



# 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: -65 to 400

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 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 seal to 1000 psig with nitrogen

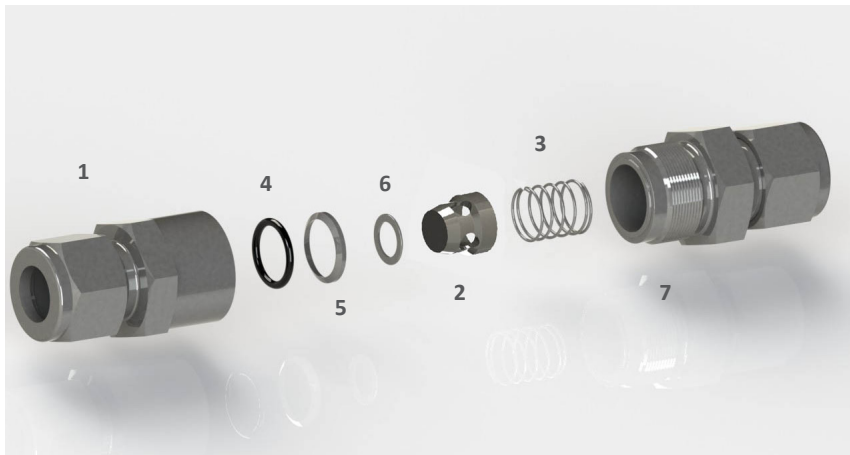
Cracking and resealing pressure verification

## PRESSURES / TEMPERATURES & FLOW

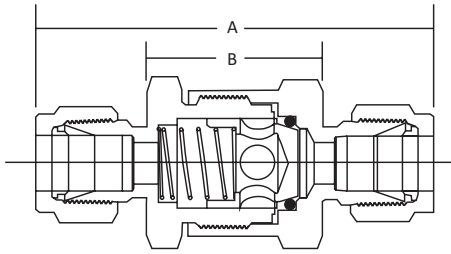
SERIES	MAXIMUM FLOW COEFFICIENT ( $C_v$ )	NOMINAL CRACKING PRESSURE PSI (BAR)	DOWNSTREAM PRESSURE AT 70°F (20°C) PSIG (BAR)
CH4	0.60	1/3, 1, 5, 10 and 25 (0.03, 0.07, 0.69 and 1.8)	6000 (413)
CH8	2.18		
CH16	3.25		

## CRACKING AND RESEAL PRESSURES

NOMINAL CRACKING PRESSURE PSI (BAR)	CRACKING PRESSURE RANGE PSIG (BAR)	RESEAL PRESSURE PSIG (BAR)
1/3 (0.03)	UP TO 3 (0.21)	UP TO 6 (0.42)
1 (0.07)	UP TO 4 (0.28)	UP TO 5 (0.35)
5 (0.35)	3 TO 9 (0.21 TO 0.63)	UP TO 2 (0.14)
10 (0.69)	7 TO 15 (0.49 TO 1.1)	3 (0.21) OR MORE
25 (1.8)	20 TO 30 (1.4 TO 2.1)	17 (1.2) OR MORE



MATERIALS OF CONSTRUCTION		
COMPONENT		316 SS
1	INLET BODY	316 SS
2	POPPET	316 SS
3	SPRING	302/316 SS
4	O-RING	FKM/NBR/EPM
5	O-RING RETAINER	316 SS
6	CONNECTOR GASKET	316 SS
7	OUTLET BODY	316 SS



## CH SERIES CHECK VALVES

CONNECTIONS	SIZE	BASIC PART NUMEBER	VALVE SIZE	A	H (HEX)
				in. (mm)	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
	1	CH16-D16	CH16	3.88 (98.6)	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
	3/4	CH16-12PF	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 TA- PERED	1/4	CH4-4MRT	CH4	2.17 (55.1)	11/16
	1/2	CH8-8MRT	CH8	2.73 (69.3)	1
MALE/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 FITTING/ MALE NPT	3/8	CH8-D6PM6	CH8	2.56 (65.0)	1
	1/2	CH8-D8PM8	CH8	2.74 (69.6)	1

## PART NUMBER CONFIGURATION



CRACKING PRESSURE DESIGNATOR	
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

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-BU*

MATERIAL	DESIGNATOR	TEMPERATURE RATING °F (°C)
FKM	Blank	0 to 400 (-17 to 204)
NITRILE	-NBR	-40 TO 250 (-40 TO 121)
LOW-TEMP NITRILE	-NBR3	-65 TO 275 (-53 TO 135)
ETHYLENE PROPYLENE	-EP	-50 TO 300 (-45 TO 148)
KALREZ	-KZ	-10 TO 400 (-23 TO 204)

## PRODUCTION TESTING

Check valves are 100% factory tested with nitrogen after assembly to confirm spring cracking pressure, and for seat 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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