**LINED PIPE INSERT**

The **Lined Pipe Insert (LP)** valve is designed to mate between two flanges on most lined pipe systems. It provides the simplest and most economical way to install a check valve in a lined piping system. No gaskets are required; just spread the flanges, center the valve, and bolt the flanges together. Lined Pipe Insert valves are available in fluoropolymer (PTFE/FEP/PFA) and Alloy C-276 to satisfy the most demanding applications. The standard spring material is Alloy C-276. Other materials are available upon request.

63 Ra FINISH

DIMENSION "A" FITS INSIDE MOST STANDARD LINED PIPE

FLOW →
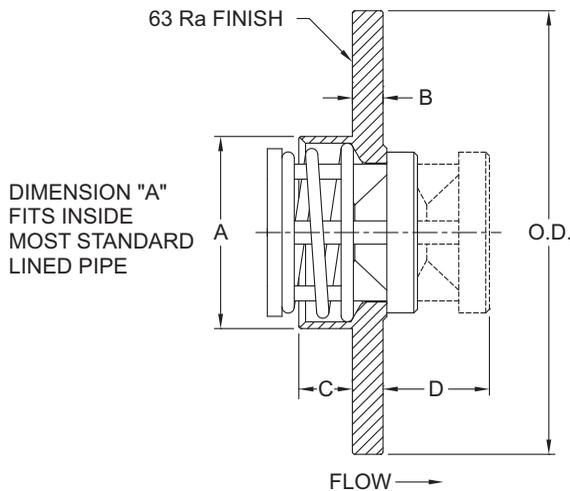
Nom. Pipe Size	Size Code	A	B	C		D [1]	OD	Orifice [2] Diameter
				PTFE	HC			
1	H	0.590	1/4	0.26	0.26	0.53	2	0.348
1-1/2	J	1.120	1/4	0.46	0.42	0.78	2-7/8	0.593
2	K	1.570	1/4	0.79	0.44	1.01	3-5/8	1.135
3	M	2.520	5/16	0.77	0.66	1.43	5	1.555 [3]

[1] Maximum nominal dimension for a fully open valve with no spring.
[2] Orifice Diameter for PTFE valve may vary due to molding process.
[3] 3" PTFE valves use 1.385 Orifice Diameter.

Body Material [4]	Nominal Pipe Size	Non-Shock Pressure-Temperature Rating
Alloy C-276 (HC)	1 - 3	ANSI Class 150 & 300
PTFE (TF)	1 - 2	55 PSIG @ 100°F [5]
	3	20 PSIG @ 100°F [5]

[4] See page 55 for material grade information. Contact the factory for availability of other materials.
[5] Consult the factory for reduced P–T rating above 100°F.

MADE IN USA   CHECK-ALL VALVE MFG. CO.   Phone: 515-224-2301   Fax: 515-224-2326

Lined Pipe Insert
For Water at 72°F

PRESSURE DROP - PSI

WATER FLOW RATE - GPM

(Graph showing pressure drop vs water flow rate for valve sizes 1", 1-1/2", 2", 3" PTFE Resin, and 3" Metal)
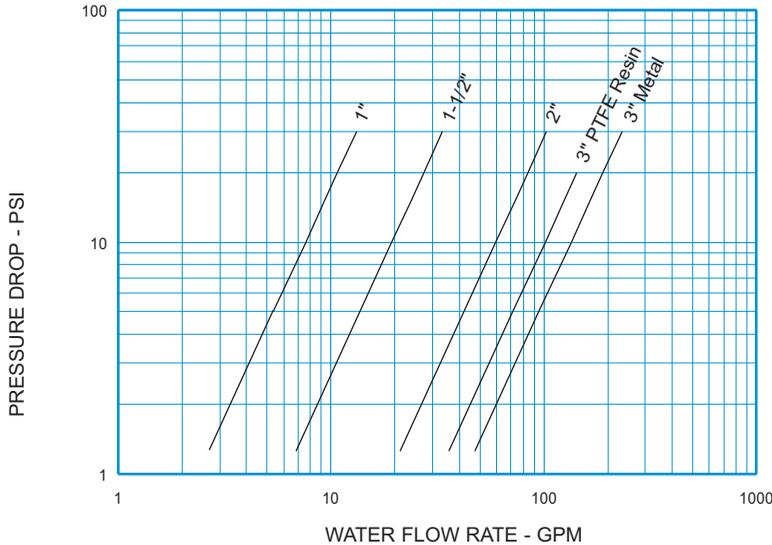
Note: All flow curves and Cv values presume the valves are fully open with 1/2 PSI cracking pressure springs. Consult the factory for more information.

STYLE LP (LPI) C_V VALUES & VALVE WEIGHTS				
METAL C_V	PTFE C_V	SIZE	METAL	PTFE
2.4	2.4	1	4.0 oz.	1.0 oz.
6.1	6.1	1-1/2	8.8 oz.	2.2 oz.
18.8	18.8	2	14.4 oz.	3.2 oz.
45.8	32.0	3	2.3 lb.	9.0 oz.

See page 50 for Flow Formulae.
Valve weights are approximate.

HOW TO ORDER
CHECK-ALL STYLE LP (LPI)

SPRING CRACKING PRESSURES
Replace "X" with actual desired setting.
Must use decimal as a character.

(PSI)		FORMAT
.000 TO .999	=	.XXX
1.00 TO 9.99	=	X.XX
10.0 TO 99.9	=	XX.X
NO SPRING	=	NOSPRG[1]

STANDARD CRACKING PRESSURE[1]
.500

Note: Many other cracking pressures are available. Consult factory.

SPECIAL OPTIONS
T = FEP ENCAPSULATED SPRING
See p. 5 for temperature ratings
Contact the factory for more options

BODY MATERIAL
ALLOY C-276 = HC
PTFE = TF
See p. 4 for temperature ratings

L P ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐

VALVE STYLE

SIZE		
1	=	H
1-1/2	=	J
2	=	K
3	=	M

SEAT MATERIAL[2]		
AFLAS ®	=	AS
BUNA-N	=	BN
EPDM	=	EP
KALREZ ®	=	KZ
"METAL-TO-METAL"[3]	=	MT
NEOPRENE	=	NE
PTFE	=	TF
VITON ®	=	VT
See p. 4 for temperature ratings		

SPRING MATERIAL		
ALLOY C-276	=	HC
316 SS	=	SS
INCONEL® X-750	=	IX
MONEL®	=	MO
17-7PH SS	=	PH
TITANIUM	=	TI
See p. 5 for temperature ratings		

Listed above are the most common material selections. Please contact the factory for additional options.

[1] .500 PSI is the only standard cracking pressure for spring materials other than Stainless Steel. Cracking pressure tolerance is +/- 15%. .125 PSI springs are not recommended for installations with flow vertical down.

[2] Seat materials other than "metal-to-metal" have a maximum pressure rating of 1500 PSI. "Metal-to-Metal" and PTFE seats are not resilient. See page 51 for allowable leakage rates.

[3] For plastic valves, "MT" seats mean plastic to plastic. Consult factory for further information.