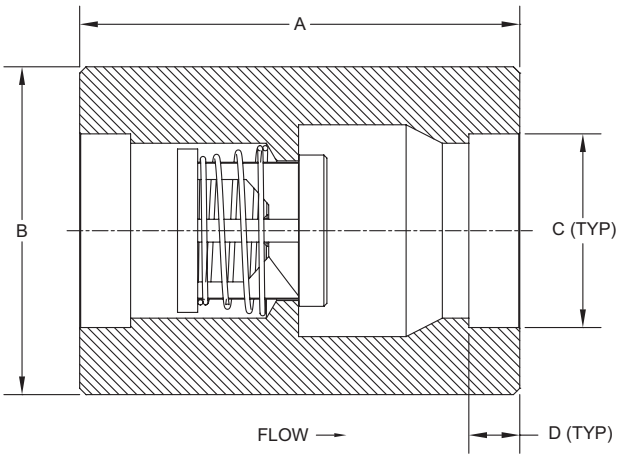
UNIVERSAL SOCKET WELD

PED 2014/68/EU COMPLIANT
See page 59 for Details

The **Universal Socket Weld (US)** check valve has 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 with a 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 55 for additional installation information.



Nom. Pipe Size	Size Code	A	B ❶	C ❷	D ❷	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

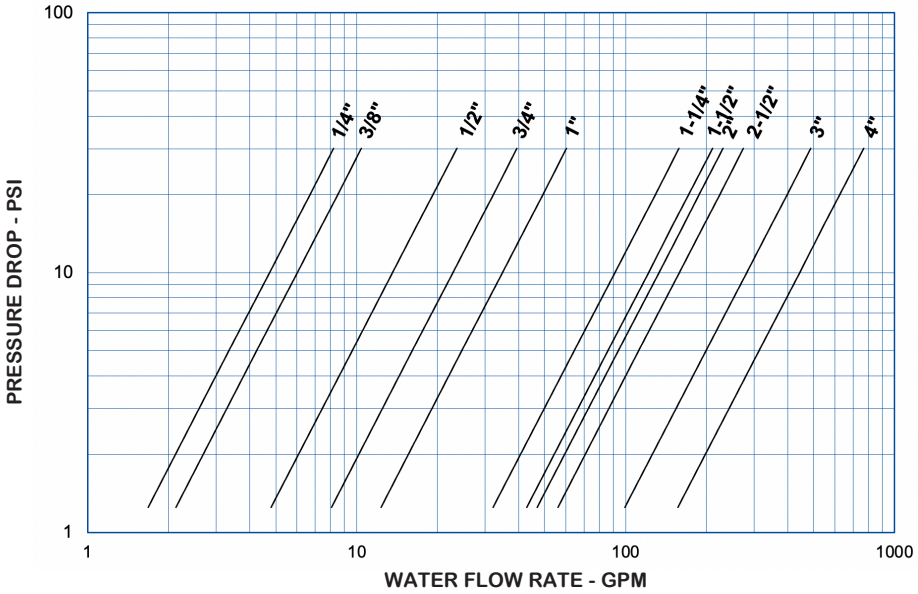
❶ May be larger.
❷ Sockets per ASME/ANSI B16.11.

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

Body Material ❸	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" 5000 PSIG (1500 PSIG for o-ring seats)	3" 3000 PSIG (1500 PSIG for o-ring seats)	4" 1500 PSIG
Carbon Steel (CS)				
Alloy 20 (A2)	Semi-standard			
Alloy C-276 (HC)				
MONEL® 400 or Alloy R405(MO)				
Alloy B (HB)	Contact the factory for these or other materials			

❸ See page 58 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_V VALUES & VALVE WEIGHTS		
C_V	SIZE	SS & CS
1.5	1/4	5.8 oz.
1.9	3/8	7.2 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 53 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 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 ❶
.125 .500 1.50 3.50
(Sizes B-I Only)

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

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 ❷

AFLAS® = AS
BUNA-N = BN
EPDM❸ = EP
KALREZ® = KZ
"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.

❶ .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.

❷ 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.

❸ EP seats not recommended for use with Carbon Steel valves.