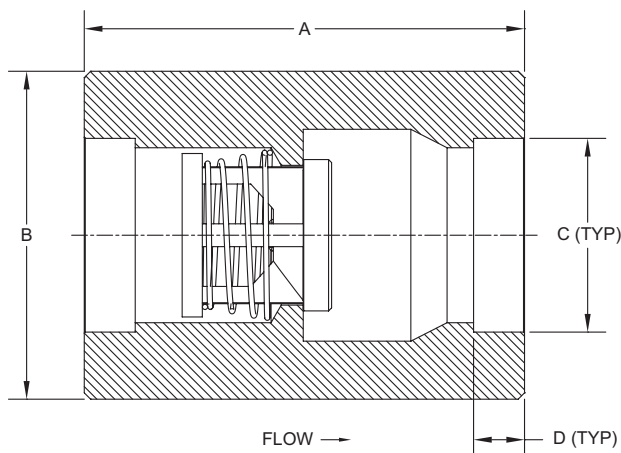


The **Universal Socket Weld (US)** check valve is a one piece body machined from bar stock with socket weld ends and is designed for minimum pressure drop. It carries rugged, dependable Check-All® trim and there are wide variety of seat materials and cracking pressures to choose from. The socket ends are machined to ASME/ANSI B16.11 dimensions. The US valve can also be used as a low pressure relief valve or vacuum breaker by using the desired spring settings.

**CAUTION:** Please take sufficient measures when welding to prevent heat build-up and possible damage to the valve seat. See page 53 for additional installation information.



Nom. Pipe Size	Size Code	A	B ①	C ②	D ②	Orifice Diameter
1/4	B	2.16	1	0.563	0.385	0.348
3/8	C	2.16	1-1/8	0.695	0.385	0.348
1/2	D	2.71	1-5/16	0.860	0.385	0.464
3/4	F	2.95	1-5/8	1.070	0.505	0.593
1	H	3.64	2-1/4	1.335	0.505	0.890
1-1/4	I	3.91	2-3/4	1.680	0.505	1.135
1-1/2	J	4.36	3-1/4	1.920	0.505	1.385
2	K	5.85	3-1/2	2.411	0.625	1.555
2-1/2	L	5.00	3-3/4	2.919	0.625	1.555
3	M	5.44	4-1/2	3.545	0.625	2.025
4	N	6.80	5-1/2	4.550	0.755	2.560

① May be larger.

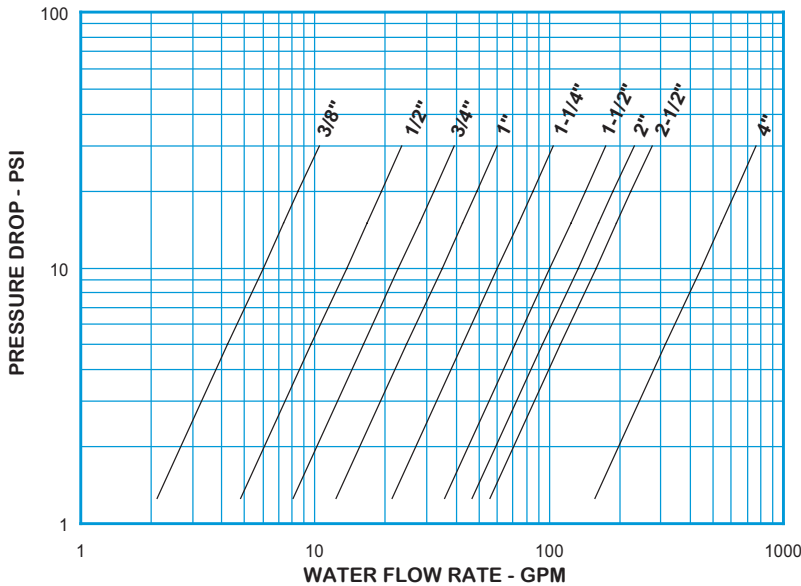
② Sockets per ASME/ANSI B16.11.

**NOTE:** Many valves in this series can be supplied with B16.34 certification. Consult the factory for more information.

Body Material ③	Availability	Non-Shock Pressure-Temp. Rating @ 100°F		
		Consult factory for P-T rating above @ 100°F		
316/316L Stainless Steel (SS)	Standard	1/4" - 2-1/2"	3"	4"
Carbon Steel (CS)				
Alloy 20 (A2)	Semi-standard	5000 PSIG (1500 PSIG for o-ring seats)	3000 PSIG (1500 PSIG for o-ring seats)	1500 PSIG
Alloy C-276 (HC)				
MONEL® 400 or Alloy R405				
Alloy B (HB)	Contact the factory for these or other materials			

③ See page 56 for material grade information.

**Universal Socket Weld  
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 US C <sub>v</sub> VALUES & VALVE WEIGHTS		
C <sub>v</sub>	SIZE	SS & CS ALLOYS
1.5	1/4	4.0 oz.
1.9	3/8	5.1 oz.
4.3	1/2	11.5 oz.
7.2	3/4	1.2 lb.
11.0	1	3.1 lb.
28.8	1-1/4	4.9 lb.
31.9	1-1/2	7.4 lb.
42.0	2	9.8 lb.
50.0	2-1/2	8.8 lb.
89.0	3	13 lb.
140	4	22.3 lb.

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

**HOW TO ORDER  
CHECK-ALL STYLE US**

**BODY MATERIAL**

ALLOY 20 = A2  
CARBON STEEL = CS  
ALLOY B = HB  
ALLOY C-276 = HC  
MONEL® 400 OR ALLOY R405 = MO  
316/316L SS = SS

See p. 3 for temperature ratings

**SPRING CRACKING PRESSURES (PSI)** Note: Many other cracking pressures are available. All spring tolerances +/- 15%.

Must use decimal as a character unless selecting NO SPRING. Specify Exact Setting

<b>SPRING RANGES</b>	<b>EXAMPLE</b>
.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 C-I Only)

**SPECIAL OPTIONS**

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

**US**

**VALVE STYLE**

**SIZE**

1/4 = B  
3/8 = C  
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® = KZ  
"METAL-TO-METAL" = MT  
NEOPRENE = NE  
PTFE = TF  
VITON™ = 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. .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 52 for allowable leakage rates.
- ③ EP seats not recommended for use with Carbon Steel valves.