

INLINE CHECK VALVE

1/8" – 3/4" NPT

Vacuum – 800 Psig

ICV SERIES

Description

A compact, inline, direct acting poppet check valve suitable for pressure and vacuum applications. Bubble tight sealing is achieved by a line of contact between a precision machined seat and a standard elastomer O-ring with minimum differential pressure, regardless of mounting attitude. Floating poppet and fluted retainer design provides laminar flow. Metal to metal positive stop ensures long service life.

Technical Data

- Nominal Crack Pressures: .15, 1 & 3 Psig (0.01, 0.07 & 0.21 bar)
- Proof Pressure: 1200 Psig (83 bar)
- Operating Pressure Range: Vacuum - 800 Psig (55 bar)
- Leakage: Zero @ > 0.5 Psig Back Pressure (0.03 bar)
- Temperature Rating:
-80°F to 375°F (-62°C to 190°C)
based on seal material



Materials of Construction

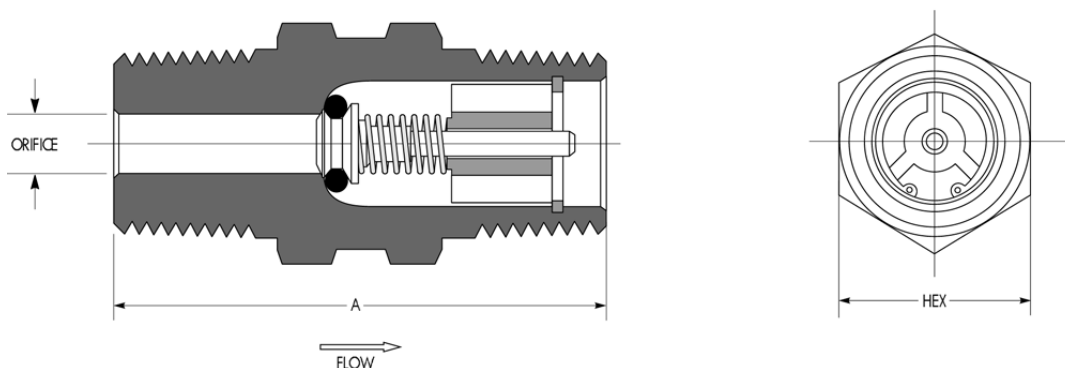
Component	Valve Body Material	
	Brass	Stainless Steel ¹
Body, Poppet	Brass, ASTM B16	316 SS, ASTM A479
Spring Retainer	Brass, ASTM B16 ²	316 SS, ASTM A479
Spring	302 SS, ASTM A313	
O'Ring ³	Buna-N	Viton™
Retaining Ring	Zinc Plated Carbon Steel	Stainless Steel

1 Stainless Steel available in 1/8", 1/4", 3/8" & 1/2" Male x Male only

2 1/8" & 1/4" Brass valves have 316SS retainer

3 Lubricated with Krytox™

SERIES ICV INLINE CHECK VALVE



Dimensional/Flow Data

Pipe Size (NPT)	Port Configuration		A (inches)	HEX	Orifice (inches)	Cv	Flow at Max Psid ¹ (SCFM)
	Inlet	Outlet					
1/8"	Male	Male	1.312	1/2"	.140	0.4	7.2
	Female	Female	1.687				
	Female	Male	1.437				
1/4"	Male	Male	1.592	5/8"	.193	0.8	14.3
	Female	Female	1.937	3/4"			
	Female	Male	1.500				
3/8"	Male	Male	1.610	3/4"	.270	1.2	21.5
1/2"	Male	Male	2.140	7/8"	.327	2.0	35.5
3/4"	Male	Male	2.160	1 – 1/8"	.467	5.0	90.0

1. Maximum allowable pressure drop 15 Psid.

Flow tested in accordance with ISA S75.02 with air. Restrictions in the inlet or outlet piping may reduce flow.

Ordering Information

ICV - FF - 250 B - V - 1

SERIES
ICV - Inline Check Valve

PORT CONFIGURATION
MM - Male x Male (Standard/Omit)
FF - Female x Female (1/8" & 1/4" brass only)
FM - Female x Male (1/8" & 1/4" brass only)

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

CRACK PRESSURE
.15 - (.1-4 Psig) (0.01 bar)
1 - (.5 - 1 Psig) (0.07 bar)
3 - (2-4 Psig) (0.21 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 250° F (-40° C to 121° 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, -65° F to 400° F (-54° C to 205° C)

MATERIAL CODE
B - Brass
SS - 316 SS

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

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

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.



SA.SL.ICV001.C.2168

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