GENERANT
Valves & BI-Lok Fittings

CHECK VALVE
1/8” – 2” NPT
0 – 4500 Psig

CV SERIES

Description

High flow, zero leak, low pressure drop check valve suitable for most fluid and gas applications. Fully guided poppet with free floating O-ring design is extremely tolerant of particulate contamination. A metal to metal positive stop in both the open and checked position protects O-ring and spring from over-stress fatigue. Zero external leakage is achieved by the utilization of a static O-ring seal with PTFE backup ring. When specified with the proper seal material, these valves are ideally suited to cryogenic system applications.

Technical Data

- Nominal Crack Pressures: .15, 1, 3 & 8 Psig (0.01, 0.07, 0.21 & 0.55 bar)
- Leakage: Zero to maximum operating pressure. PTFE seals may require back pressure to seal leak-tight
- Temperature Rating: -320°F to 450°F (-195°C to 232°C) based on seal material
- Maximum Operating Pressures to 300°F (149°C)

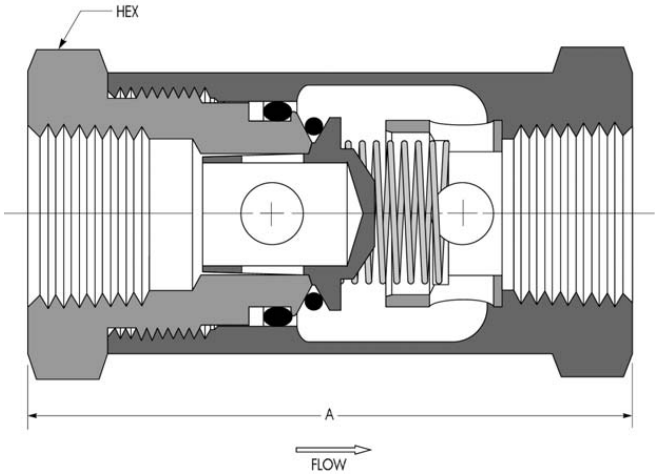
Pipe Size	Brass Psig (bar)	Carbon Steel Psig (bar)	303 Stainless Steel Psig (bar)	316 Stainless Steel Psig (bar)
1/8” – 1”	3000 (206)	3000 (206)	4500 (310)	
1-1/4” & 1-1/2”		Non standard, consult factory		
2”	1500 (103)			

Materials of Construction

Component	Valve Body Material			
	Brass	Carbon	303 SS	316 SS
Inlet Cap, Outlet Body, Poppet, Spring Retainer	Brass ASTM B16	Carbon Steel ASTM A108 Zinc & Black Plated per ASTM B633	303 SS ASTM A582	316 SS ASTM A479
Dynamic O-Ring[1]	Buna-N		Viton™	
Static O-Ring				
Backup Ring	Virgin PTFE			
Spring	302 SS, ASTM A313			

1 Lubricated with Krytox™

SERIES CV
CHECK VALVE



Dimensional/Flow Data

Pipe Size (NPT)	A (inches)	Hex	Cv	Flow at 5.0 Psid (SCFM)
1/8”	1.70	13/16”	1.7	35
1/4"	2.25	1”	3.0	60
3/8”	2.43	1 – 1/8”	3.9	80
1/2"	2.93	1 – 1/2"	7.4	150
3/4"	3.37	1 – 3/4"	11.4	280
1”	3.99	2”	14.2	380
1 – 1/4"	4.50	2 – 3/4"	26.8	700
1 – 1/2"	5.35			
2”	6.10	3 – 1/2” Round[1]	51.0	1200

1. Machined from 3-1/2” round stock with 2-3/4” wrench flats.
Flow tested in accordance with ISA S75.02 with air. Restrictions in the inlet or outlet piping may reduce flow

Ordering Information

CV - 500 B - V - 3

SERIES
CV - Check Valve

PIPE SIZE (NPT)
125 - 1/8”
250 - 1/4"
375 - 3/8”
500 - 1/2"
750 - 3/4"
1000 - 1"
1250 - 1-1/4" (brass only)
1500 - 1-1/2" (brass only)
2000 - 2" (brass only)
NPT threads per ANSI/ASME B1.20.1

MATERIAL CODE
B - Brass (1/8" - 2")
S - 303 SS (1/4" - 1")
SS - 316 SS (1/8" - 1)
C - Carbon Steel (1/4" - 1")

CRACK PRESSURE
.15 - (.1-.4 Psig) (0.01 bar)
1 - (.5 - 1 Psig) (0.07 bar)
3 - (2-4 Psig) (0.21 bar)
8 - (6-10 Psig) (0.55 bar)

SEAL MATERIAL
V - Viton™, -10°F to 375°F (-23°C to 190°C)
B - Buna-N, -40°F to 250°F (-40°C to 121°C)
N - Neoprene, -40°F to 300°F (-40°C to 148°C)
EP - Ethylene Propylene, -65°F to 300°F (-54°C to 148°C)
FS - Fluorosilicone, -80°F to 350°F (-62°C to 176°C)
S - Silicone, -70°F to 450°F (-56°C to 232°C)
T - PTFE, -320°F to 350°F (-195°C to 176°C)
PTFE Seal may require back pressure to seal leak tight

OPTIONS
Oxygen cleaning, alternative seals and other thread configurations, consult factory

Note: Viton™ and Krytox™ are trademarks of DuPont.

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