



# HIGH PRESSURE CHECK VALVES CH SERIES

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## CH SERIES POPPET CHECK VALVES

Working Pressure: up to 6000 psi (413 bar)

Temperature Range: -40 to 400°F (-40 to 204°C)

End Connections:

Types: Tube fitting, NPT and ISO pipe

Sizes: 1/8" through 1" and 6, 8, 10 and 12mm

Standard Material: 316 SS with Fluorocarbon FKM O-ring.

Other materials are available.

Cracking pressures: 1/3, 1, 5, 10 and 25 psi (0.2 to 1.7 bar)

100% factory tested:

Seat / Shell to 1000 psig with nitrogen

Cracking and resealing pressure verification

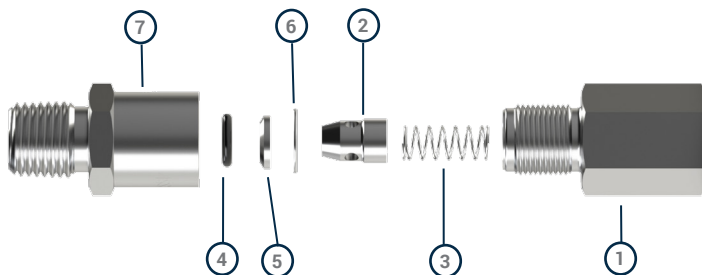
## Pressures / temperatures & flow

SERIES	MAXIMUM FLOW COEFFICIENT (CV)	NOMINAL CRACKING PRESSURE PSI (BAR)	DOWNSTREAM PRESSURE AT 70°F (20°C) PSIG (BAR)
CH4	0.67	1/3, 1, 5, 10 and 25 (0.03, 0.07, 0.69 and 1.8)	6000 (413 bar)
CH8	1.8		5000 (345 bar)
CH16	3.25		

## Cracking & Reseal Pressures

Nominal Cracking Pressure psig (bar)	Cracking Pressure Range psig (bar)	Reseal Pressure psig (bar)
1/3 (0.03)	Up to 3 (0.21)	Up to 6 (0.42) back pressure
1 (0.07)	Up to 4 (0.28)	Up to 5 (0.35) back pressure
5 (0.35)	3 TO 9 (0.21 TO 0.63)	Up to 2 (0.14) back pressure
10 (0.69)	7 TO 15 (0.49 TO 1.1)	3 (0.21) or more upstream pressure
25 (1.8)	20 TO 30 (1.4 TO 2.1)	17 (1.2) or more upstream pressure

## Materials of Construction

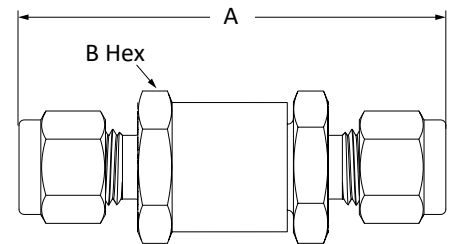


ID	Component	Material
1*	Inlet Body	316 SS
2*	Poppet	316 SS
3*	Spring	302 SS
4*	O-ring	Fluorocarbon FKM
5*	O-ring Retainer	316 SS
6*	Connector Gasket	316 SS
7*	Outlet Body	316 SS

\*Wetted components

## Part Numbers and Dimensions

End Connections		Basic Part Number	Dimensions		
Type	Size		Valve Size	A in. (mm)	H (HEX) in. (mm)
Fractional Tube Fitting	1/8	CH4-D2	CH4	2.27 (57.7)	11/16
	1/4	CH4-D4	CH4	2.44 (62.0)	11/16
	3/8	CH8-D6	CH8	2.75 (69.9)	1
	1/2	CH8-D8	CH8	2.96 (75.2)	1
	3/4	CH16-D12	CH16	3.53 (89.7)	1 3/4
Metric Tube Fitting	6	CH4-DM6	CH4	2.44 (62.0)	11/16
	8	CH8-DM8	CH8	2.70 (68.6)	1
	10	CH8-DM10	CH8	2.75 (69.9)	1
	12	CH8-DM12	CH8	2.96 (75.2)	1
Female NPT	1/4	CH4-4PF	CH4	2.26 (57.4)	11/16
	3/8	CH8-6PF	CH8	2.55 (67.8)	1
	1/2	CH8-8PF	CH8	3.03 (77.0)	1 1/16
	3/4	CH16-12PF	CH16	3.23 (82.0)	1 3/4
	1	CH16-16PF	CH16	3.83 (97.3)	1 3/4
Female ISO Tapered	1/4	CH4-4FRT	CH4	2.38 (60.5)	11/16
	3/8	CH8-6FRT	CH8	2.86 (72.6)	1
	1/2	CH8-8FRT	CH8	3.29 (83.6)	1 1/16
Male NPT	1/8	CH4-2PM	CH4	1.9 (48.3)	11/16
	1/4	CH4-4PM	CH4	2.17 (55.1)	11/16
	3/8	CH8-6PM	CH8	2.36 (59.9)	1
	1/2	CH8-8PM	CH8	2.73 (69.3)	1
	3/4	CH16-12PM	CH16	3.23 (82.0)	1 3/4
	1	CH16-16PM	CH16	3.67 (93.2)	1 3/4
Male ISO Tapered	1/4	CH4-4MRT	CH4	2.17 (55.1)	11/16
	1/2	CH8-8MRT	CH8	2.73 (69.3)	1
Male NPT to Female NPT	1/4	CH4-4PM4PF	CH4	2.26 (57.4)	11/16
	1/2	CH8-8PM8PF	CH8	2.89 (73.4)	1 1/16
Fractional Tube to Male NPT	3/8	CH8-D66PM	CH8	2.56 (65.0)	1
	1/2	CH8-D88PM	CH8	2.74 (69.6)	1



## PART NUMBER CONFIGURATION



### Cracking Pressure

Cracking Pressure psig	Designator
1/3	1/3
1	1
5	5
10	10
25	25

**MATERIAL DESIGNATOR:** Stainless Steel- 316

Example: CH4-D4-1-316

### O-RINGS

Fluorocarbon FKM O-rings are the standard seal material on CH check valves. To order, non-standard O-rings insert the designator from the table below into the valve part number. Example: CH4-D4-316-BN

MATERIAL	DESIGNATOR	TEMPERATURE RATING °F (°C)
Fluorocarbon FKM	Blank	-10 TO 400 (-23 to 204)
NITRILE	-BN	-20 TO 250 (-28 TO 121)
LOW-TEMP NITRILE	-NBR3	-40 TO 250 (-40 TO 121)
ETHYLENE PROPYLENE	-EP	-50 TO 250 (-45 TO 121)
KALREZ	-KZ	0 TO 400 (-17 TO 204)

### PRODUCTION TESTING

Check valves are 100% factory tested with nitrogen after assembly to confirm spring cracking pressure, and for seat shell leakage at 1000 psi.

*Please consider total system design considerations when selecting products to ensure safe, trouble-free performance. Function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibilities of the system designer and user.*

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