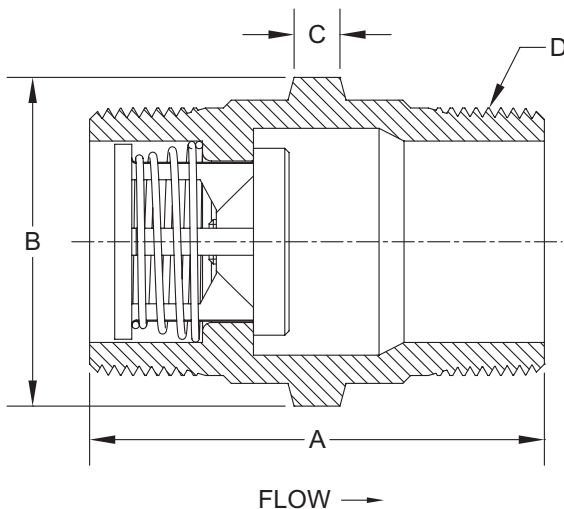


The **Connector (CN, CR)** check valve is a valve with a pipe nipple or connector housing. It is designed to be used in installations where a check valve with male pipe threads is required. The CN valve is adaptable for use as a low pressure relief valve or vacuum breaker by using the desired spring settings. Two valves used in combination make an excellent pressure vacuum vent. NPT threads are per ASME B1.20.1. Also available with ISO 7 "R" threads (CR).



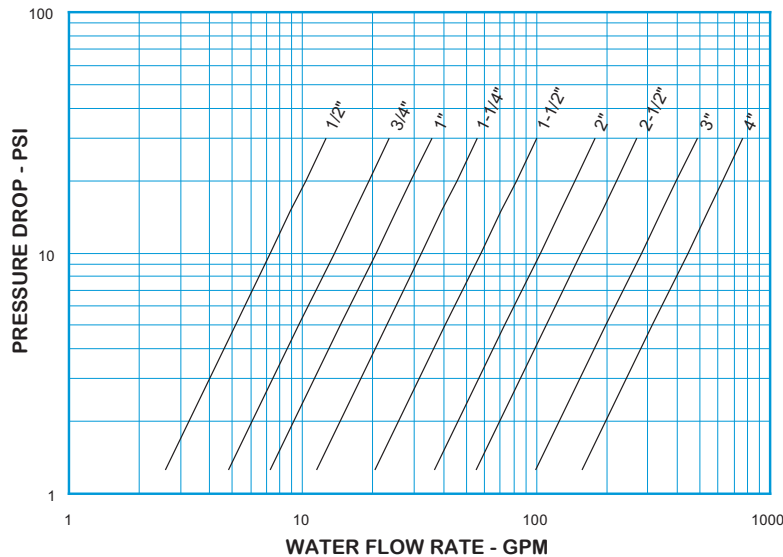
Nom. Pipe Size	Size Code	A	Hex ^① Size B	C	D	Orifice Diameter
1/2	D	2.34	7/8	0.28	1/2 NPT	0.348
3/4	F	2.34	1-1/8	0.27	3/4 NPT	0.464
1	H	3.00	1-3/8	0.35	1 NPT	0.593
1-1/4	I	3.00	1-3/4	0.33	1-1/4 NPT	0.890
1-1/2	J	3.19	2	0.32	1-1/2 NPT	1.135
2	K	3.68	2-1/2	N/A	2 NPT	1.385
2-1/2	L	5.00	3-1/4	N/A	2-1/2 NPT	1.555
3	M	5.50	4	N/A	3 NPT	2.025
4	N	5.00	4-1/2	N/A	4 NPT	2.560

^① May be larger and/or round.

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

^② See page 57 for material grade information.

Connector
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 CN, CR C _v VALUES & VALVE WEIGHTS		
C _v	SIZE	SS & CS
2.3	1/2	2.5 oz.
4.3	3/4	3.9 oz.
6.5	1	7.5 oz.
10.2	1-1/4	10.9 oz.
18.3	1-1/2	1.5 lb.
32.7	2	2.7 lb.
49.2	2-1/2	5.0 lb.
89.0	3	8.9 lb.
140	4	11.1 lb.

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

HOW TO ORDER CHECK-ALL STYLE CN, CR

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
Contact the factory for more options
See p. 4 for temperature rating

C

VALVE STYLE

NPT Threads = CN
ISO 7 R Threads = CR

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
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.

- 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.