

# IMI PBM CL300 CRYOGENIC DIVERTER VALVES

## Full Port, Sizes 1/2" - 4", Welded or Threaded Ends



### DESIGN FEATURES:

- Valve has been shown to exceed leakage performance per BS6364 and MSS SP-134
- **CD Series Cryogenic valves DO NOT have o-rings.**
- Live-loaded upstream seat & stem packings
- 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
- Firesafe design (Not API-607)
- Available with or without extended stem

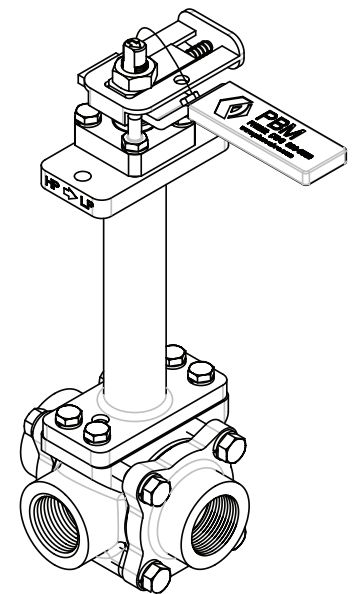


SPECIFICATIONS	CD
Sizes	1/2" - 4"
Body, Ball, End Fitting Material	316/316L Stainless Steel
Stem Material	17-4 PH Stainless Steel
Seats and Lower Stem Packing Material	V-TEF™
Body Gaskets and Upper Stem Packing	Graphite
Handle	300 Stainless Steel
Maximum Working Pressure	720 psig CWP (ANSI CL300)
Temperatures	400°F (205°C) to -320°F (-200°C)

CV and WEIGHTS		
Size	CV (gpm)	Weight (lbs.)
1/2"	6.6	9 (CL150)
3/4"	17	13 (CL150)
1"	33	16 (CL150)
1-1/2"	79	23 (EXT. SW)
2"	149	30 (EXT. SW)
3"	350	92 (EXT. SW)
4"	640	164* (CL150)

\*Weight without handle

CRYOGENIC ALLOWABLE LEAKAGE RATE COMPARISON		
NPS	MSS-SP-134-2010	BS 6364-1984
1/2"	37.50	90
3/4"	56.25	120
1"	75	150
1-1/2"	112.50	240
2"	150	300
3"	225	480
4"	300	600

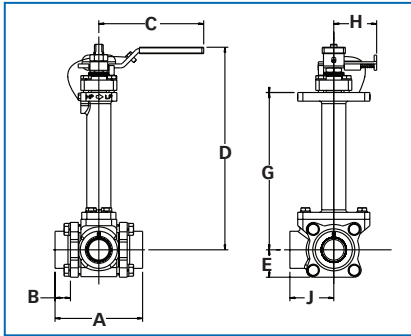


### HOW TO ORDER:

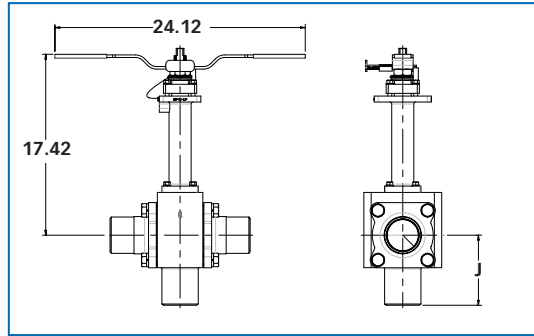
PRODUCT (1-2) MATERIAL (3-4)		SIZE (5) SERIES (6)		END CONN. (7-8)		SEAT & SEAL (9)		PURGE PORT OPTIONS (10-11)		BONNET (12)		OPERATOR (13-14)		OXYGEN CLEAN (15-16)						
CD	H-	316/316L S/S	C	1/2"	6	B -	Sch. 40 Ext. Butt weld	G	V-TEF™/Graphite Seals Spiral wound graphite stem packing	10	3-Way Side Entry 90°	-	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	15	3-Way Bottom Entry 180°	V	12" Tall Bonnet	04	Locking Lever Handle - Std. 1/2" thru 2" 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. - 4" Only		
			G	1-1/2"		L -	CL150 RF Flange	Other options available Contact PBM.									09	Locking "T" Handle - Std. 3" Only		
			H	2"		M -	CL300 RF Flange										20	DA 80psig actuator		
			K	3"		Q -	Female NPT										27	DA 60psig actuator		
			L	4"		Q1	Female BSPT										34	SR 80psig actuator		
																	41	SR 60psig actuator		
When end conn. are mixed. 1st position = upstream conn. & 2nd position = downstream conn.																				
Other operator options available - Contact PBM.																				

# IMI PBM Cryogenic Diverter (CD) Series 6 Ball Valve Dimensions

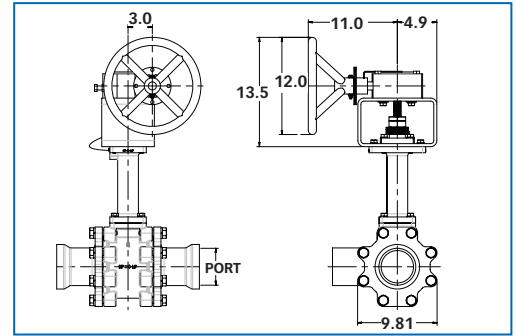
CD with lever handle



3" CD with T-Handle



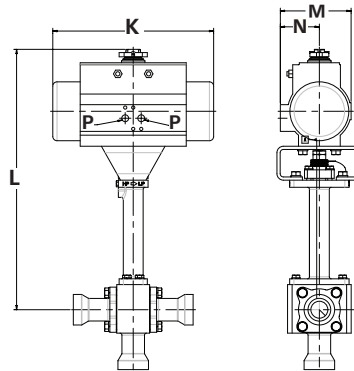
4" CD with Gear Operator



Size	Ball Port	Buttweld			Extended Socket Weld			FNPT		Handle Length from CL	Handle Height Std. Ext.	E	CL to Top of Bonnet	H	Hole Dia. for Lock
		A	B	J	A	Socket Depth	J	A	J				G		
1/2"	0.50	5.5	1.5	2.75	6.32	0.41	3.16	3.12	1.56	6.15	9.92	1.00	7.78	1.55	.28
3/4"	0.75	5.5	1.5	2.75	6.56	0.53	3.28	3.44	1.72	6.15	9.92	1.00	7.78	1.55	.28
1"	1.00	6	1.5	3.00	7.06	0.53	3.53	4.25	2.13	8.09	9.92	1.33	7.64	1.64	.25
1-1/2"	1.50	7.5	1.5	3.75	8.56	0.53	4.28	5.5	2.75	18.03	13.60	1.78	10.76	2.57	.38
2"	2.00	8	1.75	4.00	9.32	0.66	4.66	6	3.00	18.03	13.95	2.15	11.07	2.57	.38
3"	3.00	13.5	2.31	6.75	14.88	0.69	7.44	9	4.50	NA	NA	3.14	13.41	3.84	.38
4"	4.00	16	2.31	8.00	17.62	0.81	8.81	12	6.00	NA	NA	4.91	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
1/2"	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
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

[www.PBMValve.com](http://www.PBMValve.com)

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