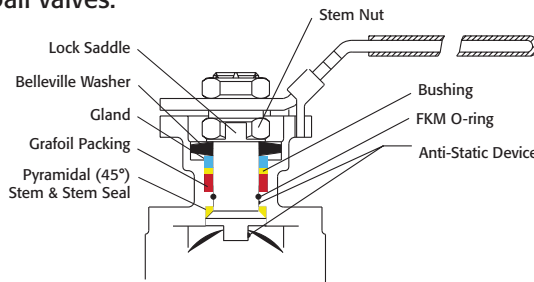




Triac C8/CR Series 3-Piece Ball Valves feature a direct mount automation pad. The high quality investment castings feature a fully machined bore. The superior live loaded packing system is accomplished with Belleville washers, "V" ring packing and a unique primary pyramidal stem seal. This advanced sealing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

**Threaded, Socket Weld
or Butt Weld**

1000 psi

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

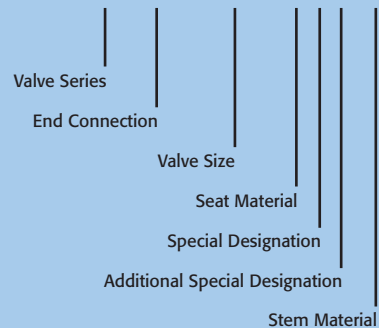
STANDARDS

DESIGN	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

**HOW TO ORDER
MANUAL VALVES**

SAMPLE PART #

C8-TH-0200-KXX-A



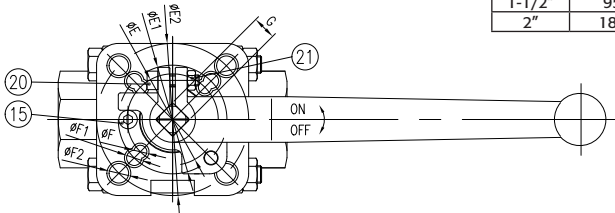
See part number matrix for itemized options

Series C8/CR

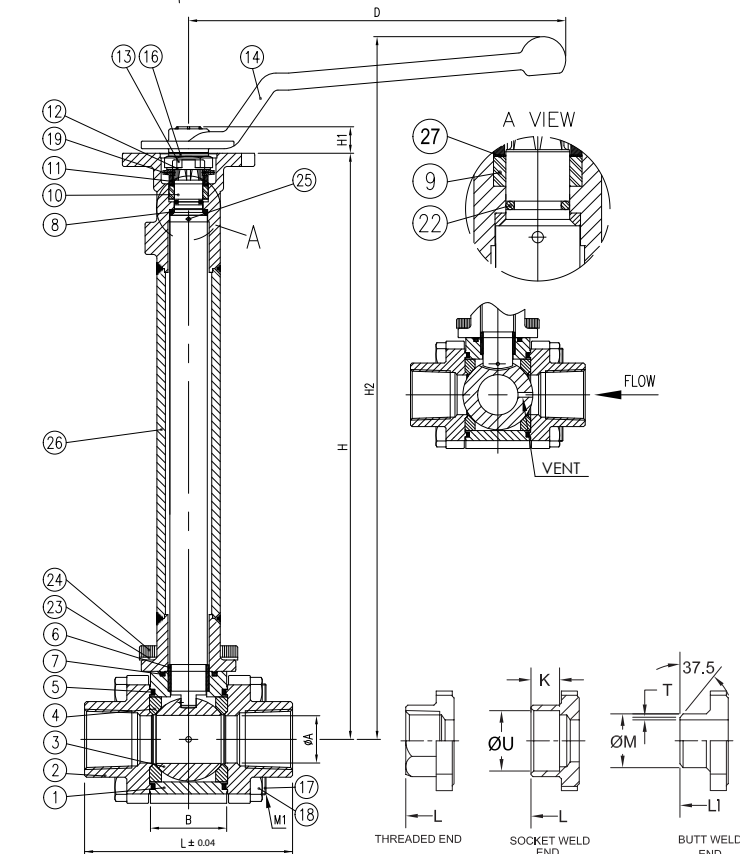
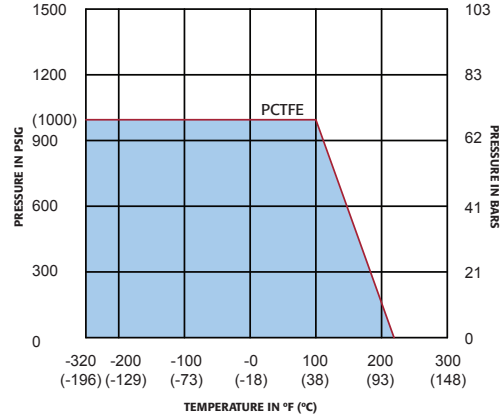
High Performance
Full Port or Regular Port
3-Piece Ball Valve
ISO 5211 Direct Mount

Threaded, Socket Weld
or Butt Weld
1000 psi
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	REPAIR KIT
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	Graphite	✓
6	STEM BEARING	1	PTFE	✓
7	BONNET JOINT GASKET	1	Graphite	✓
8	STEM SEAL	1	TFM-1600	✓
9	STEM PACKING	1	Graphite	✓
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	FKM	✓
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	✓

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	-	-	0.69	-	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	0.197	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

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

Electric

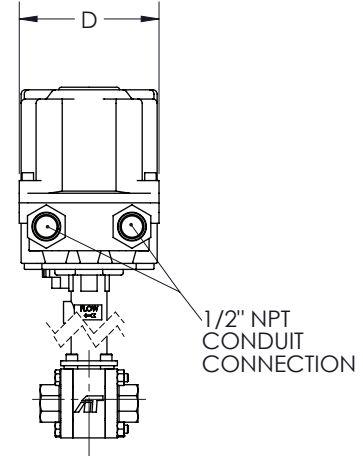
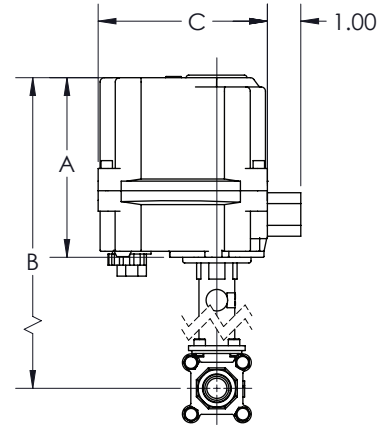
Automated Ball Valve Package

Series C8/CR Cryogenic Ball Valve

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

STANDARDS

DESIGN	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 ON-OFF SERVICE

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

OPTIONS

Suffix 1 Voltage / Accessory Model No.

- X No Specials
- R 24VDC Electric Actuator
- S 220VAC Electric Actuator
- T Other Voltage Electric Actuator
- W 12VDC Electric Actuator
- Y 24VAC Electric Actuator

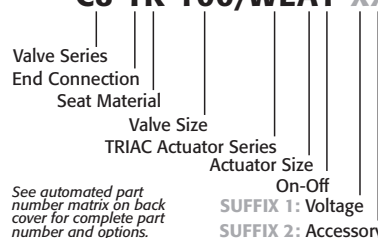
* No voltage specified on electric assemblies denotes 120VAC

Suffix 2 Accessories

- X No Specials
- 1 HS1 High Speed Electric
- 2 HS2 High Speed Electric

Other options available - call for details
Actuators are sized based on full differential pressure with clean water. Consult the Application Sizing Guide for assistance with sizing actuators.

SAMPLE PART # C8-TK-100/WEA1-XX



Series C8/CR

HOW TO ORDER: Manual Valves

2	Valve Series
C8	Cryogenic 3pc. Full-Port
CR	Cryogenic 3pc. Regular-Port

3	Body/Ball/Stem Material
Blank	Valve Series Standard (316SST)

4	End Connection
TH	NPT Ends
SW	Socket Weld Ends
BW	Butt Weld Ends
EW	Extended Butt Weld Ends
TE	NPT x Extended Butt Weld
TS	NPT x Socket Weld
XX	Configurable End Connection

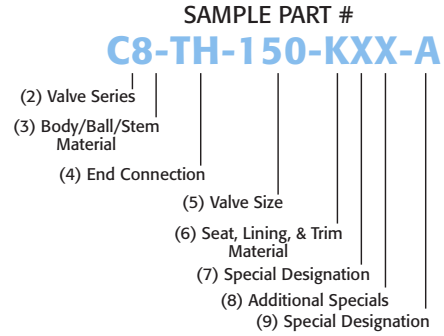
5	Valve Size	
0025	1/4"	0100 1"
0038	3/8"	0125 1-1/4"
0050	1/2"	0150 1-1/2"
0075	3/4"	0200 2"

6	Seat, Lining & Trim Material
K	PCTFE Seats (Cryogenics)

7	Special Designation
X	No Specials/Series Standard
G	Gear Operator
H	Gear Operator with Lockout Plate
S	Spring Return Handle (Direct Mount only)
4	4" Lockable Stem Extension

8	Additional Specials
X	No Specials/Series Standard

9	Special Designation
Blank	No Designation, Valve Series Standard
X	Multiple Option Designation
3	30° V-Port (v-ball)
6	60° V-Port (v-ball)
9	90° V-Port (v-ball)
A	17-4 PH® Stem



HOW TO ORDER: Automated Valves

2	Valve Series
C8	Cryogenic 3pc. Full-Port
CR	Cryogenic 3pc. Regular-Port

3	Body/Ball/Stem Material
Blank	Valve Series Standard (316SST)

4	End Connection
T	NPT Ends
S	Socket Weld Ends
B	Butt Weld Ends
E	Extended Butt Weld Ends
M	NPT x Socket Weld

5	Seat, Lining & Trim Material
K	PCTFE Seats (Cryogenics)

6	Valve Size	
025	1/4"	100 1"
038	3/8"	125 1-1/4"
050	1/2"	150 1-1/2"
075	3/4"	200 2"

7 (A) Pneumatic Actuator - 3R, 3N, 3P Series			
3RC	3R10	3RM	3R850
3RD	3R20	3RN	3R1000
3RE	3R40	3RP	3R1200
3RF	3R80	3RR	3R1750
3RG	3R130	3RS	3R2400
3RH	3R200	3RT	3R2500
3RJ	3R300	3RU	3R2700
3RK	3R500	3RV	3R3300
3RL	3R700	3RW	3R3500

3R=Standard, 3N=Electroless Nickel Plating, 3P=Teflon™ (PTFE) Coating

7 (A) Pneumatic Actuator - S2 Series			
S2C	S2-052	S2G	S2-125
S2D	S2-063	S2H	S2-140
S2E	S2-083	S2J	S2-160
S2F	S2-105	S2K	S2-210

7 (B) Pneumatic Action	
D	Double Acting (DA)
S	Spring CW (5 springs)*
O	Spring CCW (5 springs)*
4	Spring CW (4 springs)**
F	Spring CCW (4 springs)**

*2500 & 3500 80 psig spring

**2500 & 3500 60 psig spring

7 Actuator - Electric (On-Off)			
WEX1	WE-350	WEG1	WE-5200
WEA1	WE-500	WEH1	WE-6900
WEB1	WE-690	WEJ1	WE-10500
WEC1	WE-1350	WEK1	WE-17500
WED1	WE-1700	WEL1	WE-25900
WEE1	WE-2640	WEM1	WE-53000
WEF1	WE-4400	WEN1	WE-80000

7 Actuator - Electric (Modulating)			
WEA2	WEM-500	WEH2	WEM-6900
WEB2	WEM-690	WEJ2	WEM-10500
WEC2	WEM-1350	WEK2	WEM-17500
WED2	WEM-1700	WEL2	WEM-25900
WEE2	WEM-2640	WEM2	WEM-53000
WEF2	WEM-4400	WEN2	WEM-80000
WEG2	WEM-5200		

8	Accessories/Options	Model no.
X	No Specials	
A	TYPE 4 Solenoid 120VAC	TVCS-X411-4N-A120
B	TYPE 7 Solenoid 120VAC	TVCG-X411-7N-A120
C	Intrinsically Safe Solenoid	TVIS-X411-4N-D24
D	TYPE 4 Solenoid 24VDC	TVCS-X411-4N-D24
F	TYPE 7 Solenoid 24VDC	TVCG-X411-7N-D24
Q	TYPE 4 SST Solenoid 120VAC	TVSS-X411-4N-A120
M	TYPE 7 SST Solenoid 120VAC	TVSS-X411-7N-A120
L	TYPE 4 SST Solenoid 24VDC	TVSS-X411-4N-D24
N	TYPE 7 SST Solenoid 24VDC	TVSS-X411-7N-D24
P	Pneumatic Positioner	PPR-1200
E	Electro-Pneumatic Positioner	EPR-1000
R	24VDC Electric Actuator	
S	220VAC Electric Actuator	
T	Other Voltage Electric Actuator	
W	12VDC Electric Actuator	
Y	24VAC Electric Actuator	

*No voltage specified on electric assemblies denotes 120VAC

9	Accessories	Model no.
X	No Specials	
A	TYPE 4 Limit Switch	APL-210N
B	TYPE 7 Limit Switch	APL-510N
C	Intrinsically Safe Limit Switch	APL-218N
Q	TYPE 4 SST Limit Switch	APL-910N
M	TYPE 7 SST Limit Switch	APL-510S
Z	180° Operation	
1	HS1 High Speed Electric	
2	HS2 High Speed Electric	

AUTOMATED VALVE

SAMPLE PART #

C8-TK-100/3RHS-XX

