



# CVH Series

Check Valves



The CVH Series Check Valves are engineered for a competitive price with no compromise of quality and performance to meet the growing requirements of instrumentation valves. The function of this valve series is to maintain system integrity by preventing back flow of a wide variety of fluids over a broad range of pressures.

## Features & Specifications

- Rapid response
- Resilient o-ring seat provides cushioned, noise-free closing and zero leakage
- Floating o-ring design: o-ring is continually cleaned so contaminants do not prevent sealing
- Various materials of construction can be used with any liquid or gas service
- Various end connections can be assembled in any system or application
- Spring-loaded poppet can be mounted in any orientation
- Full flow with minimal restriction for maximum Cv rates
- Virtually maintenance free for maximum dependability
- Pressures up to 6000 psig (414 bar)
- Cracking pressure range is 0.5 to 20 psig (0 to 1 bar)  $\pm 10\%$
- Flow up to 7.4 Cv maximum
- Greater than 100,000 life cycles
- Special High Tolerance NPT Thread

## Technical Data

<b>Body Material*</b>	316 stainless steel, Monel® R-405, Hastelloy® C-276
<b>Operating Pressure Range</b>	0 to 6000 psig (414 bar)
<b>Temperature Range**</b>	-65° F to +550° F (-54° C to +288° C)
<b>Cv factors</b>	0.32 to 7.4
<b>Cracking Pressure Range</b>	0.5 to 20 psig (0.035 to 1.379 bar) $\pm 10\%$
<b>Leakage</b>	External: zero Internal: Soft seat = zero
<b>Connection sizes</b>	1/8" to 1"; 6mm to 25mm
<b>Life Cycles</b>	In excess of 100,000 cycles

\* Consult factory for other materials

\*\* Limited to +400° F (204° C) for 3/4" / 12 mm sizes and higher

check valves

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# CVH Series

## Specifications

### Operating Temperatures

Seal Material	Temperature (°F)	Temperature (°C)
Viton®	-20° to +400°	-29° to +204°
Fluorosilicone	-80° to +350°	-62° to +177°
Kalrez®*	-40° to +550°	-40° to +288°
Buna N	-65° to +275°	-54° to 135°

\* Limited to +400° F (204° C) for 3/4" / 12 mm sizes and higher

### Flow Rates

Fitting Size	1/8"	1/4"/4mm	3/8"/6mm	1/2"/8mm	10mm	3/4"/12mm	1"/16mm
fitting code*	-02	-04	-06	-08	-10	-12	-16
Cv FACTORS	0.32	0.79	1.71	3.08	3.87	7.38	7.38

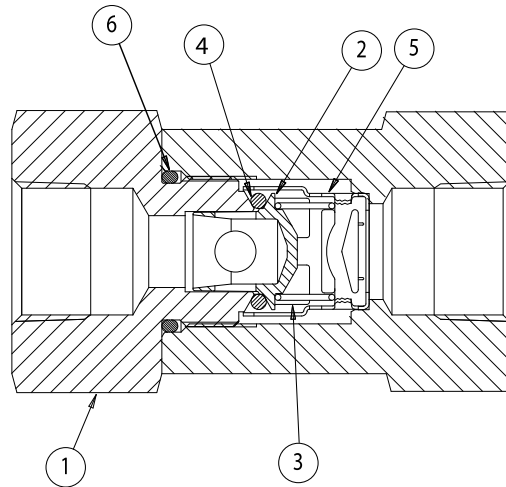
\* See ordering matrix on page 9

## Materials of Constructions

Part	Standard Materials (Others on Request)
1 Body* (outlet)	316 stainless steel
2 Poppet*	316 stainless steel
3 Spring*	302 stainless steel
4 O-ring*	Viton®
5 Spring guide	316 stainless steel
6 O-ring*†	Viton®

\* wetted component

† Applies to 3/4" / 12mm sizes and higher



## Dimensions

### Gyrolok® Tube Fitting, Fractional

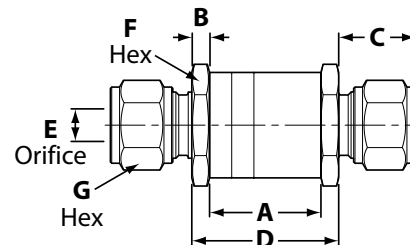
Fitting Code*	Fitting Size	A	B	C	D	E	F	G
-02	1/8"	0.83	0.20	0.67	1.23	0.09	27.0	0.67
-04	1/4"/4mm	0.83	0.20	0.77	1.23	0.19	27.0	0.77
-06	3/8"/6mm	1.26	0.20	0.83	1.66	0.30	36.6	0.83
-08	1/2"/8mm	1.26	0.20	0.92	1.66	0.42	36.6	0.92
-12	3/4"/12mm	2.05	0.50	0.97	3.05	0.66	63.5	0.97
-16	1"/16mm	2.05	0.50	1.08	3.05	0.66	63.5	1.08

\* See ordering matrix on page 9

### Gyrolok® Tube Fitting, Metric

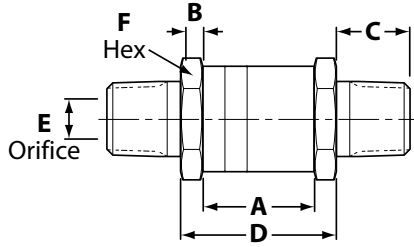
Fitting Code*	Fitting Size	A	B	C	D	E	F	G
-04	1/4"/4mm	21.08	5.08	17.9	31.30	2.44	27.0	17.9
-06	3/8"/6mm	21.08	5.08	19.5	31.30	3.96	27.0	19.5
-08	1/2"/8mm	21.08	5.08	19.1	31.30	5.94	27.0	19.1
-10	10mm	32.25	5.08	19.8	42.20	8.03	36.6	19.8
-12	3/4"/12mm	32.25	5.08	23.4	42.20	10.01	36.6	23.4
-14	14mm	32.25	5.08	21.0	42.20	12.01	36.6	21.0
-16	1"/16mm	52.07	12.70	23.4	76.10	12.70	63.5	23.4
-18	18mm	52.07	12.70	24.6	76.10	15.88	63.5	24.6
-22	22mm	52.07	12.70	24.6	76.10	16.66	63.5	24.6
-25	25mm	52.07	12.70	27.4	76.10	16.66	63.5	27.4

\* See ordering matrix on page 9



# CVH Series

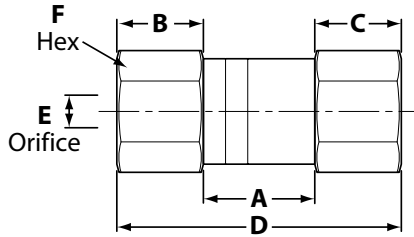
## Dimensions



### Male NPT, (Fractional)

Fitting Code*	Fitting Size	A	B	C	D	E	F
-02	1/8"	0.83	0.20	0.38	1.23	0.19	27.0
-04	1/4"/4mm	0.83	0.20	0.56	1.23	0.19	27.0
-06	3/8"/6mm	1.26	0.20	0.56	1.66	0.39	36.6
-08	1/2"/8mm	1.26	0.20	0.75	1.66	0.42	36.6
-12	3/4"/12mm	2.05	0.50	0.75	3.05	0.66	63.5
-16	1"/16mm	2.05	0.50	0.94	3.05	0.66	63.5

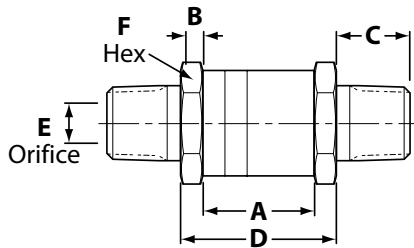
\* See ordering matrix on page 9



### Female NPT, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
-02	1/8"	0.98	0.62	0.62	2.22	0.19	27.0
-04	1/4"/4mm	0.98	0.62	0.62	2.22	0.19	27.0
-06	3/8"/6mm	0.85	0.77	0.77	2.39	0.39	36.6
-08	1/2"/8mm	1.05	0.93	0.93	2.91	0.42	36.6
-12	3/4"/12mm	0.95	1.08	1.08	3.11	0.66	63.5
-16	1"/16mm	1.16	1.37	1.37	3.90	0.66	63.5

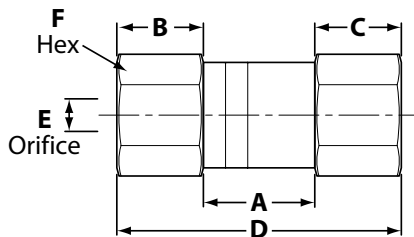
\* See ordering matrix on page 9



### Male British Tapered Pipe, (Fractional)

Fitting code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
-02	1/8"	0.83	0.20	0.38	1.23	0.19	27.0
-04	1/4"/4mm	0.83	0.20	0.56	1.23	0.19	27.0
-06	3/8"/6mm	1.26	0.20	0.56	1.66	0.39	36.6
-08	1/2"/8mm	1.26	0.20	0.75	1.66	0.42	36.6
-12	3/4"/12mm	2.05	0.50	0.75	3.05	0.66	63.5
-16	1"/16mm	2.05	0.50	0.94	3.05	0.66	63.5

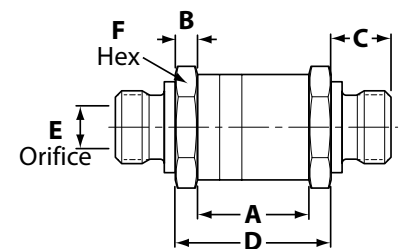
\* See ordering matrix on page 9



### Female British Tapered Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
-02	1/8"	0.74	0.63	0.63	2.00	0.19	27.0
-04	1/4"/4mm	0.99	0.88	0.88	2.75	0.19	27.0
-06	3/8"/6mm	1.04	0.98	0.98	3.00	0.39	36.6
-08	1/2"/8mm	1.31	1.25	1.25	3.81	0.42	36.6
-12	3/4"/12mm	1.22	1.56	1.56	4.34	0.66	63.5
-16	1"/16mm	1.46	1.80	1.80	5.06	0.66	63.5

\* See ordering matrix on page 9



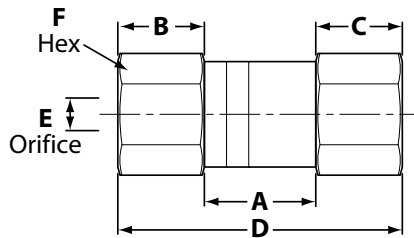
### Male British Parallel Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B	C	D	E	F
-02	1/8"	0.83	0.20	0.38	1.59	0.19	27.0
-04	1/4"/4mm	0.83	0.20	0.56	1.95	0.19	27.0
-06	3/8"/6mm	1.26	0.20	0.58	2.42	0.39	36.6
-08	1/2"/8mm	1.26	0.20	0.67	2.60	0.42	36.6
-12	3/4"/12mm	2.05	0.50	0.75	3.55	0.66	63.5
-16	1"/16mm	2.05	0.50	0.83	3.71	0.66	63.5

\* See ordering matrix on page 9

# CVH Series

## Dimensions



### Female British Parallel Pipe, (Fractional)

Fitting Code*	Fitting Size	A	B Inlet	C Outlet	D	E	F
-02	1/8"	1.15	0.66	0.66	2.47	0.19	27.0
-04	1/4"/4mm	1.16	0.89	0.89	2.94	0.19	27.0
-06	3/8"/6mm	1.03	1.04	1.04	3.11	0.39	36.6
-08	1/2"/8mm	1.27	1.17	1.17	3.61	0.42	36.6
-12	3/4"/12mm	1.17	1.51	1.51	4.19	0.66	63.5
-16	1"/16mm	1.37	1.61	1.61	4.59	0.66	63.5

\* See ordering matrix below

## How to Order

### Standard items in bold

**CVH G 4 Y 3 1 S**

#### FITTING TYPE

- F Female NPT
- G Gyrolok® tube fitting, fractional**
- J Male British parallel pipe
- K Female British parallel pipe
- M Male NPT
- Q Male British tapered pipe
- T Female British tapered pipe
- Z Gyrolok® tube fitting, metric

#### FITTING SIZE

	Fractional	Metric
2	1/8"	N/A
4	1/4"	4mm
6	3/8"	6mm
8	1/2"	8mm
10	N/A	10mm
12	3/4"	12mm
14	N/A	14mm
16	1"	16mm
18	N/A	18mm
22	N/A	22mm
25	N/A	25mm

#### CLEANING OPTIONS

- S Standard**
- O Oxygen cleaning

#### SEAL MATERIALS

- 1 Viton®
- 2 Buna-N (not for oxygen service)
- 3 Fluorosilicone
- 4 Kalrez®

#### CRACK PRESSURE

- 1 0.5 psig (0.04 bar)
- 2 1.0 psig (0.07 bar)
- 3 3.0 psig (0.21 bar)
- 4 10 psig (0.83 bar)
- 5 20 psig (1.38 bar)

#### BODY MATERIAL

- Y 316 stainless steel (standard)**
- H Hastelloy® C-276
- M Monel® R-405

Please consult HOKE Incorporated or your local distributor for information on special connections, o-rings, operating pressures and temperature ranges.

## For Your Safety

It is solely the responsibility of the system designer and user to select products suitable for their specific application requirements and to ensure proper installation, operation, and maintenance of these products. Material compatibility, product ratings and application details should be considered in the selection. Improper selection or use of products described herein can cause personal injury or property damage.

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