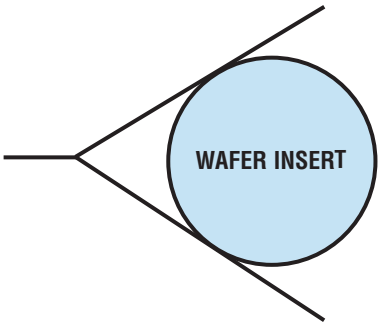
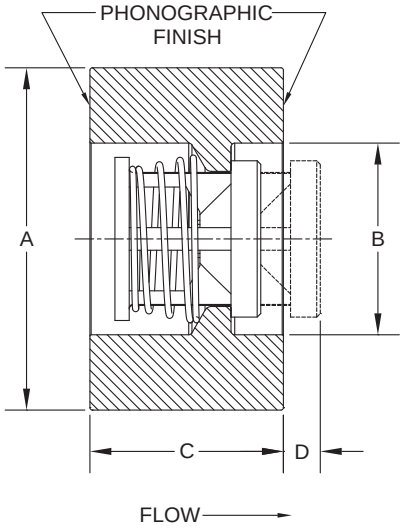


PED 97/23/EC COMPLIANT
See Page 55 for Details

The **Wafer Insert (WV)** valve is designed to fit between two mating ANSI flanges. Two gaskets are required, instead of the one normally used in a flanged joint. The "drop in" valve body fits inside the bolt circle for quick installation and removal in rigid piping applications where the use of the F1, F6, or FP **(see our Flange Insert series on page 5)** is not practical. Many valves in this series can meet API 594 and/or B16.34 requirements. Consult the factory for more information.

The Wafer Insert valve can also be used as a low pressure relief valve or vacuum breaker by using the desired spring settings.



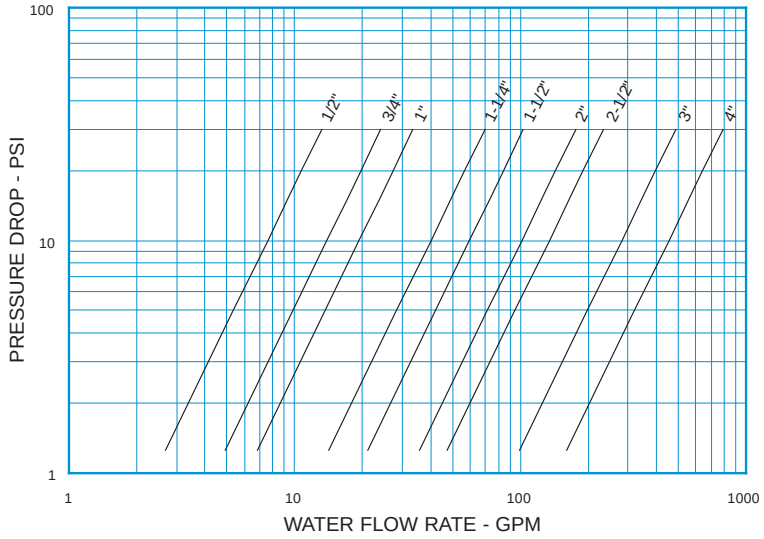
Nom. Pipe Size	Size Code	A	B	C	D ❶	Orifice Diameter
1/2	D	1-3/8	0.62	1.38	N/A	0.348
3/4	F	1-3/4	0.82	1.38	N/A	0.464
1	H	2	1.05	1.38	0.35	0.593
1-1/4	I	2-1/2	1.38	1.63	0.27	0.890
1-1/2	J	2-7/8	1.61	1.63	0.54	1.135
2	K	3-5/8	2.07	2.39	0.17	1.385
2-1/2	L	4-1/8	2.47	2.63	0.31	1.555
3	M	5	3.07	2.89	0.42	2.025
4	N	6-3/16	4.03	2.89	1.25	2.560

❶Maximum nominal dimension for a fully open valve with no spring.

Body Material ❷	Nominal Pipe Size	Non-Shock Pressure-Temperature Rating
316 Stainless Steel (SS) Carbon Steel (CS) Alloy 20 (A2) Alloy C-276 (HC) Alloy B (HB) Alloy 400 or Monel ® (MO) Titanium (TI)	1/2" - 2-1/2"	ANSI Class 150 - 1500 (1500 PSIG for o-ring seats)
	3"	ANSI Class 150 - 900 (1500 PSIG for o-ring seats)
	4"	ANSI Class 150 - 600
Brass (BR)	1/2" - 4"	ANSI Class 150 - 300

❷See page 54 for material grade information.

Wafer Insert
For Water at 72°F



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 WV
C_V VALUES & VALVE WEIGHTS

C_V	SIZE	SS & CS ALLOYS	BRASS
2.4	1/2	9.5 oz.	10.2 oz.
4.4	3/4	12.6 oz.	13.5 oz.
6.1	1	1.0 lb.	1.1 lb.
12.7	1-1/4	1.8 lb.	1.9 lb.
18.8	1-1/2	2.4 lb.	2.5 lb.
32.0	2	5.2 lb.	5.6 lb.
42.5	2-1/2	7.2 lb.	7.7 lb.
89.0	3	11.4 lb.	12.4 lb.
144	4	17.2 lb.	18.4 lb.

See page 49 for Flow Formulae.
Valve weights are approximate.

HOW TO ORDER
CHECK-ALL STYLE WV

BODY MATERIAL
ALLOY 20 = A2
BRASS = BR
CARBON STEEL = CS
ALLOY B = HB
ALLOY C-276 = HC
ALLOY 400 OR MONEL® = MO
316 SS = SS
TITANIUM = TI
See p. 3 for temperature ratings

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

(PSI)	FORMAT	EXAMPLE
.000 TO .999	.XXX	.500
1.00 TO 9.99	X.XX	1.50
10.0 TO 99.9	XX.X	15.0
NO SPRING	NOSPRG	NOSPRG

STANDARD CRACKING PRESSURES ❶
.125 .500 1.50 3.50
(Sizes D-J Only)

Note: Many other cracking pressures are available. All spring tolerances +/-15%.

SPECIAL OPTIONS
T = FEP ENCAPSULATED SPRING
See p. 4 for temperature ratings
Contact the factory for more options

WV

VALVE STYLE

SIZE
1/2 = D
3/4 = F
1 = H
1-1/4 = I
1-1/2 = J
2 = K
2-1/2 = L
3 = M
4 = N

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

SPRING MATERIAL
ALLOY C-276 = HC
ALLOY X750 OR INCONEL® X750 = IX
ALLOY 400 OR MONEL® = MO
17-7PH SS = PH
316 SS = SS
TITANIUM = TI
See p. 4 for temperature ratings

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

❶.500 PSI is the only standard cracking pressure for spring materials other than Stainless Steel. .125 PSI springs are not recommended for installations with flow vertical down.
❷Seat 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 50 for allowable leakage rates.
❸EP seats not recommended for use with Carbon Steel valves.