

# FluoroSeal Inc.

Specialty Valves



OPTIONS

## PLUG VALVES — OPTIONS

### EZ-SEAL® TOP SEAL & ADJUSTMENT SYSTEM

This product is available on FluoroSeal® Sleeved and Lined Plug Valves in ANSI/ASME and DIN standards. In fact all DIN valves up to DN 150 come fitted with the EZ-SEAL® (patent pending) as standard.

FluoroSeal®, Non-Lubricated, EZ-SEAL® (patent pending) Sleeved and Lined Plug Valves possess the state-of-the-art in PTFE fluorocarbon seat designs. With low maintenance and trouble-free operation, a high integrity bubble-tight seal is provided both in-line and to atmosphere. The specific design features contributing to the superiority of this product are described as a function of their individual purpose and engineering precautions taken to assure maximum service life.

This innovation places FluoroSeal® Plug Valves at the leading edge of technology in the industrial valve market .

The EZ-SEAL® offers 360° simultaneous and even compression adjustment of the packing and plug, eliminating side loading. Visual indication takes the guess work out of valve adjustment and remaining service life diagnostic.

### THE EZ-SEAL® CONCEPT

An easily accessible, single point frontal adjustment system that introduces the ease and precision of maintenance planning and cost savings on both manual and automated valve applications. Achievement is two-fold:

1. Maintenance technicians now have a trouble-free way of resealing both manual and automated valves with a single, quick and easy adjustment point (in comparison to time-consuming, cumbersome multiple adjustment bolt designs)
2. Visual gauging offers up-front knowledge of valve status, useful in scheduling valve change-out on shutdowns



Valve with EZ-SEAL® (Patent Pending) Assembly



EZ-SEAL® (Patent Pending)  
Cover with Cast On Min / Max Gauge

ADVANTAGES



EZ-SEAL® (Patent Pending)  
Bracket and Lock

- No special tooling needed
- Significantly reduces recordable leakages
- Visual diagnostic
- Extended service life
- Allows for easy maintenance planning
- EZ-SEAL® Bracket and EZ-SEAL® Lock with a wide range of ISO mount patterns and five locking positions are offered in 304 SS as standard
- Allows direct mounting of actuation without inhibiting visual verification of stem status

DESIGN FEATURES SUMMARY

1. Single point frontal adjustment system
2. 360° simultaneous and even compression of top seal and plug
3. Plug adjustment is linear, impossible to side load
4. Tapered stem for increased sealing capabilities
5. Visual Min / Max cam adjustment indicator
6. Combination formed metal diaphragm and static eliminator
7. ISO mount stem
8. All-in-one ISO bracket and locking device, as standard
9. All components are high precision investment cast
10. Explosion-proof stem design
11. Positive shutoff



ANSI/ASME Class 300 Lbs FluoroSeal® Sleeved Plug Valve with EZ-SEAL®  
(Patent Pending) Cover

## JACKETED PLUG VALVES

The bolt-on Fully Jacketed Plug Valve with standard flanges eliminates the need to oversize piping flanges, translating in tremendous savings to the user.

Among other features, the ease of installation allows any FluoroSeal® Plug Valve to be retrofitted in-line in process.

FluoroSeal® Plug Valves are also available with Partial Steam Jackets. Choose accordingly to the application requirements.

There's no limits to the possibilities: all FluoroSeal® valves in all trim materials are available in either a two-way or multiport versions, with partial or full jackets.

DIN Fully Jacketed Plug Valves are available upon request.



Fig. 1 Standard Welded Full Jacket with Oversized Flanges



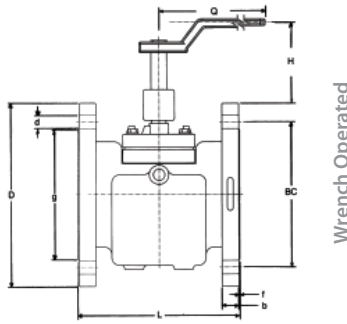
Fig. 3 Full Bottom Jacket Using Valve Body Standard Flanges  
(Jacket Pressure Rating Available in 150 & 300 lbs)



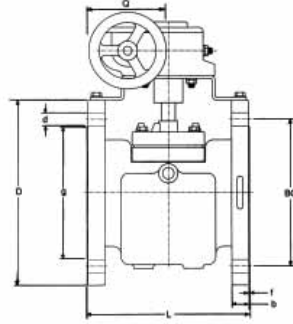
Fig. 2 Partial Welded Jacket



Fig. 4 Multiport with Full Welded Jacket



Wrench Operated



Enclosed Gear Operated

FULLY JACKETED ANSI/ASME CLASS 150 LBS

E = Clearance required for resleeving measured from center line

EG = Enclosed gear operated

N = Number of holes

SIZE	L		H		D		K		g		b		f		d		Q		E		N
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#
2" x 1" x 2"	7.00	177.80	7.00	177.80	6.00	152.40	4.75	120.70	3.63	92.00	0.63	16.00	0.06	1.60	0.75	19.00	9.00	228.60	8.50	215.90	4
2 1/2" x 1 1/2" x 2 1/2"	8.00	203.20	7.63	193.70	7.50	190.50	5.50	139.70	4.13	104.60	0.75	19.00	0.06	1.60	0.75	19.00	14.25	362.00	10.38	263.70	4
3" x 2" x 3"	8.00	203.20	8.00	203.20	7.50	190.50	6.00	152.40	5.00	127.00	0.75	19.00	0.06	1.60	0.75	19.00	16.50	419.10	12.25	311.20	4
4" x 3" x 4"	9.00	228.60	9.00	228.60	9.00	228.60	7.50	190.50	6.19	157.20	0.94	23.90	0.06	1.60	0.75	19.00	16.50	419.10	13.63	346.20	8
6" x 4" x 6"	10.50	266.70	10.00	254.00	11.00	279.40	9.50	241.30	8.50	215.90	1.00	25.40	0.06	1.60	0.88	22.40	23.63	600.20	16.25	412.80	8
6" x 4" x 6" EG	10.50	266.70	11.50	292.10	11.00	279.40	9.50	241.30	8.50	215.90	1.00	25.40	0.06	1.60	0.88	22.40	14.50	368.30	17.63	447.80	8
8" x 6" x 8" EG	11.50	292.10	12.00	304.80	13.50	342.90	11.75	298.45	10.62	269.75	1.13	28.70	0.06	1.60	0.88	22.40	14.50	368.30	21.75	552.50	8
10" x 8" x 10" EG	13.00	330.20	14.25	361.95	16.00	406.40	14.25	361.95	12.75	323.85	1.19	30.20	0.06	1.60	1.00	25.40	19.50	495.30	26.63	676.40	12
12" x 10" x 12" EG	14.00	355.60	15.75	400.05	19.00	482.60	17.00	431.80	15.00	381.00	1.25	31.80	0.06	1.60	1.00	25.40	19.50	495.30	31.25	793.80	12
14" x 12" x 14" EG	15.00	381.00	14.19	360.43	21.00	533.40	18.75	476.30	16.25	412.80	1.38	35.10	0.06	1.60	1.12	28.45	27.50	698.50	33.75	857.30	12
16" x 12" x 16" EG	16.00	406.40	16.31	414.27	23.00	584.20	21.25	539.75	18.50	469.90	1.38	35.10	0.06	1.60	1.13	28.58	27.50	698.50	33.75	857.30	16
18" x 16" x 18" EG	34.00	863.60	-	-	25.00	635.00	22.75	577.85	21.00	533.40	1.50	38.10	0.06	1.60	1.25	31.75	27.50	698.50	46.00	1168.40	16
20" x 18" x 20" EG	36.00	914.40	21.88	555.75	27.00	685.80	25.00	635.00	23.00	584.20	1.62	41.15	0.06	1.60	1.25	31.75	27.50	698.50	46.00	1168.40	20

FULLY JACKETED ANSI/ASME CLASS 300 LBS

E = Clearance required for resleeving from center line

EG = Enclosed gear operated

N = Number of holes

SIZE	L		H		D		K		g		b		f		d		Q		E		N
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#
2" x 1" x 2"	8.50	215.90	5.00	127.00	6.50	165.10	5.00	127.00	3.63	92.00	0.88	22.40	0.06	1.60	0.75	19.00	9.00	228.60	8.50	215.90	8
2 1/2" x 1 1/2" x 2 1/2"	11.13	282.70	5.31	135.00	8.25	209.60	5.88	149.40	4.13	104.60	1.13	28.70	0.06	1.60	0.88	22.40	14.25	362.00	10.38	263.70	8
3" x 2" x 3"	11.13	282.70	5.31	135.00	8.25	209.60	6.63	168.40	5.00	127.00	1.13	28.70	0.06	1.60	0.88	22.40	16.50	419.10	12.25	311.20	8
4" x 3" x 4"	12.00	304.80	6.10	155.00	10.00	254.00	7.88	200.20	6.19	157.20	1.25	31.80	0.06	1.60	0.88	22.40	16.50	419.10	13.63	346.20	8
6" x 4" x 6"	15.88	403.40	11.50	292.10	12.50	317.50	10.63	270.00	8.50	215.90	1.44	36.60	0.06	1.60	0.88	22.40	23.63	600.20	16.25	412.80	12
6" x 4" x 6" EG	15.88	403.40	11.50	292.10	12.50	317.50	10.63	270.00	8.50	215.90	1.44	36.60	0.06	1.60	0.88	22.40	14.50	368.30	17.63	447.80	12
8" x 6" x 8" EG	16.50	419.10	12.00	304.80	15.00	381.00	13.00	330.20	10.62	269.75	1.63	41.40	0.06	1.60	1.00	25.40	14.50	368.30	21.75	552.50	12
10" x 8" x 10" EG	18.00	457.20	14.25	361.95	17.50	444.50	15.25	387.35	12.75	323.85	1.88	47.80	0.06	1.60	1.12	28.45	19.50	495.30	26.63	676.40	16
12" x 10" x 12" EG	19.75	501.65	15.75	400.05	20.50	520.70	17.75	450.85	15.00	381.00	2.00	50.80	0.06	1.60	1.25	31.75	19.50	495.30	31.25	793.80	16
16" x 12" x 16" EG	24.00	609.60	16.31	414.27	25.50	647.70	22.50	571.50	18.50	469.90	2.19	55.63	0.06	1.60	1.38	35.05	27.50	698.50	33.75	857.30	20
18" x 16" x 18" EG	26.00	660.40	-	-	28.00	711.20	24.75	628.65	21.00	533.40	2.31	58.67	0.06	1.60	1.38	35.05	27.50	698.50	46.00	1168.40	24
20" x 18" x 20" EG	28.00	711.20	-	-	30.50	774.70	27.00	685.80	23.00	584.20	2.44	61.98	0.06	1.60	1.38	35.05	27.50	698.50	46.00	1168.40	24

FULLY JACKETED ANSI/ASME CLASS 600 LBS

E = Clearance required for resleeving from center line

EG = Enclosed gear operated

N = Number of holes

SIZE	L		H		D		K		g		b		f		d		Q		E		N
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	#
2" x 1" x 2"	11.50	292.10	-	-	6.50	165.10	5.00	127.00	3.62	91.90	1.00	25.40	0.25	6.35	0.75	19.10	9.00	228.60	8.50	215.90	8
2 1/2" x 1 1/2" x 2 1/2"	13.00	330.20	-	-	7.50	190.50	5.88	149.40	4.12	104.60	1.12	28.40	0.25	6.35	0.88	22.40	14.25	362.00	10.38	263.70	8
3" x 2" x 3"	14.00	355.60	-	-	8.25	209.60	6.62	168.10	5.00	127.00	1.25	31.80	0.25	6.35	0.88	22.40	16.50	419.10	12.25	311.20	8
4" x 3" x 4"	17.00	431.80	-	-	10.75	273.10	8.50	215.90	6.19	157.20	1.50	38.10	0.25	6.35	1.00	25.40	16.50	419.10	13.63	346.20	8
6" x 4" x 6"	22.00	558.80	-	-	14.00	355.60	11.50	292.10	8.50	215.90	1.88	47.80	0.25	6.35	1.12	28.40	23.63	600.20	16.25	412.80	12
6" x 4" x 6" EG	22.00	558.80	-	-	14.00	355.60	11.50	292.10	8.50	215.90	1.88	47.80	0.25	6.35	1.12	28.40	14.50	368.30	17.63	447.80	12
8" x 6" x 8" EG	26.00	660.40	-	-	16.50	419.10	13.75	349.30	10.62	269.70	2.19	55.60	0.25	6.35	1.25	31.80	14.50	368.30	21.75	552.50	12
10" x 8" x 10" EG	31.00	787.40	-	-	20.00	508.00	17.00	431.80	12.75	323.90	2.50	63.50	0.25	6.35	1.38	35.10	19.50	495.30	26.63	676.40	16
12" x 10" x 12" EG	33.00	838.20	-	-	22.00	558.80	19.25	489.00	15.00	381.00	2.62	66.50	0.25	6.35	1.38	35.10	19.50	495.30	31.25	793.80	20
16" x 12" x 16" EG	39.00	990.60	-	-	27.00	685.80	23.75	603.25	18.50	469.90	3.00	76.20	0.25	6.35	1.63	41.28	27.50	698.50	33.75	857.30	20
18" x 16" x 18" EG	43.00	1092.20	-	-	29.50	749.30	25.75	654.10	21.00	533.40	3.25	82.60	0.25	6.35	1.75	44.50	27.50	698.50	46.00	1168.40	20
20" x 18" x 20" EG	47.00	1193.80	-	-	32.00	812.80	28.50	723.90	23.00	584.20	3.50	88.90	0.25	6.35	1.75	44.50	27.50	698.50	46.00	1168.40	24

PLUG-ANSI-DIN-R001-2008

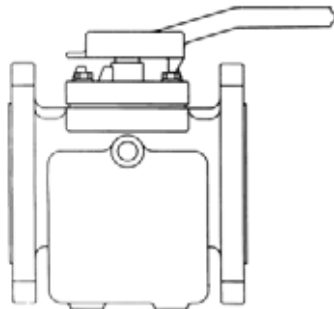
**PARTIALLY JACKETED PLUG VALVES**

Heat dissipation due to the partial insulating effect of the PTFE sleeve, combined with the basic plug valve design, provides a more uniform heat flange-to-flange with a partial jacket than with a full jacket. Therefore, a partial jacket should be selected for most applications.

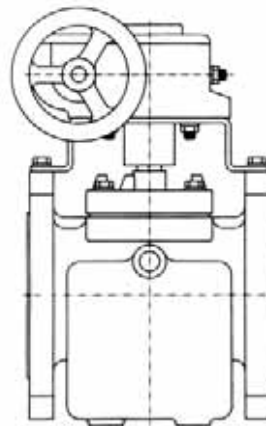
Refer to standard valves for dimensional data. Available in sizes 1" to 18".

DIN Partially Jacketed Plug Valves are available upon request.

**PARTIALLY JACKETED 2-WAY ANSI/ASME CLASS 150, 300 & 600 LBS**

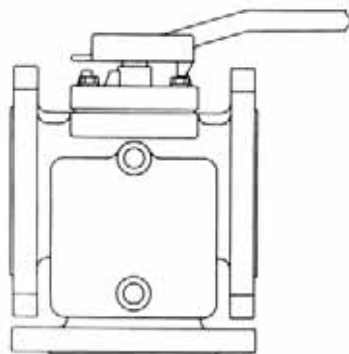


1" to 4"  
Wrench Operated

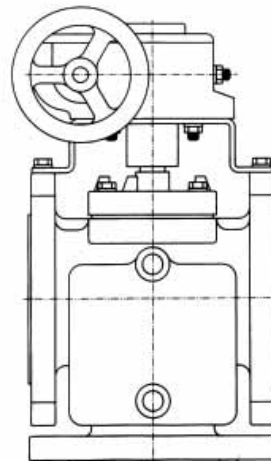


4" to 18"  
Enclosed Gear Operated

**PARTIALLY JACKETED MULTIPORT ANSI/ASME CLASS 150, 300 & 600 LBS**



1" to 4"  
Wrench Operated



4" to 18"  
Enclosed Gear Operated

**JACKET INLET OUTLET AND DRAIN CONNECTIONS**

VALVE SIZE	1"		1 1/2"		2"		3"		4"		6"		8"		10"		12"		16"		18"	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
NPT	3/8	9.53	1/2	12.70	1/2	12.70	1/2	12.70	1/2	12.70	1	25.40	1	25.40	1	25.40	1	25.40	1	25.40	1 1/2	38.10

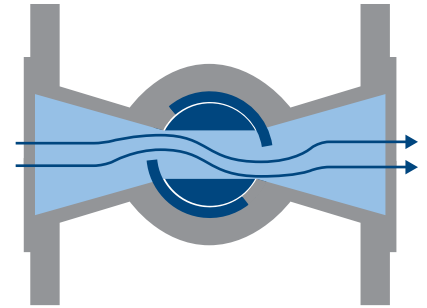
PLUG-ANSI-DIN-R001-2008

V-PORT & CHARACTERIZED PLUGS

FluoroSeal<sup>®</sup> Plug Valves are also available with Characterized Plugs for fine control applications. Standard V-Ports in 60° and other custom configurations are available in all trim materials.

The design and features of the FluoroSeal<sup>®</sup> Plug Valve makes it an excellent choice for fine throttling in slurry and chemical applications. The no cavity design allows the plug valve to throttle without exposing the stem seal to line pressure, a definite advantage over most ball valves specifically in high cycling applications.

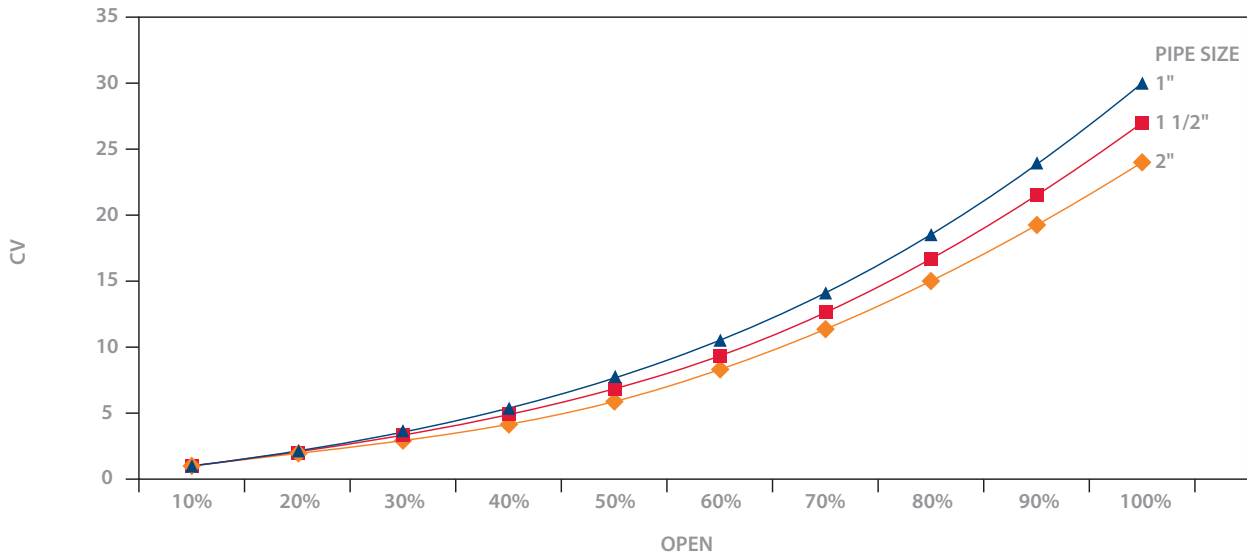
The Cage Control V-Port Plug Valve is mostly used in highly abrasive applications offering the benefits of a metal seated control valve, with the added advantage of a bubble-tight shutoff at a fraction of the cost. This product is available in all materials from 1" to 14" (DN 25 to DN 150).



Flow Diagram



TYPICAL FLOW CHART FOR A 1" 60° V-PORT PLUG VALVE



PLUG-ANSI-DIN-R001-2008

