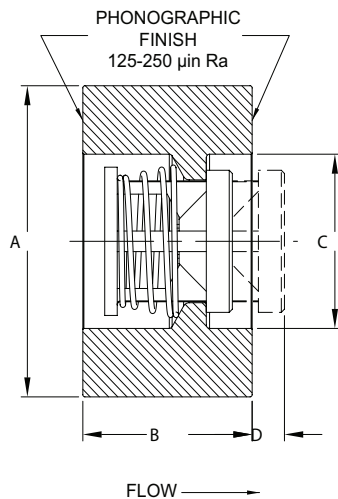


The **Wafer Insert (WV)** valve is designed to fit between two mating ANSI flanges. Two gaskets are required, instead of the one normally used in a flanged joint. The “drop in” valve body fits inside the bolt circle for quick installation and removal in rigid piping applications where the use of the 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 ②	Orifice Diameter
1/2	D	1-3/8	1.38	0.62	N/A	0.348
3/4	F	1-3/4	1.38	0.82	N/A	0.464
1	H	2	1.38	1.05	0.35	0.593
1-1/4	I	2-1/2	1.63	1.38	0.27	0.890
1-1/2	J	2-7/8	1.63	1.61	0.54	1.135
2	K	3-5/8	2.38	2.07	0.18	1.385
2-1/2	L	4-1/4 ^①	2.62	2.47	0.32	1.555
3	M	5	2.88	3.07	0.43	2.025
4	N	6-3/16	2.88	4.03	1.26	2.560

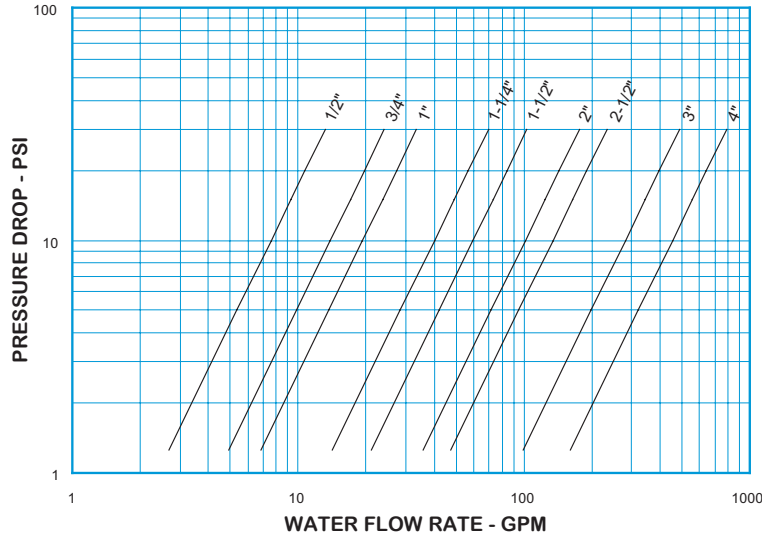
① Due to material availability, may be 4-1/8".

② Maximum nominal dimension for a fully open valve with no spring.

Body Material ^③	Nominal Pipe Size	Non-Shock Pressure-Temp. Rating
316 Stainless Steel (SS) Carbon Steel (CS) Alloy 20 (A2) Alloy C-276 (HC) Alloy B (HB) MONEL [®] 400 or Alloy R405 (MO) Titanium (TI)	1/2" - 1"	ANSI Class 150 - 2500 (1500 PSIG @ 100°F for o-ring seats)
	1-1/4" - 2-1/2"	ANSI Class 150 - 1500 (1500 PSIG @ 100°F for o-ring seats)
	3"	ANSI Class 150 - 900 (1500 PSIG @ 100°F for o-ring seats)
	4"	ANSI Class 150 - 600
Brass (BR)	1/2" - 4"	ANSI Class 150 - 300

③ See page 58 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	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	7.8 lb.	8.4 lb.
89.0	3	11.4 lb.	12.4 lb.
144	4	17.2 lb.	18.4 lb.

See page 53 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
MONEL® 400 OR ALLOY R405 = MO
316 SS = SS
TITANIUM = TI
See p. 3 for temperature ratings

SPRING CRACKING PRESSURES (PSI)
Must use decimal as a character unless selecting NO SPRING. Specify Exact Setting

SPRING RANGES	EXAMPLE
.000 TO .999	= .500
1.00 TO 9.99	= 1.50
10.0 TO 85.0	= 15.0
NO SPRING	= NOSPRG

STANDARD CRACKING PRESSURES ①			
.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 rating
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 ②

AFLAS® = AS
BUNA-N = BN
EPDM ③ = EP
KALREZ® (FFKM) = KZ
FLUOREZ® (FFKM) = FZ
“METAL-TO-METAL” = MT
NEOPRENE = NE
PTFE = TF
FKM = VT
See p. 3 for temperature ratings

SPRING MATERIAL

316 SS = SS
ALLOY C-276 = HC
INCONEL X750® OR ALLOY X750 = IX
MONEL® 400 = MO
17-7PH SS = PH
TITANIUM = TI
See p. 4 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. 0.125 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 54 for allowable leakage rates.
- ③ EP seats not recommended for use with Carbon Steel valves.