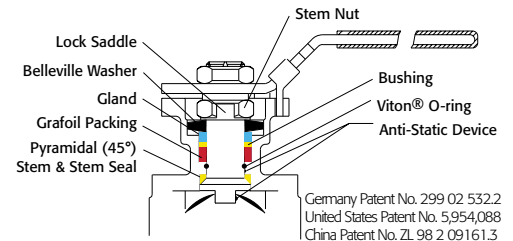
**SERIES C8/CR Cryogenic**

SIZE	SIZED FOR 80 PSI AIR SUPPLY		SIZED FOR 60 PSI AIR SUPPLY	
	FULL PORT	REGULAR PORT	FULL PORT	REGULAR PORT
1/4"	C8-TK-025/2R2D-XX	N/A	C8-TK-025/2R2D-XX	N/A
3/8"	C8-TK-038/2R2D-XX	N/A	C8-TK-038/2R2D-XX	N/A
1/2"	C8-TK-050/2R2D-XX	CR-TK-050/2R2D-XX	C8-TK-050/2R2D-XX	CR-TK-050/2R2D-XX
3/4"	C8-TK-075/2R3D-XX	CR-TK-075/2R2D-XX	C8-TK-075/2R3D-XX	CR-TK-075/2R2D-XX
1"	C8-TK-100/2R3D-XX	CR-TK-100/2R3D-XX	C8-TK-100/2R3D-XX	CR-TK-100/2R3D-XX
1-1/4"	C8-TK-125/2R4D-XX	CR-TK-125/2R3D-XX	C8-TK-125/2R4D-XX	CR-TK-125/2R3D-XX
1-1/2"	C8-TK-150/2R4D-XX	CR-TK-150/2R4D-XX	C8-TK-150/2R5D-XX	CR-TK-150/2R4D-XX
2"	C8-TK-200/2R6D-XX	CR-TK-200/2R4D-XX	C8-TK-200/2R6D-XX	CR-TK-200/2R5D-XX

#### OPTIONS

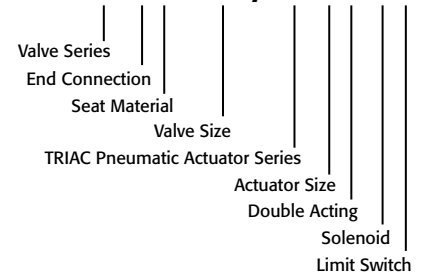
DESCRIPTION	PART NO. SUFFIX	DESCRIPTION	PART NO. SUFFIX
NEMA 4 Solenoid	(A)	NEMA 4 Limit Switch (2) spdt	(A)
NEMA 7 Solenoid	(B)	NEMA 7 Limit Switch (2) spdt	(B)
Intrinsically Safe Solenoid	(C)	Intrinsically Safe Limit Switch	(C)

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 # C8-TK-100/2R3D-XX



See part number matrix for itemized options



9955 International Blvd.  
Cincinnati, Ohio 45246  
www.atcontrols.com  
PHONE (513) 247-5465  
FAX (513) 247-5462  
sales@atcontrols.com



# Pneumatic Spring Return

## Automated Ball Valve Package

### Series C8/CR Cryogenic Ball Valve

Sizes 1/4"-2", Full Port (C8)  
 Sizes 1/2"-2", Regular Port (CR)

Stainless Steel Body

Vented, Upstream Ball

Threaded, Socket Weld or Butt Weld

1000 psi WOG

Superior Live Loaded Packing System

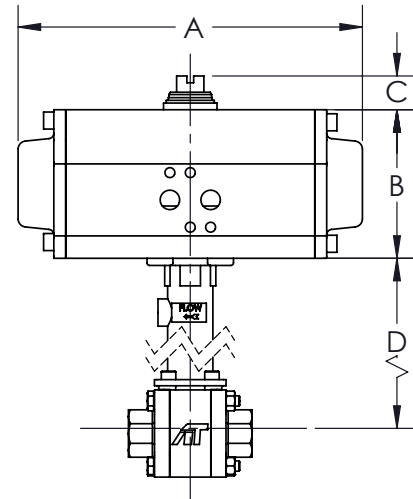
Blowout Proof Stem w/ Dual Anti-Static Devices

PCTFE Seats

17-4 PH® Stem

#### STANDARDS

DESIGN	ANSI/ASME B16.34, BS 6364
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	ISO 5209
CRYOGENIC SERVICE TEST	BS 6364
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015



**SERIES C8/CR Cryogenic**

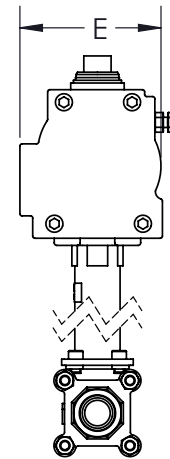
#### DIMENSIONS (IN)

##### Full Port

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/4"	9.29	4.49	0.79	11.81	4.17	7
3/8"	9.29	4.49	0.79	11.97	4.17	8
1/2"	9.29	4.49	0.79	11.81	4.17	15
3/4"	11.46	5.28	0.79	11.97	5.19	40
1"	11.46	5.28	0.79	12.20	5.19	70
1-1/4"	13.9	6.18	0.79	12.36	6.05	110
1-1/2"	13.9	6.18	0.79	12.94	6.05	250
2"	20.95	8.31	1.18	13.91	7.64	430

##### Regular Port

VALVE SIZE	A	B	C	D	E	VALVE Cv
1/2"	9.29	4.49	0.79	11.97	4.17	12
3/4"	9.29	4.49	0.79	11.81	4.17	15
1"	11.46	5.28	0.79	11.97	5.19	34
1-1/4"	11.46	5.28	0.79	12.20	5.19	56
1-1/2"	13.9	6.18	0.79	12.36	6.05	95
2"	13.9	6.18	0.79	12.94	6.05	200



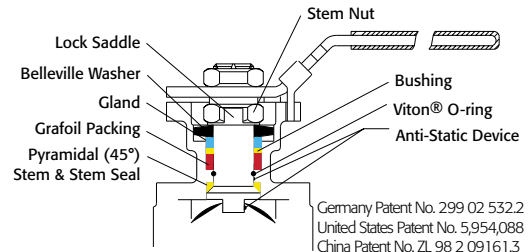
DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

SIZE	SIZED FOR 80 PSI AIR SUPPLY		SIZED FOR 60 PSI AIR SUPPLY	
	FULL PORT	REGULAR PORT	FULL PORT	REGULAR PORT
MODEL	MODEL	MODEL	MODEL	
1/4"	C8-TK-025/2R3S-XX	N/A	C8-TK-025/2R4S-XX	N/A
3/8"	C8-TK-038/2R3S-XX	N/A	C8-TK-038/2R4S-XX	N/A
1/2"	C8-TK-050/2R3S-XX	CR-TK-050/2R3S-XX	C8-TK-050/2R4S-XX	CR-TK-050/2R4S-XX
3/4"	C8-TK-075/2R5S-XX	CR-TK-075/2R3S-XX	C8-TK-075/2R6S-XX	CR-TK-075/2R4S-XX
1"	C8-TK-100/2R5S-XX	CR-TK-100/2R5S-XX	C8-TK-100/2R6S-XX	CR-TK-100/2R6S-XX
1-1/4"	C8-TK-125/2R6S-XX	CR-TK-125/2R5S-XX	C8-TK-125/2R7S-XX	CR-TK-125/2R6S-XX
1-1/2"	C8-TK-150/2R6S-XX	CR-TK-150/2R6S-XX	C8-TK-150/2R7S-XX	CR-TK-150/2R7S-XX
2"	C8-TK-200/2R8S-XX	CR-TK-200/2R6S-XX	C8-TK-200/2R9S-XX	CR-TK-200/2R7S-XX

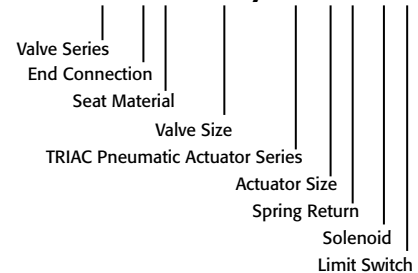
#### OPTIONS

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.



#### SAMPLE PART # C8-TK-100/2R6S-XX



See part number matrix for itemized options



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

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



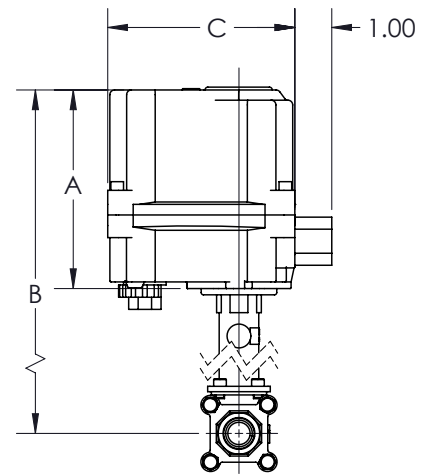
# Electric Automated Ball Valve Package

## Series C8/CR Cryogenic Ball Valve

- Sizes 1/4"-2", Full Port (C8)
- Sizes 1/2"-2", Regular Port (CR)
- Stainless Steel Body
- Vented, Upstream Ball
- Threaded, Socket Weld or Butt Weld
- 1000 psi WOG
- Superior Live Loaded Packing System
- Blowout Proof Stem w/ Dual Anti-Static Devices
- PCTFE Seats
- 17-4 PH® Stem

### STANDARDS

DESIGN	ANSI/ASME B16.34, BS 6364
END CONNECTIONS	ASME B16.25, B1.20.1, B16.11
PRESSURE TESTING	API 598
MOUNTING	ISO 5211
MARKING SYSTEM FOR VALVES	ISO 5209
CRYOGENIC SERVICE TEST	BS 6364
MATERIAL CERTIFICATION	EN 10204-3.1 MTR
QUALITY ASSURANCE	ISO 9001:2015

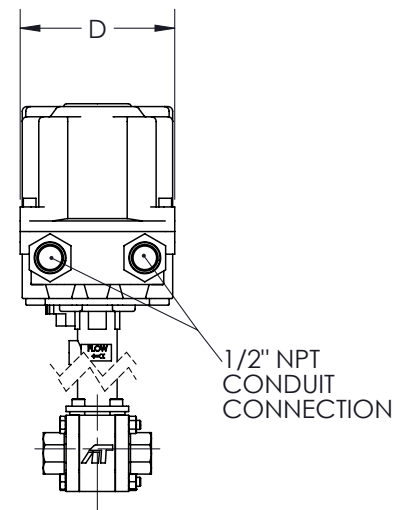


### DIMENSIONS (IN) Full Port

VALVE SIZE	A	B	C	D	VALVE Cv
1/4"	5.24	17.05	4.94	4.08	7
3/8"	5.24	17.21	4.94	4.08	8
1/2"	5.24	17.05	4.94	4.08	15
3/4"	5.24	17.21	4.94	4.08	40
1"	5.24	17.44	4.94	4.08	70
1-1/4"	10.55	22.91	9.02	13.31	110
1-1/2"	10.55	23.49	9.02	13.31	250
2"	11.42	25.33	13.31	9.02	430

### Regular Port

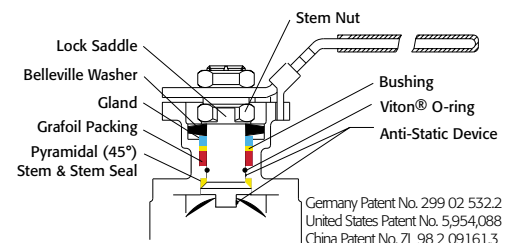
VALVE SIZE	A	B	C	D	VALVE Cv
1/2"	5.24	17.21	4.94	4.08	12
3/4"	5.24	17.05	4.94	4.08	15
1"	5.24	17.21	4.94	4.08	34
1-1/4"	9.25	21.45	6.69	10.16	56
1-1/2"	10.55	22.91	9.02	13.31	95
2"	10.55	23.49	9.02	13.31	200



DIMENSIONS SHOWN ARE FOR ASSEMBLIES SIZED FOR 80 PSI SUPPLY

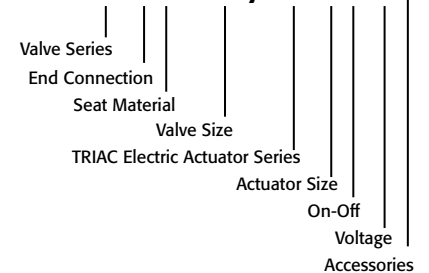
**SERIES C8/CR Cryogenic**

SIZE	ON-OFF		MODULATING	
	FULL PORT	REGULAR PORT	FULL PORT	REGULAR PORT
MODEL	MODEL	MODEL	MODEL	
1/4"	C8-TK-025/WEA1-XX	N/A	C8-TK-025/WEA2-XX	N/A
3/8"	C8-TK-038/WEA1-XX	N/A	C8-TK-038/WEA2-XX	N/A
1/2"	C8-TK-050/WEA1-XX	CR-TK-050/WEA1-XX	C8-TK-050/WEA2-XX	CR-TK-050/WEA2-XX
3/4"	C8-TK-075/WEA1-XX	CR-TK-075/WEA1-XX	C8-TK-075/WEA2-XX	CR-TK-075/WEA2-XX
1"	C8-TK-100/WEA1-XX	CR-TK-100/WEA1-XX	C8-TK-100/WEB2-XX	CR-TK-100/WEA2-XX
1-1/4"	C8-TK-125/WEC1-XX	CR-TK-125/WEB1-XX	C8-TK-125/WEC2-XX	CR-TK-125/WEB2-XX
1-1/2"	C8-TK-150/WEC1-XX	CR-TK-150/WEC1-XX	C8-TK-150/WEC2-XX	CR-TK-150/WEC2-XX
2"	C8-TK-200/WEE1-XX	CR-TK-200/WEC1-XX	C8-TK-200/WEE2-XX	CR-TK-200/WEC2-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 # C8-TK-100/WEA1-XX



See part number matrix for itemized options

### OPTIONS

#### DESCRIPTION

24 VAC/24 VDC/220VAC

Feedback potentiometer

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



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

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

# 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



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

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

# Other Products

## Special Seats Balls and Seal Designs



## Floor Mounted Damper Drives



## Fusible Link Assemblies



## Lockout Mounting Kits



## Special Multi-Port Valves



## Steam Jacketed Valves



## Limit Switches Mounted on Manual Valves



## 180° Actuators



## Stem Extensions



## Dual Valve Assemblies

