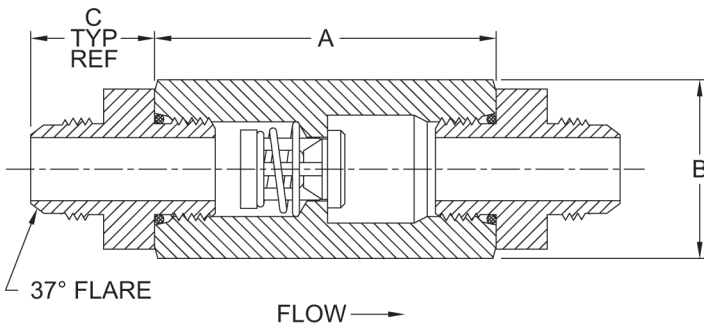


The **Tubing Check Valve-Flared (TF)** is a three-piece constructed check valve with 37° flared end fittings that conform to SAE J514 & ISO 8434-2 . These valves are designed for maximum flow with minimal pressure drop. The TF valve can also be used as a low pressure relief valve or vacuum breaker by using the desired spring settings.



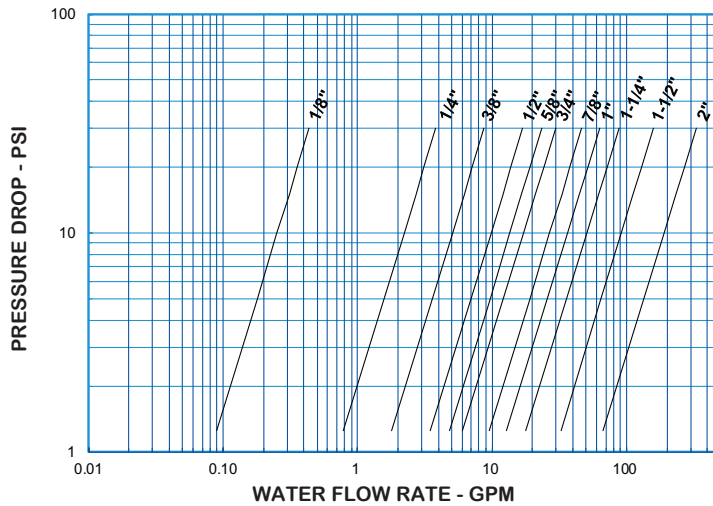
Tubing O.D. Size	Size Code	A	Hex <sup>①</sup> Size B	C	Orifice Diameter
1/8	A	2.16	7/8	0.69	0.348
1/4	B	2.16	7/8	0.89	0.348
3/8	C	2.16	7/8	0.91	0.348
1/2	D	2.47	1-1/8	1.04	0.464
5/8	E	2.63	1-1/4	1.20	0.464
3/4	F	2.92	1-1/2	1.38	0.593
7/8	G	3.34	1-7/8	1.40	0.890
1	H	3.34	1-7/8	1.46	0.890
1-1/4	I	3.48	2-1/4	1.58	1.135
1-1/2	J	3.81	2-1/2	1.79	1.385
2	K	5.09	3-1/2	2.19	2.025

<sup>①</sup> May be larger and/or round.

Line Size	Non-Shock Pressure-Temperature @ Rating 100°F		
	Stainless Steel (SS) <sup>②</sup>	Carbon Steel (CS) <sup>②</sup>	Brass (BR) <sup>②</sup>
1/8" - 1/2"	7700 PSIG (1500 PSIG for o-ring seats)	6000 PSIG (1500 PSIG for o-ring seats)	3000 PSIG (1500 PSIG for o-ring seats)
5/8" - 3/4"	6000 PSIG (1500 PSIG for o-ring seats)	5000 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)
7/8"	5400 PSIG (1500 PSIG for o-ring seats)	5000 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)
1"	5400 PSIG (1500 PSIG for o-ring seats)	4500 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)
1-1/4"	3600 PSIG (1500 PSIG for o-ring seats)	4000 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)
1-1/2"	2400 PSIG (1500 PSIG for o-ring seats)	3000 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)
2"	1800 PSIG (1500 PSIG for o-ring seats)	2000 PSIG (1500 PSIG for o-ring seats)	1600 PSIG (1500 PSIG for o-ring seats)

<sup>②</sup> See page 56 for material grade information.

### Tubing Check Valve Flared 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 TF C <sub>v</sub> VALUES & VALVE WEIGHTS		
C <sub>v</sub>	SIZE	ALL MATL
0.08	1/8	5.5 oz.
0.7	1/4	6.6 oz.
1.6	3/8	7.2 oz.
3.1	1/2	13 oz.
4.3	5/8	1.8 lb.
5.4	3/4	2.3 lb.
8.5	7/8	2.7 lb.
11.5	1	3.0 lb.
16.0	1-1/4	5.7 lb.
29.0	1-1/2	7.8 lb.
60.0	2	15 lb.

See page 51 for Flow Formulae.  
Valve weights are approximate.

## HOW TO ORDER CHECK-ALL STYLE TF

**BODY MATERIAL ②**

BRASS = BR  
CARBON STEEL = CS  
316 SS = SS

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
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(Sizes A-I Only)

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

TF

**VALVE STYLE**

**SIZE**

1/8	= A
1/4	= B
3/8	= C
1/2	= D
5/8	= E
3/4	= F
7/8	= G
1	= H
1-1/4	= I
1-1/2	= J
2	= K

SEAT MATERIAL ③	STANDARD END FITTING O-RING MATERIAL
AFLAS® = AS	PTFE (TF)
BUNA-N = BN	BUNA-N (BN)
EPDM ④ = EP	EPDM ④ (EP)
KALREZ® = KZ	PTFE (TF)
"METAL-TO-METAL" = MT	SEE NOTE BELOW ⑤
NEOPRENE = NE	NEOPRENE (NE)
PTFE (TF) = TF	PTFE (TF)
VITON™ = VT	VITON™ (VT)

See p. 3 for temp ratings

**SPRING MATERIAL**

316 SS = SS  
ALLOY C-276 = HC  
INCONEL® X750 OR ALLOY X750 = IX  
ALLOY 400 OR MONEL® = 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. .125 PSI springs are not recommended for installations with flow vertical down.
- ② Brass valves have plated Carbon Steel tube fittings if applicable. Consult factory if other body or fitting materials are desired.
- ③ 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 52 for allowable leakage rates.
- ④ EP seats not recommended for use with Carbon Steel valves.
- ⑤ Fitting o-rings are the same as the seat for standard seat materials. For "metal-to-metal" seated valves, end fitting o-rings are Buna-N for brass and carbon steel valves and VITON™ for stainless steel valves. Consult the factory for further information.