

Zero dead leg valves



Zero dead leg valves

Features and benefits

- For use in situations where sampling, draining, transferring or directing fluid from a line is necessary
- Designed to minimize hold-up in point-of-use applications
- Completely eliminates any dead legs
- Drains completely, because unlike other designs, our valves have no pockets
- Eliminates hold up, because the tip of the diaphragm seals on the ID of the line tubing
- Flush mount design, simple clamp assembly
- CIP/SIP capable for easy, repeatable cleaning and sterilization



Performance

Zero dead leg valve flow rates		
Size	Cv at 1 psi (0.07 bar)	
inches	LPM	GPM
0.50	10.2	2.7
1.00	59.8	15.8
1.50	180	48
2.00	272	72
3.00	643	170

Technical specifications

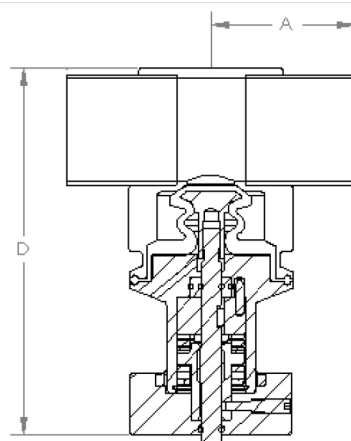
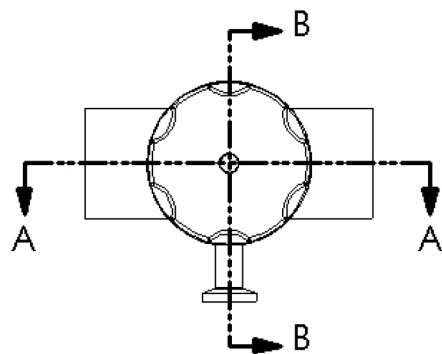
	Zero dead leg valves
Mounting type	Flush
Flow rate	10.2 - 643 l/m
Flow rate	2.7 - 170 USGPM
Sizes	0.5", 0.75", 1.0", 1.5", 2.0", 3.0", 4.0"
Outlet connections	Buttweld, Sanitary flange
Max. operating pressure	250 psi (17 bar)
Operating temperature	-60 °F to 350 °F (-51 °C to 177 °C)
Compatible actuators	Compact pneumatic, Fail closed, Fail open, Manual
Compatible diaphragms	EPDM, PTFE, Silicone, Silicone plus, Viton
Surface finish options	Electropolished, Max 10 micro-inch Ra (0.25 µm Ra), Max 15 micro-inch Ra (0.375 µm Ra), Max 20 micro-inch Ra (0.5 µm Ra)
Certification and compliance	ISO 9001
Standards	ASME BPE, CE-PED
Weight	1 - 6 lbs (0.45 - 2.73 kg)

Temperature range depends on diaphragm material.

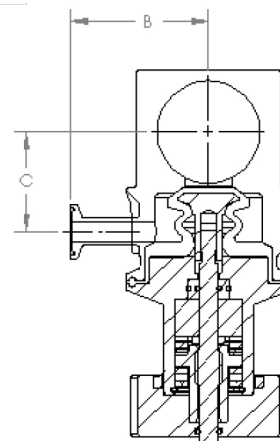
Materials of construction

	Zero dead leg valves
Material	Hastelloy C22, Hastelloy C276, Stainless steel 316L, Stainless steel AL-6XN

Zero dead leg valves dimensions



SECTION A-A



SECTION B-B

Line Size*	A		B		C		D - with Manual Ac-tuator		D - with Pneumatic Actuator	
inches	mm	in	mm	in	mm	in	mm	in	mm	in
0.50	47.2	1.86	52.5	2.07	13.5	0.53	106.9	4.21	127.8	5.03
0.75	50.4	1.99	49.8	1.96	19.8	0.78	119.6	4.71	140.5	5.53
1.00	111.8	4.40	64.3	2.53	26.9	1.06	146.3	5.76	187.5	7.38
1.50	85.1	3.35	64.3	2.53	52.3	2.06	157.0	6.18	206.2	8.12
2.00	107.4	4.23	82.6	3.25	52.5	2.065	171.2	6.74	212.6	8.37
3.00	107.4	4.23	64.3	2.53	52.5	2.065	195.1	7.683	236.5	9.31

Weights

Size	Valve Body		Total Weight with Manual Actuator		Total Weight with Pneumatic Actuator	
inches	lb	kg	lb	kg	lb	kg
0.50	1.00	0.45	3.05	1.39	2.75	1.25
0.75	1.40	0.64	3.45	1.57	3.15	1.43
1.00	1.50	0.68	5.70	2.59	6.55	2.98
1.50	2.20	1.00	8.75	3.98	10.55	4.80
2.00	3.50	1.59	10.05	4.57	11.85	5.39
3.00	6.00	2.73	13.00	5.91	29.75	13.52

Product codes

Inches	Model number	Description
0.5	KC05-105-1	Radial valve , 0.5" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1" Clamp-end Spool, 0.5" clamp-end outlet, 2.1" from centerline, flush diaphragm, & 0.5" clamp-end port, 2.1" from centerline, flush diaphragm at 180 °, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
0.75	KC08-103-1	Radial valve , 0.5" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 0.75" Clamp-end Spool, 0.5" clamp-end outlet, 2.08" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1	KC10-510-1	Radial valve , 1" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1" Clamp-end Spool, 1" clamp-end outlet, 2.5" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1.5	KC17-510-1	Radial valve , 1" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1" Clamp-end Spool, 1" clamp-end outlet, 2.5" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
2	KC20-512-1	Radial valve , 2" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 2" Clamp-end Spool, 2" clamp-end outlet, 3.25" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
3	KC30-514-1	Radial valve , 3" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 3" Clamp-end Spool, 3" clamp-end outlet, 3.7" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
0.5	KW05-109-1	Radial valve , 0.5" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1.5" Weld-end Spool, 0.5" clamp-end outlet, 2.25" from centerline, flush diaphragm, & 0.5" satellite valve, centerline @ 45, 0.5" Straight Clamp 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1	KW08-102-1	Radial valve , 1" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 0.75" Weld-end Spool, 0.75" clamp-end outlet, 2.52" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
0.5	KW10-505-1	Radial valve , 0.5" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1" Weld-end Spool, 0.5" clamp-end outlet, 2.1" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1	KW15-510-1	Radial valve , 1" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1.5" Weld-end Spool, 1" clamp-end outlet, 2.5" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1.5	KW17-115-1	Radial valve , 1.5" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 1.5" Weld-end Spool, 1.5" clamp-end outlet, 2.8" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
1	KW20-510-1	Radial valve , 1" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 2" Weld-end Spool, 1" clamp-end outlet, 2.53" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp
2	KW20-511-1	Radial valve , 2" Zero Dead Leg, EN 1.4435 body/EN1.4404 fitting(s), 2" Weld-end Spool, 1.5" clamp-end outlet, 3.3" from centerline, flush diaphragm, 20 micro-inch Ra surface finish, electropolished and passivated, includes body/actuator clamp

Note: for additional configurations, please contact Watson-Marlow.

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