

STAINLESS STEEL CRYOGENIC GLOBE VALVES

MC CRYO SERIES

0 - 720 PSIG (0 - 49.7 BARG) CLASS 300
1/2" - 2" (DN15 - DN50)



APPLICATIONS

- Cryogenic Storage Tank and Transportation Vessels ASU Plants and piping configurations
- An Alternate to Higher Cost Bellow Sealed Valves
- Compatible with Hydrogen (LH2), Nitrogen (LN2), Argon (LAR), Oxygen (LOX), Natural Gas (LNG), Carbon Dioxide (CO2)



FEATURES

- Stainless Steel Construction
- One Piece Investment Cast Bonnet
- Self-centering Soft Seated Plug Assembly
- Quality Investment Cast Body Providing Full Port High Flow Cv
- Bubble Tight Shut-off
- Standard Connections - Sch 10 BWE
- Fire safe bonnet gasket for flammable or toxic service in accordance with fire safe requirements of BS6755-2 or API607
- CGA G4.1 Oxygen Cleaning



OPTIONS

- Variety of other end connections available
- PTFE packing and bonnet gasket
- Pneumatic Actuators
- Open and/or Closed Limit Switches
- Digital and EP Positioners



Valve Size:

1/2" (DN15), 1" (DN25), 1-1/2" (DN40),
2" (DN50)



OPERATING RANGES

Temperature..... -423° F to +300° F
(-253°C to +149°C)
Pressure Rating ANSI Class 300
(720 PSIG 49.7 BARG)
Max. Operating Pressure 720 PSIG @ 100°F (49.7 BARG @ 37.8°C)



TECHNICAL DATA

Designed to ASME VIII D1, B16.34 & B31.3

Materials of Construction:

Body, Stem & Extension .. ASTM A351 CF3M (316L)
Bolting Hardware 300 Series S/S
Soft Seated Seal PCTFE (M400H)
Packing GRAPH-LOCK® 9000
EVSP (LH2/LNG)
PTFE (LIN/LAR/LOX/CO2)

Connection:

Valve Butt Weld Sch 10 (Other Options Available)

Testing:

Proof Pressure 800 PSIG (55.2 BARG)
Seat Leakage Bubble Tight to 400 PSIG (27.6 BARG)
External Leakage Leak Tight to 1x10⁻⁹ scc GHe/sec

MC CRYO SERIES

ORDERING GUIDE

MC - 088 - OWPG1M - SG

MODEL NUMBER _____
MC - Model Number

SIZE _____
084 - 1/2" (DN15)
088 - 1" (DN25)
812 - 1-1/2" (DN40)
816 - 2" (DN50)

CLEANING _____
O - Oxygen Clean

END TYPE _____
W - Butt Weld
F - CL300 Flange

END WALL _____
P - Pipe Sch 10
T - Tube .065 *
F - RF Flange CL300

OPTIONS/ADD-ONS
SG - Soft Goods Kit
TW - Top Works Kit

TOP WORKS
M - Manual
A - Auto w/o Factory Mounted Actuator
B - Auto w/ AutoSeal, Quick Opening
E - Auto w/ AutoSeal, EQ%
L - Auto w/ AutoSeal, Linear

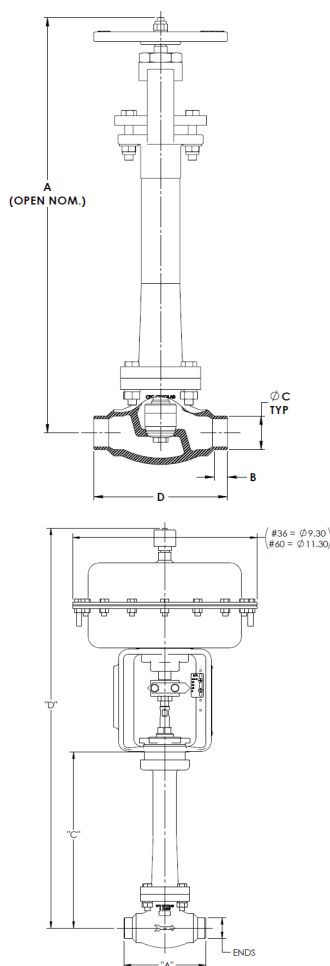
PACKING
1 - PTFE
6 - Graphite **

BODY
G - Globe

* Butt-Weld to Tube Adapter will change dimension D
** For Hydrogen and Natural Gas Service



DIMENSIONS



MC CRYO VALVE DIMENSION - MANUAL

SIZE	ASSEMBLY PART NO.	DIMENSION [INCHES (MM)]				CV	Weight (lbs.)
		A	B	C	D		
1/2 (DN15)	MC-084	13.99 (355.2)	0.63 (15.9)	0.84 (21.3)	4.25 (108)	3.9	5.3
1 (DN25)	MC-088	16.24 (412.5)	0.50 (12.7)	1.32 (33.4)	5.00 (127)	12.0	11.1
1-1/2 (DN40)	MC-812	17.39 (441.6)	0.63 (15.9)	1.90 (48.3)	6.50 (165.1)	27.1	17.3
2 (DN50)	MC-816	17.59 (446.7)	0.54 (13.6)	2.38 (60.3)	7.75 (196.9)	43.3	21.1

MC CRYO VALVE DIMENSION - AUTOMATIC

SIZE	ENDS	A	B (CLOSED)	B (OPEN)	C	D (#36)	D (#60)
1/2"	1/2" SCH 10	4.25	14.00	14.50	9.52	21.60	23.60
1"	1" SCH 10	5.00	16.24	16.96	10.07	22.71	24.15
1-1/2"	1-1/2" SCH 10	6.50	17.37	18.98	11.63	23.71	25.71
2"	2" SCH 10	7.75	17.59	19.47	11.89	23.98	25.98

	AUTO, NO ACTUATOR		AUTO, 36 AUTO-SEAL		AUTO, 60 AUTO-SEAL	
	WEIGHT (lbs)	WEIGHT (kg)	WEIGHT (lbs)	WEIGHT (kg)	WEIGHT (lbs)	WEIGHT (kg)
MC-084	6.7	3.0	26.7	12.1	43.3**	19.6**
MC-088	11.1	5.0	31.1	14.1	47.7	21.6
MC-812	17	7.7	37**	16.8**	53.6	24.3
MC-816	20.9	9.5	40.9**	18.5**	57.5	26.1

** Actuator not recommended for valve size