



Breakthrough engineering for a better world

Process Automation

IMI PBM



CN Series 6 Size 3/4" to 4"

Cryogenic Ball Valves 150# & 300#

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) and LP (low pressure) on valve body
- Available with or without extended stem

CV & Weights			
Size	CV (gpm)	Weight CL 150#	Weight CL 300#
3/4"	42	7	10
1"	73	12	15
1 1/2"	170	25	32
2"	360	34	39
3"	935	70	92
4"	1,900	118+	156*

*Stem prep for automation

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

SPECIFICATIONS

Sizes
Stem Material
Body, Ball End Fitting Material
Seats and Lower Stem Packing Material
Body Gaskets and Upper Stem Packing
Handle
Maximum Working Pressure

2-WAY, FULL PORT, FLANGED ENDS

3/4" to 4"
17-4 PH Stainless Steel
316L Stainless Steel
V-TEFT™
Graphite
300 Stainless Steel
275 psig CWP (ANSI CL 150); 720 psig CWP (ANSI CL300); flanged end connections



How To Order:
pbmvalve.com/build-a-part-number

PRODUCT (1-2) MATERIAL (3-4)			SIZE (5) SERIES (6)			END CONNECTION (7-8)			SEAT / SEAL (9)		PURGE PORTS (10-11)		BONNET (12)		OPERATOR (13-14)		OXYGEN CLEAN (15-16)	
CN	H	316 S/S	D	3/4"	6	L	150# RF Flange	G	V-TEF™/Graphite Seals Spiral wound graphite stem packing	--	No Purge Ports	-	Standard Bonnet	04	Locking Lever Handle - Std. 3/4" thru 2" Only	- L	Oxygen Clean Per PBM Procedure "G" seat / seal code only	
Other material options available - Contact IMI PBM			E	1"		M	300# RF Flange	Z	V-TEF™/Graphite Seals Low Emission graphite stem packing			V	12" Tall Bonnet	09	Locking "T" Handle - Std. 3" Only	--	NO Oxygen Clean "Z" seat / seal code only	

Other material options available - Contact IMI PBM

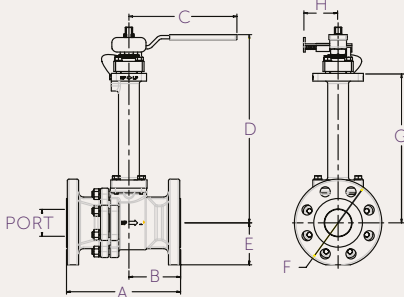
Note: Valves with "Z" code will not be oxygen cleaned.

Other operator options available - Contact IMI PBM for information

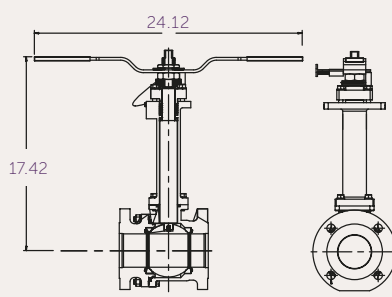
G	1-1/2"
H	2"
K	3"
L	4"

08	Gear Operator Std. - 4" Only
20	No Handle, Stem Actuator Prep
02	DA 80psig actuator
27	DA 60psig actuator
34	SR 80psig actuator
41	SR 60psig actuator

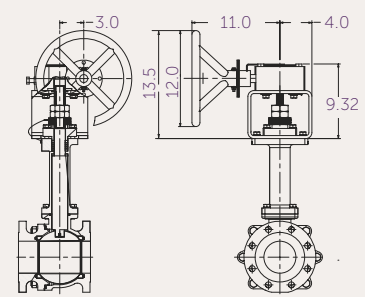
CN WITH LEVER HANDLE



3" CN WITH T-HANDLE



4" CN WITH GEAR OPERATOR

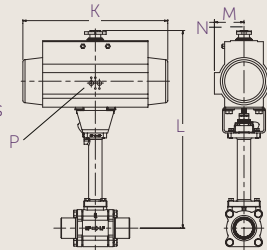


Size	Port Dia.	Pressure Class	A	B	C	D	E	F	G	H	Hole Dia. for Lock
			Overall Length	CL to End Face	Handle Length	Handle Height Std. Ext.	CL to Bottom Flange	Flange Dia.	CL to Top of Bonnet		
3/4"	.75	150#	4.62	2.12	6.15	9.86	1.80	3.88	7.78	1.55	.28
	.75	300#	6.00	2.90	6.15	9.86	2.15	4.62	7.78	1.55	.28
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



Find out more
pbmvalve.com

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	14.08	3.17	1.77	1/8	6.46	14.08	3.17	1.77	1/8	10.83	15.86	4.85	2.68	1/4	9.48	15.35	4.17	2.30	1/8
1-1/2"	10.83	19.98	4.85	2.68	1/4	9.48	19.47	4.17	2.30	1/8	14.65	21.81	5.83	3.15	1/4	13.12	21.33	5.39	2.87	1/4
2"	13.12	21.46	5.39	2.87	1/4	10.83	20.29	4.85	2.68	1/4	19.68	23.95	7.36	3.90	1/4	17.13	22.98	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	29.53	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



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