

CRYOGENIC GLOBE VALVES VACUUM JACKETED & NON-JACKETED MANUAL OR AUTOMATIC **2000/5000 SERIES**

0-300 PSIG



APPLICATIONS

- Cryogenic Storage Tanks
- Cryogenic Transportation Trailers
- Cryogenic Vacuum Jacketed & Non-Jacketed Piping Systems
- Acceptable for use in flammable applications (i.e. Liquid & gaseous hydrogen & LNG)

OPTIONS

- Pipe or Tube Ends
- Automatic Control or Remote On/Off Operation
- Manual or Automatic w/ controls
- Packed or bellow seal
- Quick Open, Linear, Equal %, Hyperbolic Flow Plugs
- Pneumatic or Electric Actuators
- Micro-Electric Grades (UHP)
- Higher rated working pressures on request



FEATURES

- Bellow Sealed Design
- Redundant packing seals
- Vacuum Jacketed (multi- layers of radiation shielding) or non-Jacketed
- Bubble tight Shut Off
- All Stainless Steel Construction
- Top Entry - Completely Extractable
- Bar Stock Body
- Axially bolted bonnet for high seat loading
- Low Maintenance - High Durability
- Long Bonnet Extension
- Stem & Packing Box Hermetically Sealed
- Easy inline maintenance
- Purged Bonnet Connection Standard (Over Seat Purge)
- Fugitive Emissions-Compliant



TECHNICAL DATA

Operating Ranges:

Temperature..... -452° F to +300° F
-269° C to +149° C

Max. Operating Pressure 300 PSIG

Materials of Construction:

All major structural components are 300 Series Stainless Steel

Body & Bonnet.....Stainless Steel (316L)
Body Seat.....PCTFE (M400H)Packing
Packing.....PTFE or Graphite*
Bonnet Gasket.....Glass Filled PTFE
Redundant Seal.....FKM or EPDM

Tests:

External Leakage.....Helium Mass Spectrometer
to 1x10⁻⁹scc GHe/sec

Seat Leakage.....Bubble tight
to 150 PSIG

Proof Pressure.....330 PSIG (ambient)

Valve Size: 1/2" to 3" Pipe (Sch 5 Butt Weld Standard),
or 1/2" to 3" Tube ODT (for Orbital Welding)

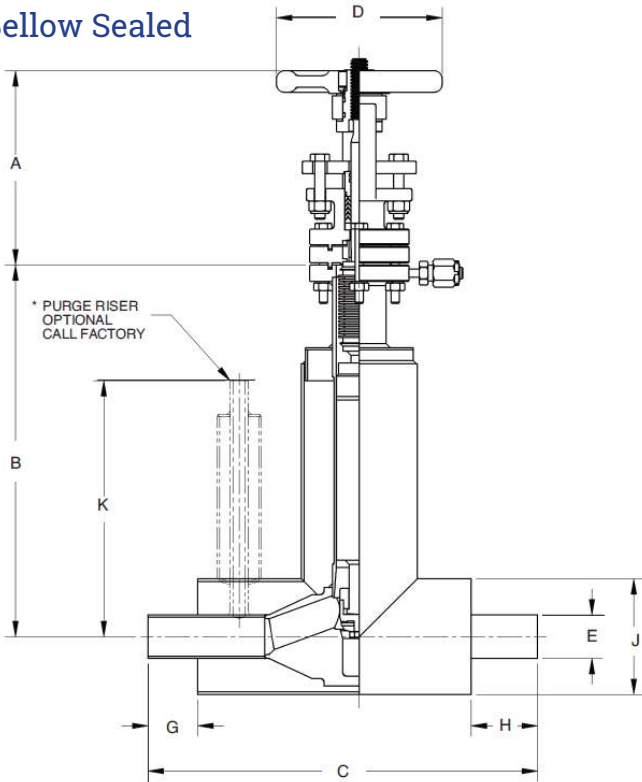


CRYOGENIC GLOBE VALVES

VACUUM JACKETED & NON-JACKETED / MANUAL OR AUTOMATIC

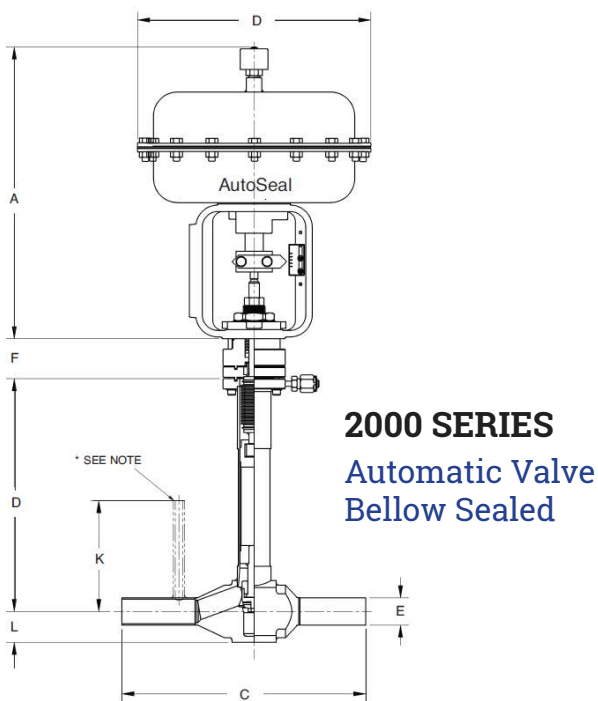
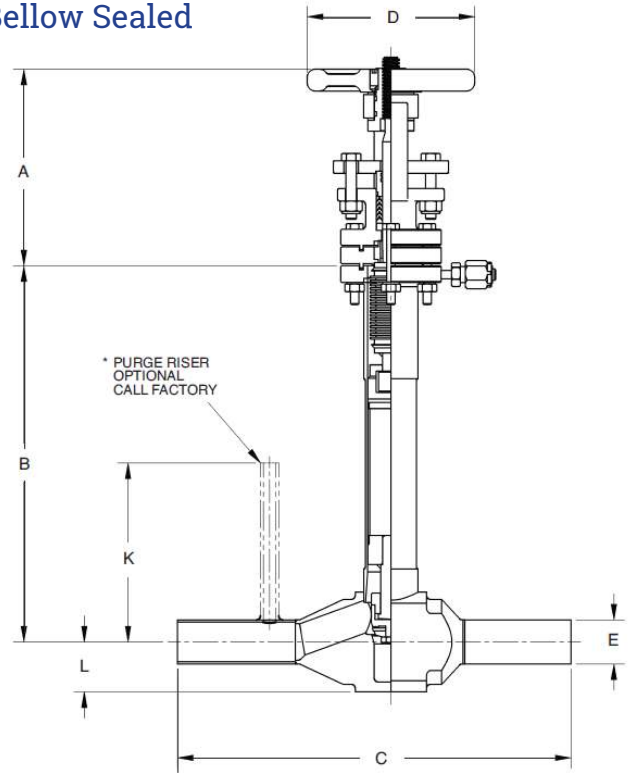
5000 SERIES

Manual Valve
Bellow Sealed

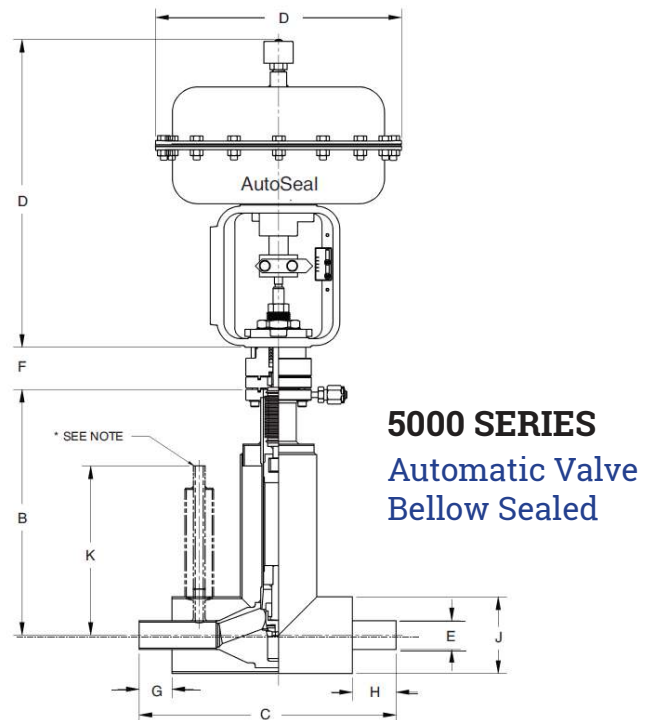


2000 SERIES

Manual Valve
Bellow Sealed



2000 SERIES
Automatic Valve
Bellow Sealed



5000 SERIES
Automatic Valve
Bellow Sealed

2000/5000 SERIES 300 PSIG



DIMENSION TABLES

5000 SERIES MANUAL VALVE DIMENSIONS (inches)										
SIZE	A-1 NON-BELLOW SEAL STEM	A-2 BELLOW SEAL STEM	B	C	D	E	G	H	J	K
0.5" PS	5.25	5.88	11.25	11.75	5.00	0.840	1.50	2.00	3.50	7.56
0.5" ODT	5.25	5.88	11.25	15.56	5.00	0.500	1.50	2.00	3.50	*
0.75" PS	5.25	5.88	11.25	11.75	5.00	1.050	1.50	2.00	3.50	7.75
0.75" ODT	5.25	5.88	11.25	15.56	5.00	0.750	1.50	2.00	3.50	*
1.0" PS	5.25	5.88	11.25	11.75	5.00	1.315	1.50	2.00	3.50	7.75
1.0" ODT	5.25	5.88	11.25	15.56	5.00	1.000	1.50	2.00	3.50	*
1.5" PS	5.25	5.88	14.00	12.25	7.00	1.900	2.00	2.00	4.50	9.06
1.5" ODT	5.25	5.88	14.00	15.56	7.00	1.500	2.00	2.00	4.50	*
2.0" PS	5.25	5.88	14.00	12.25	7.00	2.375	2.38	1.63	4.50	10.19
2.0" ODT	5.25	5.88	14.00	15.56	7.00	2.000	2.38	1.63	4.50	*

5000 SERIES AUTOMATIC VALVE DIMENSIONS (inches)													
SIZE	A		B	C	D		E	F		G	H	J	K
	AUTOSEAL 36	AUTOSEAL 60			AUTOSEAL 36	AUTOSEAL 60		NON- BELLOW SEAL STEM	BELLOW SEAL STEM				
0.5" ODT	12.06	14.06	11.25	15.56	9.31	11.25	0.500	0.94	1.91	1.50	2.00	3.50	*
0.5" PS	12.06	14.06	11.25	11.75	9.31	11.25	0.840	0.94	1.91	1.50	2.00	3.50	7.56
0.75" ODT	12.06	14.06	11.25	15.56	9.31	11.25	0.750	0.94	1.91	1.50	2.00	3.50	*
0.75" PS	12.06	14.06	11.25	11.75	9.31	11.25	1.050	0.94	1.91	1.50	2.00	3.50	7.75
1.0" ODT	12.06	14.06	11.25	15.56	9.31	11.25	1.000	0.94	1.91	1.50	2.00	3.50	*
1.0" PS	12.06	14.06	11.25	11.75	9.31	11.25	1.315	0.94	1.91	1.50	2.00	3.50	7.75
1.5" ODT	12.06	14.06	11.25	15.56	9.31	11.25	1.500	0.94	1.91	2.00	2.00	4.50	*
1.5" PS	12.06	14.06	14.00	12.25	9.31	11.25	1.900	1.62	2.75	2.00	2.00	4.50	9.06
2.0" ODT	12.06	14.06	14.00	15.56	9.31	11.25	2.000	1.62	2.75	2.38	1.63	4.50	*
2.0" PS	12.06	14.06	14.00	12.25	9.31	11.25	2.375	1.62	2.75	2.38	1.63	4.50	10.19

2000 SERIES MANUAL VALVE DIMENSIONS (inches)										
SIZE	A-1 NON-BELLOW SEAL STEM	A-2 BELLOW SEAL STEM	B	C	D	E	K			L
0.5" PS	5.25	5.88	11.25	11.75	5.00	0.840	C F O N S T R U C T U R E	A C T U A L	T O L E R A N C E	1.50
0.5" ODT	5.25	5.88	11.25	15.56	5.00	0.500				1.50
0.75" PS	5.25	5.88	11.25	11.75	5.00	1.050				1.50
0.75" ODT	5.25	5.88	11.25	15.56	5.00	0.750				1.50
1.0" PS	5.25	5.88	11.25	11.75	5.00	1.315				1.50
1.0" ODT	5.25	5.88	11.25	15.56	5.00	1.000				1.50
1.5" PS	5.25	5.88	14.00	12.25	7.00	1.900				1.88
1.5" ODT	5.25	5.88	14.00	15.56	7.00	1.500				1.88
2.0" PS	5.25	5.88	14.00	12.25	7.00	2.375				1.88
2.0" ODT	5.25	5.88	14.00	15.56	7.00	2.000				1.88

2000 SERIES AUTOMATIC VALVE DIMENSIONS (inches)											
SIZE	A		B	C	D		E	F		K	L
	AUTOSEAL 36	AUTOSEAL 60			AUTOSEAL 36	AUTOSEAL 60		NON- BELLOW SEAL STEM	BELLOW SEAL STEM		
0.5" ODT	12.06	14.06	11.25	15.56	9.31	11.25	0.500	0.94	1.91	*	1.50
0.5" PS	12.06	14.06	11.25	11.75	9.31	11.25	0.840	0.94	1.91	7.56	1.50
0.75" ODT	12.06	14.06	11.25	15.56	9.31	11.25	0.750	0.94	1.91	*	1.50
0.75" PS	12.06	14.06	11.25	11.75	9.31	11.25	1.050	0.94	1.91	7.75	1.50
1.0" ODT	12.06	14.06	11.25	15.56	9.31	11.25	1.000	0.94	1.91	*	1.50
1.0" PS	12.06	14.06	11.25	11.75	9.31	11.25	1.315	0.94	1.91	7.75	1.50
1.5" ODT	12.06	14.06	11.25	15.56	9.31	11.25	1.500	0.94	1.91	*	1.88
1.5" PS	12.06	14.06	14.00	12.25	9.31	11.25	1.900	1.62	2.75	9.06	1.88
2.0" ODT	12.06	14.06	14.00	15.56	9.31	11.25	2.000	1.62	2.75	*	1.88
2.0" PS	12.06	14.06	14.00	12.25	9.31	11.25	2.375	1.62	2.75	10.19	1.88

*Dimensions subject to change without notice.

2000/5000 SERIES 300 PSIG

ORDERING GUIDE

CP5-088-CBPG1B-CE

BASIC MODEL NUMBER

CP5 - 5000 Series Vacuum Jacketed
CP2 - 2000 Series Non-Jacketed

VALVE SIZE³

084 - 1/2"
086 - 3/4"
088 - 1"
812 - 1-1/2"
816 - 2"
824 - 3"

CLEANING

O - Oxygen
C - Standard
U - Ultra High Purity (15 Ra Tube)

STEM SEAL

B - Bellow Sealed
S - STD Packing (Non-Bellow Sealed)
Pipe - Tube
P - Pipe
T - Tube

OPTIONS

TW - Top Works only¹
SG - Soft Goods only
CB - Cold Box Cuff
CE - For PED 2014/68/EU
(QS System Module H)

TOP WORKS

A - Automatic Valve (Other Than AutoSeal)
B - Auto Valve Using AutoSeal²
E - Auto Valve Control Tip - EQ%
L - Auto Valve Control Tip - Linear
H - Hyperbolic
M - Manual Handwheel

PACKING

1 - Teflon Chevron
6 - Graphite Ring

CONFIGURATION GLOBE



PERFORMANCE CHARACTERISTICS

Valve Pipe Size	Cooldown Weight Lb.	Conductive Heat Leak Total HT Rate (W)	Conductive Heat Leak Total HT Rate (BTU/HR)	Flow Cv Coefficient ⁵
1/2"	5.5	4.647 Watts	15.85	12.0
3/4"	5.5	4.647 Watts	15.85	12.0
1"	5.5	4.647 Watts	15.85	12.0
1.5"	12	8.066 Watts	27.52	21.0
2"	11	8.066 Watts	27.52	30.5
3"	40	11.207 Watts	38.23	75.0

¹ Includes seat-plug-inner cylinder assembly and top works (less actuator)

² 1/2" - 1" seated valves use FWAA602CASX AutoSeals Actuators (3-15) PSI ; 1-1/2" use FWAA602CBSX AutoSeal Actuators (6-30 PSI); 2" use FWAA602CCNX AutoSeal Actuators (20-60 PSI)

³ 1/2" inlet/outlet through 1" inlet/outlet valves all have 1" size valve seats

⁴ Customer to specify actuator other than AutoSeal

⁵ CFD H₂O Standard Conditions