

PBM ANSI CL150 & CL300 CRYOGENIC VALVES, 2-Way, Full Port, Sizes 3/4" - 4", Flanged Ends



www.PBMValve.com

DESIGN FEATURES:

- Valve has been shown to exceed leakage performance per BS6364 and MSS SP-134
- **CN Series Cryogenic valves DO NOT have o-rings.**
- Live-loaded stem packings
- Fire Tested to API-607
- 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
- With or without extended stem



SPECIFICATIONS	CN - 2-Way, Full Port, Split Body Flanged Class 150 or 300
Sizes	3/4" - 4"
Body, Ball, End Fitting Material	316 Stainless Steel
Stem Material	17-4 PH Stainless Steel
Seats & Lower Stem Packing Material	V-TEF™
Body Gaskets & Upper Stem Packing	Graphite
Handle	300 Stainless Steel
Maximum Working Pressure	275 psig CWP (ANSI CL150) 720 psig CWP (ANSI CL300) Flanged end connections.

CV and WEIGHTS			
Size	CV (gpm)	Weight CL150 (lbs.)	Weight CL300 (lbs.)
3/4"	52	7	10
1"	80	12	15
1-1/2"	190	25	32
2"	400	34	39
3"	1,100	70	92
4"	2,400	118*	156*

CRYOGENIC ALLOWABLE LEAKAGE RATE COMPARISON		
NPS	MSS-SP-134-2010	BS 6364-1984
3/4"	56.25	120
1"	75	150
1-1/2"	112.50	240
2"	150	300
3"	225	480
4"	300	600

*Stem prep for automation

HOW TO ORDER:

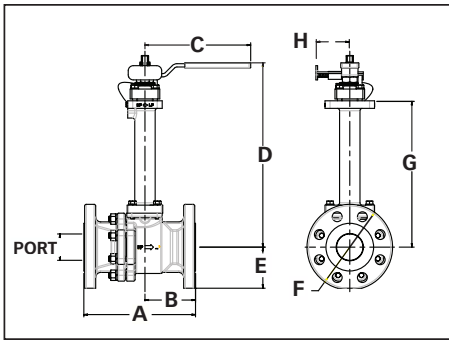
PRODUCT (1-2) MATERIAL (3-4)			SIZE (5) SERIES (6)			END CONN. (7-8)		SEAT & SEAL (9)		PURGE PORT OPTIONS (10-11)		BONNET (12)		OPERATOR (13-14)		OXYGEN CLEAN (15-16)	
CN	H	316 S / S	D	3/4"	6	L	CL150 RF Flange	G	V-TEF™/Graphite Seals Spiral wound graphite stem packing	--	No Purge Ports	-	Standard Bonnet	02	No Handle, Stem Actuator Prep	-L	Oxygen Clean Per PBM Procedure "G" seat / seal code only
Other material options available - Contact PBM.			E	1"		M	CL300 RF Flange	Z	V-TEF™/Graphite Seals Low Emission graphite stem packing			V	12" Tall Bonnet	04	Locking Lever Handle - Std. 3/4" thru 2" Only	--	NO Oxygen Clean "Z" seat / seal code only
			G	1-1/2"		Note: Valves with "Z" code will not be oxygen cleaned.											
			H	2"													
			K	3"													
			L	4"													
												08	Gear Operator Std. - 4" Only				
												09	Locking "T" Handle - Std. 3" Only				
												20	DA 80psig actuator				
												27	DA 60psig actuator				
												34	SR 80psig actuator				
												41	SR 60psig actuator				

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

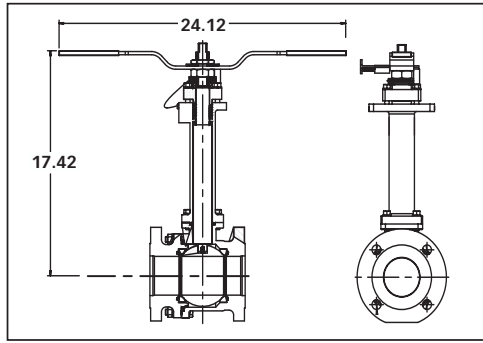
Other operator options available - Contact PBM.

PBM ANSI CL150 & CL300 CRYOGENIC BALL VALVE DIMENSIONS

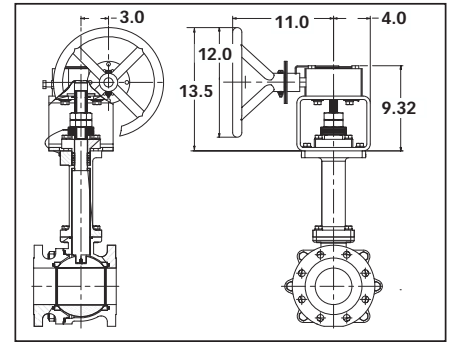
CN with Lever Handle



3" CN with T-Handle



4" CN with Gear Operator

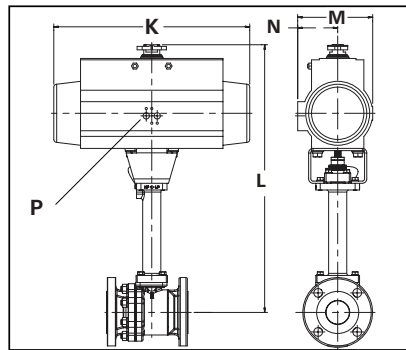


CN CRYOGENIC VALVES

Size	Port Dia.	Pressure Class	A	B	C	D	E	F	G	H	Hole Dia. for Lock
			Overall Length	CL to End Face	Handle Length	Handle Height Std. Ext.	CL to Bottom Flange	Flange Dia.	CL to Top of Bonnet		
3/4"	.75	150#	4.62	2.12	6.15	9.86	1.80	3.88	7.78	1.55	.28
	.75	300#	6.00	2.90	6.15	9.86	2.15	4.62	7.78	1.55	.28
1"	1.00	150#	5.00	2.25	8.09	10.08	2.06	4.25	7.71	1.64	.25
	1.00	300#	6.50	3.15	8.09	10.08	2.38	4.88	7.71	1.64	.25
1-1/2"	2.00	150#	6.50	2.68	18.03	13.70	2.38	5.00	10.81	2.57	.38
	2.00	300#	7.50	3.18	18.03	13.70	3.00	6.12	10.81	2.57	.38
2"	2.00	150#	7.00	3.12	18.03	14.00	2.88	6.00	11.12	2.57	.38
	2.00	300#	8.50	3.84	18.03	14.00	3.12	6.50	11.12	2.57	.38
3"	3.00	150#	8.00	3.57	NA	NA	3.50	7.50	13.41	3.84	.38
	3.00	300#	11.12	5.19	NA	NA	4.00	8.25	13.41	3.84	.38
4"	4.00	150#	9.00	3.84	NA	NA	4.38	9.00	14.83	NA	NA
	4.00	300#	12.00	5.34	NA	NA	4.75	10.00	14.83	NA	NA

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
3/4"	6.46	13.73	3.17	1.77	1/8	5.55	13.28	2.79	1.61	1/8	9.48	14.99	4.17	2.30	1/8	8.27	14.44	3.72	2.07	1/8
1"	6.46	14.16	3.17	1.77	1/8	6.46	14.16	3.17	1.77	1/8	10.83	15.92	4.85	2.68	1/4	9.48	15.42	4.17	2.30	1/8
1-1/2"	10.83	20.02	4.85	2.68	1/4	9.48	19.52	4.17	2.30	1/8	14.65	21.86	5.83	3.15	1/4	13.12	21.38	5.39	2.87	1/4
2"	13.12	21.69	5.39	2.87	1/4	10.83	20.33	4.85	2.68	1/4	19.68	24.00	7.36	3.90	1/4	17.13	23.06	6.45	3.44	1/4
3"	14.65	25.46	5.83	3.15	1/4	13.12	24.98	5.39	2.87	1/4	22.78	29.54	8.54	4.29	1/4	19.68	27.29	7.36	3.90	1/4
4"	22.78	32.96	8.54	4.29	1/4	22.78	32.96	8.54	4.29	1/4	26.46	35.04	11.42	5.71	1/4	26.46	35.04	11.42	5.71	1/4



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

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

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