IMI PBM

Radial Diaphragm Tank Outlet Valves

www.pbmvalve.com

IMI PBM Igenix®

Clean. Reliable. Simple. Versatile

Igenix® CLEAN Valve Solutions
IMI PBM

IMI Critical Engineering

Breakthrough Engineering

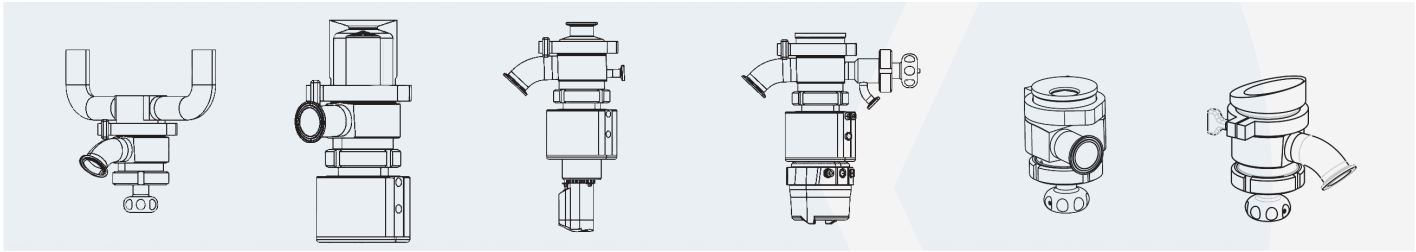
IMI PBM Igenix®

Radial Diaphragm Tank Outlet Valves

As an ISO 9001:2015 manufacturer, IMI PBM produces standard and custom sanitary valve products for services required to minimize contamination, facilitate CIP/SIP and reduce downtime. IMI PBM Radial Diaphragm Valves comply with ASME BPE guidelines and offer valve certifications. Our absolute mission is to provide time lasting designs which help our users produce high quality biologicals and pharmaceuticals.

- Lower potential emissions due to less flange connections
- Smooth sloping design for complete drainage
- ½" - 4" (DN 15 - DN 100)
- 45° and 2° sloped outlet
- Pressure rating 175 psi/12 bar
- Machined by IMI PBM from wrought material
- Standard finish 15 Ra with EP (BPE SF4)
- Optional purge port and tank connections available
- Body materials - 316L, Hastelloy® C-22®, AL6XN™, & others; Weld pads - any material
- Platinum cured Silicone or V-TEF™ (4" (DN100) only) diaphragms
- Full material traceability and documentation package
- Exceeds performance requirements of ASME-BPE testing
- Optional position switch options including AS-Interface, DeviceNet, Foundation Fieldbus and Modbus
- Approved CRN

RDV CONFIGURATIONS

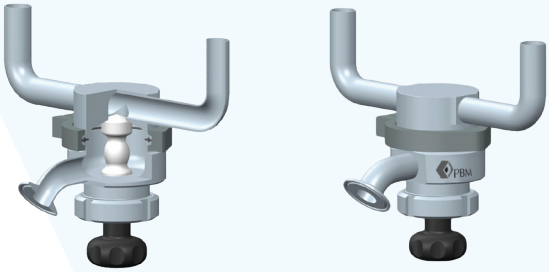


Point of us | Extended Weld Pad | Clamp on with purge port | Standard Weld Pad with satellite valve | Tangential

Point of Use Valve

Zero Dead Leg

IMI PBM's Igenix® Radial Diaphragm Zero Static Valves eliminate dead-leg on critical process systems including WFI, clean steam and process media. IMI PBM's Radial Diaphragm Zero Static Valves have an advantage over traditional weir type diaphragm valves due to a detachable body connection, using a standard hygienic clamp, that can be capped during system passivation.

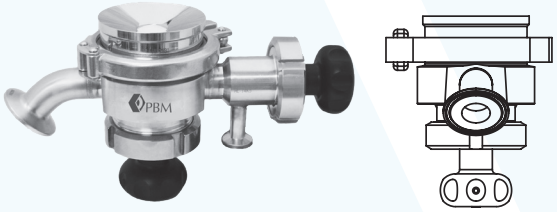


Valve Size		Header Size Selection						
		1/2" (DN15)	3/4" (DN20)	1" (DN25)	1-1/2" (DN40)	2" (DN50)	3" (DN80)	4" (DN100)
1/2"	(DN15)	*	*	*	*	*	*	
3/4"	(DN20)		*	*	*	*	*	
1"	(DN25)			*	*	*	*	
1-1/2"	(DN40)				*	*	*	
2"	(DN50)					*	*	*
3"	(DN80)						*	*

Additional RDV Configurations

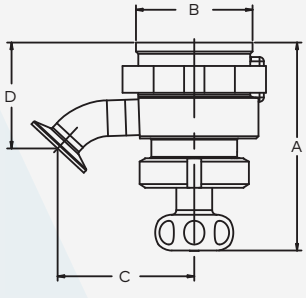
Satellite Valve

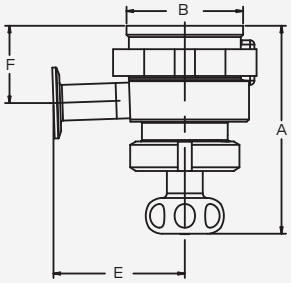
IMI PBM's Igenix® Satellite Valve offers seating against the body of our Radial Diaphragm Valve eliminating dead leg and allowing the introduction of CIP / SIP into the valve.



IMI PBM
Radial Diaphragm Manual Valves

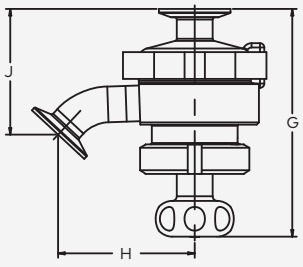
Flush Mounted Radial Diaphragm Valve

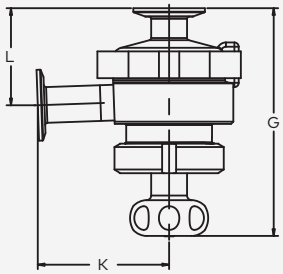




Size		Port		A		B		C		D		E		F	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/2"	(DN15)	0.37	9.40	5.07	128.78	2.25	57.15	3.11	78.99	2.64	67.06	3.18	80.77	1.93	49.02
3/4"	(DN20)	0.62	15.75	5.07	128.78	2.25	57.15	3.11	78.99	2.50	63.50	3.18	80.77	1.80	45.72
1"	(DN25)	0.87	22.10	5.82	147.83	3.25	82.55	3.81	96.77	2.95	74.93	3.66	92.96	2.15	54.61
1-1/2"	(DN40)	1.37	34.80	6.36	161.54	3.25	82.55	4.32	109.73	3.44	87.38	3.66	92.96	2.40	60.96
2"	(DN50)	1.87	47.50	7.14	181.36	4.25	107.95	5.34	135.64	4.05	102.87	4.65	118.11	2.79	70.87
3"	(DN80)	2.87	72.90	9.26	235.20	6.25	158.75	7.34	186.44	5.72	145.29	5.59	141.99	3.98	101.09
4"	(DN100)	3.83	97.28	10.27	260.86	6.25	158.75	8.71	221.23	6.82	173.23	5.70	144.78	4.51	114.55

Clamp Mounted Radial Diaphragm Valve

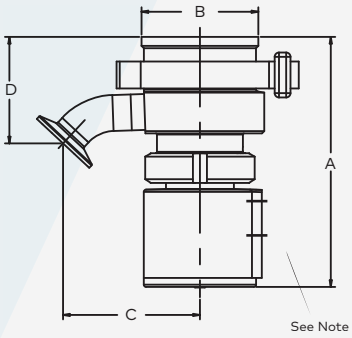


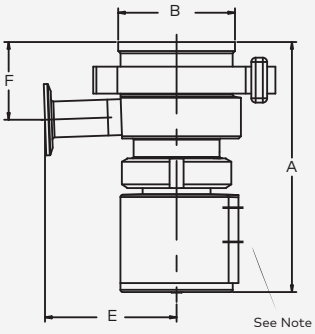


Size		Port		G		H		J		K		L	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/2"	(DN15)	0.37	9.40	5.82	147.83	3.11	78.99	3.39	86.12	3.18	80.77	2.68	68.07
3/4"	(DN20)	0.62	15.75	5.82	147.83	3.11	78.99	3.25	82.55	3.18	80.77	2.55	64.77
1"	(DN25)	0.87	22.10	6.37	161.80	3.81	96.77	3.51	89.15	3.66	92.96	2.61	66.29
1-1/2"	(DN40)	1.37	34.80	6.91	175.51	4.32	109.73	3.99	101.35	3.66	92.96	2.86	72.64
2"	(DN50)	1.87	47.50	7.69	195.33	5.34	135.64	4.60	116.84	4.65	118.11	3.34	84.84
3"	(DN80)	2.87	72.90	9.39	238.51	7.34	186.44	5.85	148.59	5.59	141.99	4.11	104.39
4"	(DN100)	3.83	97.28	10.40	264.16	8.71	221.23	6.95	176.53	5.70	144.78	4.63	117.60

IMI PBM
Radial Diaphragm Actuated Valves

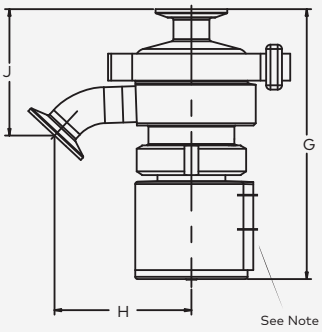
Actuated Flush Mounted Radial Diaphragm Valve

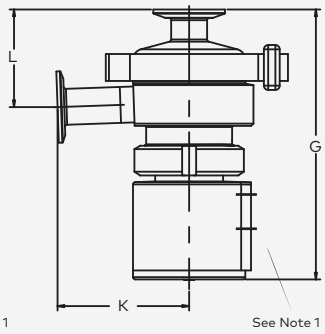




Size		Port		A		B		C		D		E		F	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/2"	(DN15)	0.37	9.40	6.08	154.43	2.25	57.15	3.11	78.99	2.64	67.06	3.18	80.77	1.93	49.02
3/4"	(DN20)	0.62	15.75	6.08	154.43	2.25	57.15	3.11	78.99	2.50	63.50	3.18	80.77	1.80	45.72
1"	(DN25)	0.87	22.10	6.96	176.78	3.25	82.55	3.81	96.77	2.95	74.93	3.66	92.96	2.15	54.61
1-1/2"	(DN40)	1.37	34.80	8.24	209.30	3.25	82.55	4.32	109.73	3.44	87.38	3.66	92.96	2.40	60.96
2"	(DN50)	1.87	47.50	9.42	239.27	4.25	107.95	5.34	135.64	4.05	102.87	4.65	118.11	2.79	70.87
3"	(DN80)	2.87	72.90	13.42	340.87	6.25	158.75	7.34	186.44	5.72	145.29	5.59	141.99	3.98	101.09
4"	(DN100)	3.83	97.28	14.50	368.30	6.25	158.75	8.71	221.23	6.82	173.23	5.70	144.78	4.51	114.55

Actuated Clamp Mounted Radial Diaphragm Valve





Size		Port		G		H		J		K		L	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1/2"	(DN15)	0.37	9.40	6.83	173.48	3.11	78.99	3.39	86.12	3.18	80.77	2.68	68.07
3/4"	(DN20	0.62	15.75	6.83	173.48	3.11	78.99	3.25	82.55	3.18	80.77	2.55	64.77
1"	(DN25)	0.87	22.10	7.51	190.75	3.81	96.77	3.51	89.15	3.66	92.96	2.61	66.29
1-1/2"	(DN40)	1.37	34.80	8.79	223.27	4.32	109.73	3.99	101.35	3.66	92.96	2.86	72.64
2"	(DN50)	1.87	47.50	9.97	253.24	5.34	135.64	4.60	116.84	4.65	118.11	3.34	84.84
3"	(DN80)	2.87	73.90	13.62	345.95	7.34	186.44	5.85	148.59	5.59	141.99	4.11	104.39
4"	(DN100)	3.83	97.28	14.63	371.60	8.71	221.23	6.95	176.53	5.70	144.78	4.63	117.60

Note 1: Air connection on actuator is 1/8" F.N.P.T.

Specifications, Weights, CV

SPECIFICATIONS	RD VALVE
Sizes	1/2" - 3" (DN15 - DN80)
Body and Weld pad	316L Stainless, Hastelloys, AL6XN, & more
Maximum Working Pressure	175 psi / 12 bar CWP
Diaphragm/Gasket Materials	Silicone or V-TEF™/PTFE
Temperatures	Silicone to -60°F to 275°F (-51.11°C to 135°C), V-TEF™ +32°F to 400°F (+0°C to 204.44°C)

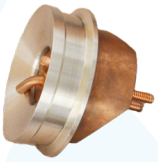
WEIGHTS

Size		Valve, manual		Valve + actuator		Valve + clamp, manual		Valve + Clamp + actuator	
		lb.	kg.	lb.	kg.	lb.	kg.	lb.	kg.
1/2"	DN15	3.14	1.4	4.46	2.0	2.87	1.3	4.20	1.9
3/4"	DN20	3.17	1.4	4.32	2.0	3.00	1.4	4.15	1.9
1"	DN25	7.10	3.2	9.50	4.3	6.53	3.0	8.90	4.0
	DN40	8.56	3.9	14.20	6.4	9.16	4.2	14.00	6.4
2"	DN50	15.90	7.2	21.90	9.9	15.10	6.8	21.00	9.5
3"	DN80	31.80	14.4	62.80	28.5	27.70	12.6	59.70	27.1
4"	DN100	39.02	17.70	71.99	32.65	34.92	15.84	68.47	31.06

CV Values

Size		Cv	Kv
1/2"	DN15	3.30	2.9
3/4"	DN20	10.30	8.9
1"	DN25	14.60	12.6
1-1/2"	DN40	48.10	41.6
2"	DN50	72.20	62.5
3"	DN80	167.70	145.1
4"	DN100	240.0	207.6

Custom fit, copper, chill block fixtures are available to facilitate welding of IMI PBM's Radial Diaphragm tank outlet valve weld pad.



SILICONE

V-TEF™

How to Order

PRODUCT (1-2) MATERIAL (3-4)			SIZE (5) SERIES (6)		OUTLET END CONNECTION (7)			OUTLET ORIENTATION CONNECTION (8)		DIAPHRAGM /GASKET (9)		TANK PAD OPTIONS (10-11)		PURGE PORTS/ SATELLITE VALVE (12)		OPERATOR (13-14)		POLISH (MECH. UNLESS NOTED) (15-16)	
RD	HL	316L Stainless	C	1/2"	1	F	Extended Butt Weld	1	2 Degree Slope W/ Straight Outlet	B	Silicone/ Silicone	- -	Standard Weld Pad	-	No purge option(s) selected	- -	w/Manual Knob	G	15Ra ID / 63Ra OD after EP (Standard)
	C-	Hastelloy® C-276	D	3/4"		X	Hygienic Clamp	2	2 Degree Slope W/ 45 Degree Outlet	G	V-TEF™/PTFE	LP	Less Weld Pad	A	(1) 1/2" clamp on center opposite outlet	20	SR80 psig actr (Actuated for 80 psig diff.)	H	10Ra ID / 63Ra OD after EP
	Y-	Hastelloy® C-22®	E	1"				3	Tangential 2 deg slope W/ Straight Outlet	H	V-TEF™/EPDM	CX	1/2" Clamp Inlet	B	(1) 1/2" BWTE on center opposite outlet	21	SR80 psig actr & GP LS (Actuated for 80 psig diff.)	O	15Ra ID / 32Ra OD / EP
	P-	AL6XN	G	1-1/2"						I	V-TEF™/FKM	DX	3/4" Clamp Inlet					S	10Ra ID / 32Ra OD / EP
			H	2"				4	Tangential 2 deg slope W/ 45 Degree Outlet			EX	1" Clamp Inlet	R	(1) 1/2" Satellite Valve - Hygienic Clamp - Manual	23	SR80 psig actr & GP Limit Switch & 120VAC Solenoid (Actuated for 80 psig diff.)		
			K	3"								GX	1-1/2" Clamp Inlet						
			L	4"								HX	2" Clamp Inlet	S	(1) 1/2" Satellite Valve - Ext. Butt Weld - Tube - Manual	34	SR80 psig actr (Actuated for 175 psig diff.)		
												KX	3" Clamp Inlet			35	SR80 psig actr & GP LS (Actuated for 175 psig diff.)		
															Other purge port / satellite valve options - Consult factory.	37	SR80 psig actr & GP Limit switch & 120VAC Solenoid (Actuated for 175 psig diff.)		
																56	SR80 psig actr & GP Limit switch & 24VDC Solenoid (Actuted for 80 psig diff.)		
																64	SR80 psig actr & GP Limit switch & 24VDC Solenoid (Actuated for 175 psig diff.)		

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

IMI PBM

Polymer Radial Diaphragm Tank Outlet Valves

- Smooth sloping design for complete drainage
- 2˚ sloped outlet
- Machined from polypropylene or PVDF material
- Outlet sizes can be customized upon request - Contact IMI PBM
- Diaphragm seal easily removed for quick change-out
- Silicone diaphragm is medical grade platinum cured
- Full material traceability and documentaton package
- Exceeds performance requirements of ASME-BPE testing

SPECIFICATIONS	RD VALVE
Sizes	1" - 2" (DN25 - DN50)
Maximum Working Pressure	10 psi / 0.69 bar CWP
Diaphragm/Gasket Materials	Silicone or V-TEF™
Maximum Service Temp.	Polypropylene (104ºC / 220ºF) PVDF (110ºC / 230ºF)

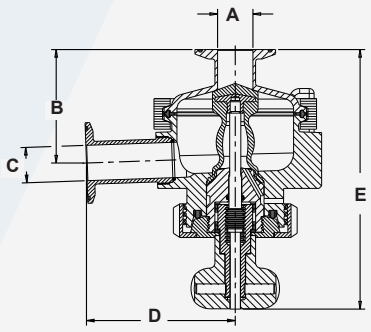
WEIGHTS

Size		Valve, manual		Valve + actuator	
		lb.	kg.	lb.	kg.
1"	DN25	4.7	2.13	5.8	2.63
1-1/2"	DN40	6.0	2.72	9.0	4.08
2"	DN50	9.2	4.17	13.4	6.08

CV Values

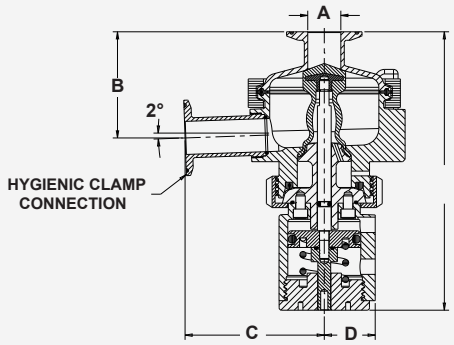
Size		CV	KV
1"	DN25	14.60	12.6
1-1/2"	DN40	48.10	41.6
2"	DN50	72.20	62.5

Manual Clamp Mounted Radial Diaphragm



Size		A		B		C		D		E (OPEN)		E (CLOSED)	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1"	(DN25)	0.87	22.10	2.79	70.87	0.87	22.10	3.66	92.96	6.69	169.93	6.38	162.05
1-1/2"	(DN40)	1.37	34.80	3.08	78.23	1.37	34.80	3.65	92.71	9.25	234.95	8.75	222.25
2"	(DN50)	1.87	47.50	3.40	86.36	1.87	47.50	4.65	118.11	10.11	256.79	9.51	241.55

Actuated Clamp Mounted Radial



Size		A		B		C		D		E (OPEN)		E (CLOSED)	
		in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
1"	(DN25)	0.87	22.10	2.79	70.87	0.87	22.10	3.66	92.96	7.63	193.80	7.32	185.92
1-1/2"	(DN40)	1.37	34.80	3.08	78.23	1.37	34.80	3.65	92.71	9.25	234.95	8.75	222.25
2"	(DN50)	1.87	47.50	3.40	86.36	1.87	47.50	4.65	118.11	10.11	256.79	9.51	241.55

How to Order

PRODUCT (1-2) MATERIAL (3-4)			SIZE (5) SERIES (6)		OUTLET END CONNECTION (7)			OUTLET ORIENTATION CONNECTION (8)		DIAPHRAGM /GASKET (9)		PURGE PORTS (12)		OPERATOR (13-14)	
RD	PP	Polypropylene	E	1"	1	X	Hygienic Clamp	1	2˚ Slope W/ Straight Outlet	B	Silicone/ Silicone	-	No purge option(s) selected	--	w/Manual Knob
			G	1-1/2"				3	Tangential 2˚ slope W/ Straight Outlet	G	V-TEF™	A	(1) 1/2" clamp on center opposite outlet	20	SR80 psig actr
			H	2"						H	V-TEF™/EPDM	B	(1) 1/2" BWTE on center opposite outlet	21	SR80 psig actr & GP LS
										I	V-TEF™/FKM			23	SR80 psig actr & GP Limit switch & 120VAC Solenoid
												R	(1) 1/2" Satellite Valve - Hygienic Clamp - Manual		
												S	(1) 1/2" Satellite Valve - Ext. Butt Weld - Tube - Manual	56	SR80 psig actr & GP Limit switch & 24VDC Solenoid

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

Other purge port / satellite valve options - Consult factory.

www.pbmvalve.com

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IMI Critical Engineering

Breakthrough Engineering

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