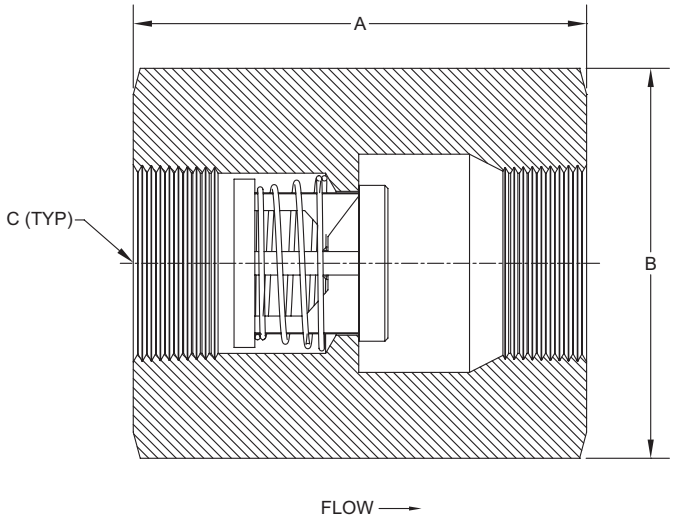
UNIVERSAL HIGH PRESSURE

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

The **Universal High Pressure (U1, R1)** check valve is a one piece body machined from bar stock with female pipe threads. The valve is designed and manufactured for high pressure applications. These valves can also be used as low pressure relief valves or vacuum breakers by using the desired spring settings. This valve is normally supplied with a “metal-to-metal” seat. NPT threads are per ASME B1.20.1. Also available with ISO 7 “Rp” threads (R1).

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

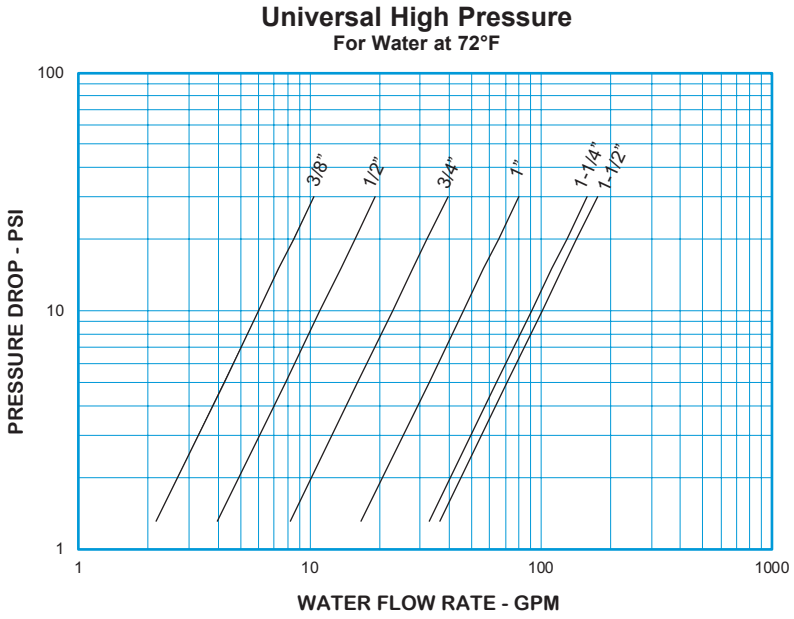


Nom. Pipe Size	Size Code	A	Hex ❶ Size B	C	Orifice Diameter
3/8	C	2.16	1	3/8 NPT	0.348
1/2	D	2.71	1-1/4	1/2 NPT	0.464
3/4	F	2.95	1-5/8	3/4 NPT	0.593
1	H	3.64	2-1/4	1 NPT	0.890
1-1/4	I	3.91	2-3/4	1-1/4 NPT	1.135
1-1/2	J	4.36	3-1/4	1-1/2 NPT	1.385

❶ May be larger and/or round.

Body Material ❷	Availability	Non-Shock Pressure-Temp. Rating @ 100° F Consult factory for P-T rating above 100° F
316 Stainless Steel (SS)	Standard	10,000 PSIG For pressure below 3000 PSIG see our U3 style on page 17
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	
Titanium (TI)		

❷ See page 58 for material grade



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 U1 C_V VALUES & VALVE WEIGHTS		
C_V	SIZE	SS & CS
1.9	3/8	5.9 oz.
3.5	1/2	11.8 oz.
7.2	3/4	1.4 lb.
14.6	1	3.5 lb.
28.8	1-1/4	5.4 lb.
31.9	1-1/2	8.1 lb.

See page 53 for Flow Formulae.
Valve weights are approximate.

HOW TO ORDER
CHECK-ALL STYLE U1

BODY MATERIAL
ALLOY 20 = A2
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 ❶
.125 .500 1.50 3.50
(Sizes C-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

1 _ _ _ MT _ _ _ _ _ _ _ _

VALVE STYLE
NPT Threads = U1
ISO 7 Rp Threads = R1

SIZE
3/8 = C
1/2 = D
3/4 = F
1 = H
1-1/4 = I
1-1/2 = J

SEAT MATERIAL ❷
"METAL TO METAL" = MT
Same temperature rating as body

SPRING MATERIAL
316 SS = SS
ALLOY C-276 = HC
ALLOY B = HB
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 "Metal-to-Metal" seats are not resilient. See page 54 for allowable leakage rates.