

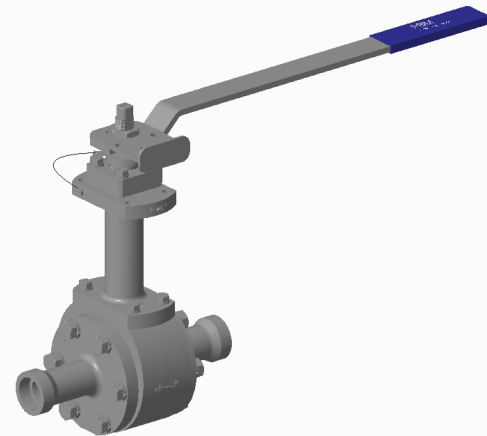
PBM CL600 CRYOGENIC BALL VALVES, Full Port, Sizes 1/2" - 4", Welded or Threaded Ends



www.PBMValve.com

DESIGN FEATURES:

- Valve has been shown to exceed leakage performance per BS6364 and MSS SP-134
- **C6 Series Cryogenic valves DO NOT have o-rings.**
- Live-loaded stem packings
- Fire Tested to API 607
- Extended Socket Weld & Butt weld ends require no disassembly to weld
- Designed and tested in accordance with ASME B31.1 and B16.34.
- Cleaned for oxygen service.
- Optional API-622 Low-e Packing (cannot be cleaned for oxygen service)
- Quarter turn operation
- Locking lever handle or optional oval locking handwheel with special request
- Automation available
- Internal and external grounding
- Uni-directional flow and vented ball, marked HP (high pressure) & LP (low pressure) on valve body
- Available with or without extended stem



SPECIFICATIONS	CP - FULL PORT
Sizes	1/2" - 4"
Body, Ball, End Fitting Material	316L Stainless Steel
Stem Material	17-4 PH Stainless Steel
Seats and Lower Stem Packing Material	V-TEF™
Body Gaskets and Upper Stem Packing	Graphite
Handle	300 Stainless Steel
Maximum Working Pressure	1440 psig CWP (ANSI CL600)
Temperatures	400°F (205°C) to -320°F (-200°C)

CV and WEIGHTS		
Size	CV (gpm)	Weight (lbs.)
1/2"	12	15*
3/4"	30	18*
1"	60	37*
1-1/2"	155	80*
2"	293	90*
3"	745	204*
4"	1322	412*

*Stem prep for automation

CRYOGENIC ALLOWABLE LEAKAGE RATE COMPARISON		
NPS	MSS-SP-134-2010	BS 6364-1984
1/2"	37.5	90
3/4"	56.25	120
1"	75	150
1-1/2"	112.5	240
2"	150	300
3"	225	480
4"	300	600

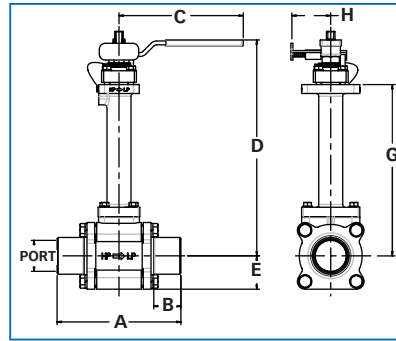
HOW TO ORDER:

PRODUCT (1-2) MATERIAL (3-4)		SIZE (5) SERIES (6)		END CONNECTIONS (7-8)		SEAT & SEAL (9)		PURGE PORT OPTIONS (10-11)		BONNET (12)		OPERATOR (13-14)		OXYGEN CLEAN (15-16)			
C6	HL	316L S / S	C	1/2"	6	B -	Sch. 40 Ext. Butt weld	G	V-TEF™/Graphite Seals Spiral wound graphite stem packing	--	No Purge Ports	-	Standard Bonnet	02	No Handle, Stem Actuator Prep	- L	Oxygen Clean Per PBM Procedure "G" seat / seal code only
Other material options available - Contact PBM.																	
			D	3/4"		D -	Sch. 10 Ext. Butt weld	Z	V-TEF™/Graphite Seals Low Emission graphite stem packing			V	12" Tall Bonnet	04	Locking Lever Handle - Std. 1/2" thru 1" Only	--	NO Oxygen Clean "Z" seat / seal code only
			E	1"		J -	Extended Socket Weld	Note: Valves with "Z" code will not be oxygen cleaned.						08	Gear Operator Std. 1-1/2"- 4" Only		
			G	1-1/2"		Q -	Female NPT							20	DA 80psig actuator		
			H	2"		Q1	Female BSPT							27	DA 60psig actuator		
			K	3"		When end conn. are mixed. 1st position = upstream conn. & 2nd position is for downstream conn.								34	SR 80psig actuator		
			L	4"										41	SR 60psig actuator		

Other operator options available - Contact PBM.

<http://pbmvalve.com/build-a-part-number>

PBM Cryogenic (C6) CL600 Ball Valve Dimensions

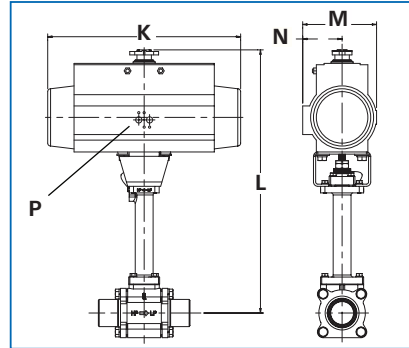


C6 with lever handle

CP CRYOGENIC VALVES												
Size	Ball Port	A	B	Extended Socket Weld		A	C	D	E	G	H	Hole Dia. for Lock
		Butt Weld		A	Socket Depth	FNPT	Handle Length	CL to Top of Stem				
1/2"	0.50	6.50	1.50	7.32	0.41	4.12	8.09	10.21	1.59	7.87	2.08	0.28
3/4"	0.75	7.50	1.75	8.56	0.53	4.25	8.09	10.21	1.59	7.87	2.08	0.28
1"	1.00	8.50	2.50	9.56	0.53	5.50	18.03	11.14	2.38	7.70	2.57	0.28
1-1/2"	1.50	11.00	3.00	12.06	0.53	7.00	CF	CF	2.75	10.81	CF	CF
2"	2.00	11.50	3.25	12.82	0.66	7.00	CF	CF	3.00	11.11	CF	CF
3"	3.00	15.50	4.35	16.38	0.69	11.00	CF	CF	4.38	13.41	CF	CF
4"	4.00	18.50	5.00	20.13	0.81	N/A	CF	CF	5.38	15.08	CF	CF

ACTUATED DIMENSIONS

Unit of Measure = inches
Dimensions based on actuators used with V-TEF™ seats.



Size	60 psi Double Acting					80 psi Double Acting					60 psi Spring Return					80 psi Spring Return				
	K	L	M	N	P	K	L	M	N	P	K	L	M	N	P	K	L	M	N	P
1/2"	6.46	14.32	3.17	1.77	1/8"	6.46	14.32	3.17	1.77	1/8"	9.48	15.58	4.17	2.30	1/8"	9.48	15.58	4.17	2.30	1/8"
3/4"	8.27	15.03	3.72	2.07	1/8"	6.46	14.32	3.17	1.77	1/8"	10.83	16.08	4.84	2.68	1/4"	10.83	16.08	4.84	2.68	1/4"
1"	10.83	16.91	4.84	2.68	1/4"	10.83	16.91	4.84	2.68	1/4"	17.13	19.64	6.46	3.44	1/4"	17.13	19.64	6.46	3.44	1/4"
1-1/2"	14.65	22.86	5.83	3.15	1/4"	13.11	22.38	5.39	2.87	1/4"	19.69	24.69	7.32	3.90	1/4"	19.69	24.69	7.32	3.90	1/4"
2"	17.13	24.05	6.46	3.44	1/4"	14.65	23.16	5.83	3.15	1/4"	22.76	27.24	8.54	4.29	1/4"	19.41	26.25	8.38	4.53	1/4"
3"	17.13	28.35	6.46	3.44	1/4"	14.65	27.46	5.83	3.15	1/4"	26.46	36.30	11.42	5.71	1/4"	22.76	31.54	8.54	4.29	1/4"
4"	19.69	30.96	7.32	3.90	1/4"	19.69	30.96	7.32	3.90	1/4"	26.46	37.97	11.42	5.71	1/4"	26.46	37.97	11.42	5.71	1/4"



<http://pbmvalve.com/valves/cryogenic-valves>

<http://pbmvalve.com/maintenance-instructions>

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