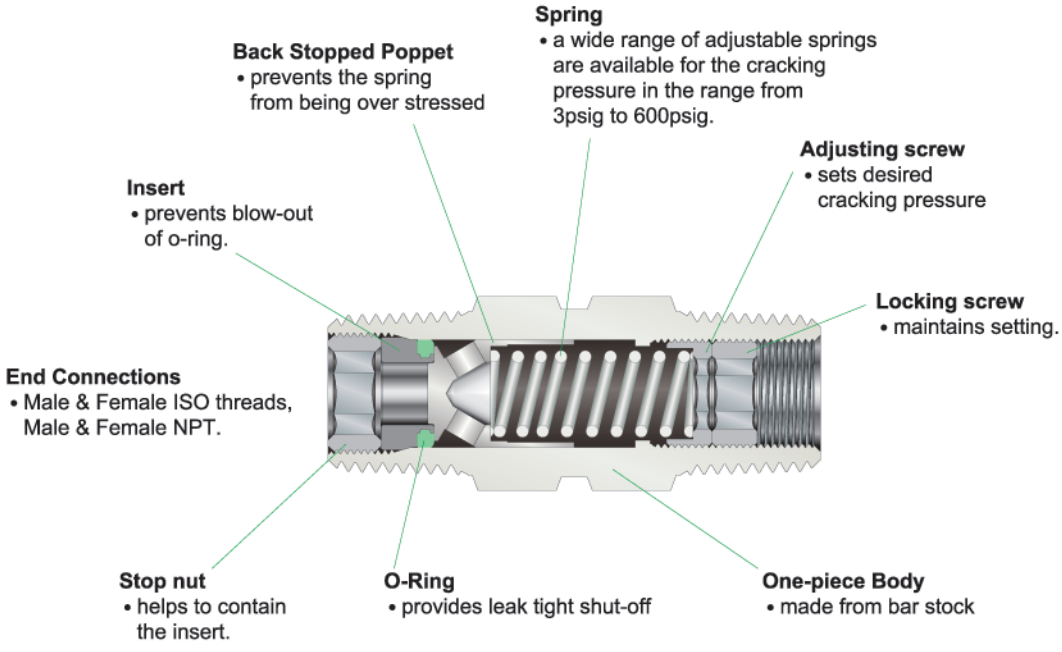
Hy-Lok CVA Series

One-piece Pipe-ended Adjustable Check Valves

Catalog No. H - 700ACV
Apr. 2006



Features

- Working pressure to 3000psig(206 bar) @70°F(21°C)
- Temperature range from -10°F to 375°F(-23°C to 191°C) with Viton Seal
- One picce body construction
- Ease adjustment
- Wide range of cracking pressure
- Materials include stainless steel and brass.

Technical Data

End Connection Sizes	1/4"	1/2"
Max. Working Pressure @21°C (70°F)	3000 psig (206 bar)	
Operating Temperature Range	Viton : -10°F to 375°F (-23°C to 191°C) Buna-N : -10°F to 250°F (-23°C to 121°C)	
Cracking Pressure Range	3 to 50 psig 50 to 150 psig 150 to 350 psig 350 to 600 psig	
Flow Coefficient (Cv)	0.35	1.20

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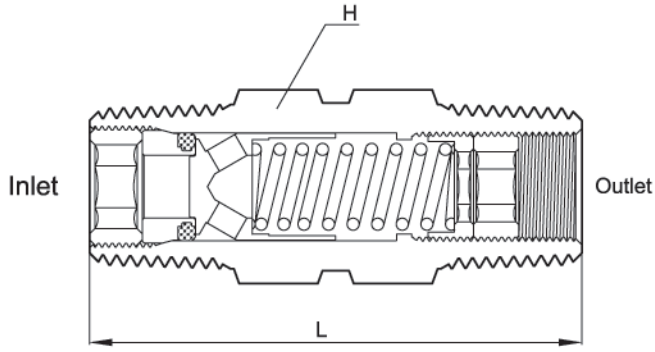
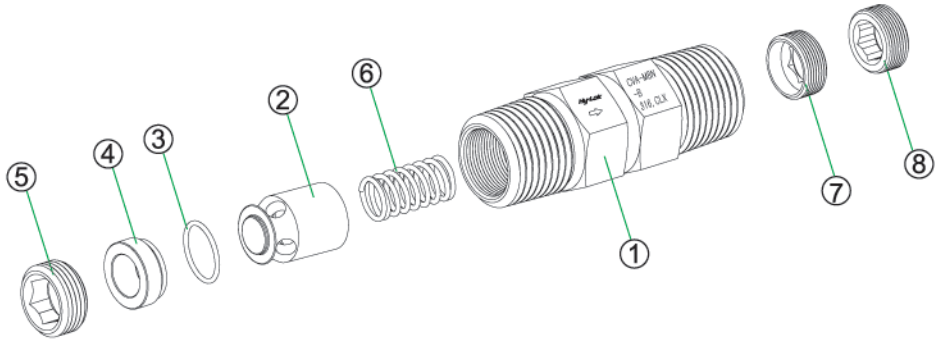


Table of Dimensions

Basic Part NO.		Flow Dia.	End Connections		Dimensions			
			Inlet	Outlet	L		H	
					mm	in.	mm	in.
CVA	-M4N	4.8	1/4 Male NPT	1/4 Male NPT	41.1	1.62	14.20	9/16
	-M4R		1/4 Male ISO Tapered	1/4 Male ISO Tapered				
	-F4N		1/4 Female NPT	1/4 Female NPT	75.7	2.98	19.05	3/4
	-M8N	10.0	1/2 Male NPT	1/2 Male NPT	65.0	2.55	22.22	7/8
	-M8R		1/2 Male PT	1/2 Male PT				

■ All dimensions in milimeters. Dimensions are for reference only , subject to change.

Materials of Construction



NO.	Component	Valve Body Materials	
		316 Stainless Steel	Brass
		Material Grade / ASTM Specification	
1	Body①	316SS / A479	Brass360 / B16
2	Poppet	316SS / A479	Brass360 / B16
3	O-ring①	Viton Standard	
4	Insert	316SS / A479	Brass360 / B16
5	Stop nut	316SS / A479	Brass360 / B16
6	Spring	302SS/A313	
7	Adjusting screw②	316SS / A479	Brass360③ / B16
8	Locking screw②		

① Silicone-based lubricant.
② Molybdenum disulfide-based dry film lubricant.
③ Adjusting screw in brass valve with 150 or 600 psig spring is 316SS.

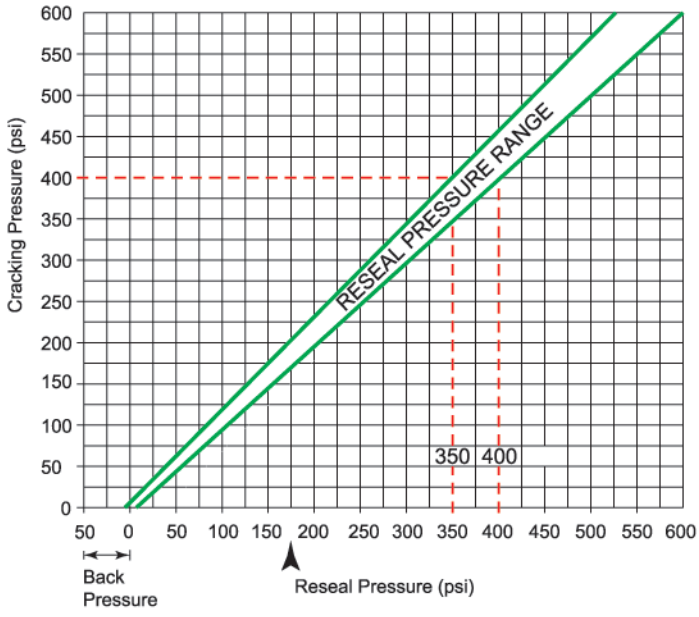
Cleaning

■ Each valve is cleaned and packaged according to the manufacture standard cleaning procedures.

Testing

■ Each valve is factory tested for cracking pressure and reseal performance.
■ Optional tests are available upon request.

Cracking and Reseal Presure at 70°F (20°C)



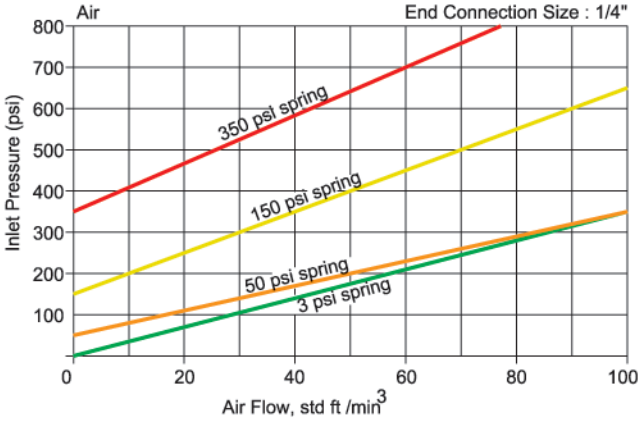
Example : For a valve set to crack at 400 psi, the minimum reseal pressure would be 350psi.

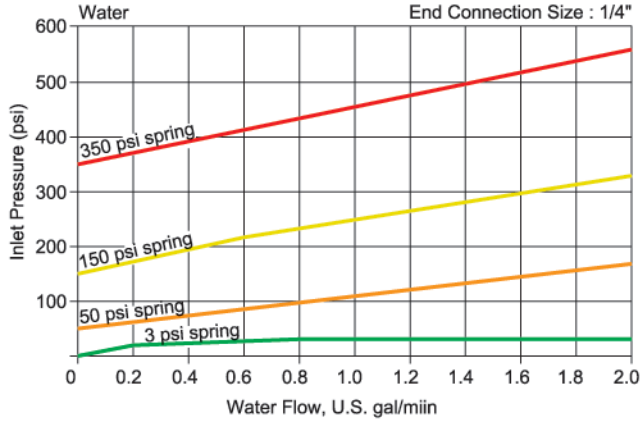
> ⚠ Valves that are not actuated for a period of time may crack initially at higher than subsequent cracking pressure.

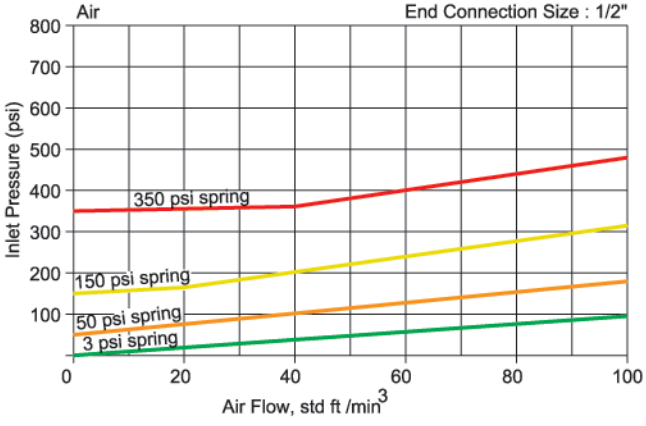
CVA series check valves set to crack at 20psi or lower may require back pressure to reseal bubble-tight.

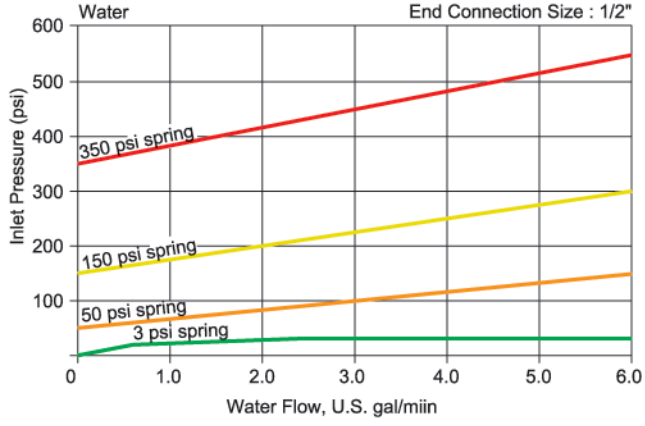
1. Cracking pressure : The upstream pressure at which the first indication of flow occurs.
2. Reseal pressure : The upstream pressure at which there is no indication of flow.

Flow Rate at 70°F (20°C)



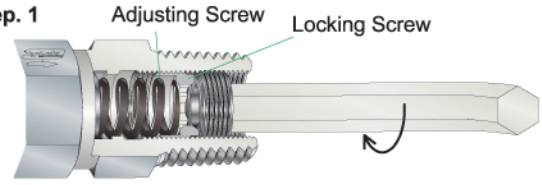






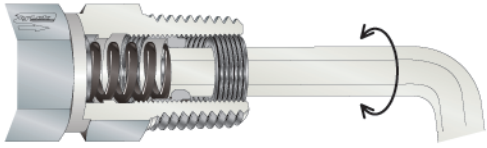
Cracking Pressure Adjustment

Step. 1



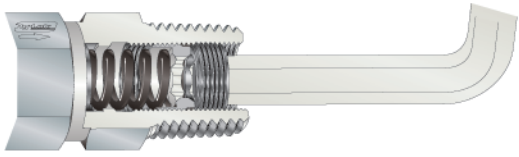
Insert the hex wrench into the lock screw. Loosen the lock screw by rotating the hex wrench 2 to 3 full turns in the counterclockwise direction.

Step. 2



After loosening the lock screw, align the hex wrench os it will enter into the adjustment screw. To establish the desired cracking pressure, rotate the hex wrench in a clockwise direction to increase the cracking pressure or rotate the hex wrench in a counterclockwise direction to decrease the craking presure.

Step. 3



After adjusting the adjustment screw to reach the desired cracking presking pressure, withdraw the hex wrench from the adjustment screw. Tighten the lock screw against the adjustment screw firmly by rotating the hex wrench in a clockwise direction.

After testing for the desired cracking pressure, if additional adjusting is required, repeat steps 1 through 3.

Maintenance Kits

- Seal kits and spring kits are available for retrofit or maintenance
- For more information, contact your local authorized Hy-Lok Sales and Service Representative.

Seat Materials

Available various O-ring materials, whose temperature ratings are shown below.

Material	Temperature Rating
Viton	-23°C to 191°C (-10°F to 375°F)
Buna - N	-23°C to 121°C (-10°F to 250°F)
Kalrez	-23°C to 315°C (-10°F to 600°F)
PTFE	-46°C to 232°C (-50°F to 450°F)
Neoprene	-40°C to 121°C (-40°F to 250°F)
Ethylene Propylene	-46°C to 149°C (-50°F to 300°F)

* High back pressure is required for PTFE to seal leak-tight.

Ordering Information

CVA — **Series Designator**

F — **End Connection Designator**
- F - Both Ends Female Thread
- M - Both Ends Male Thread

4N — **Size Designator**

Pipe Thread Designation NPT (ISO / BSP)

Nom. Size	1 / 4	1 / 2
Designation	4N(R)	8N(R)

A — **Cracking Pressure Designator**
- A : 3 ~ 50 psi
- B : 50 ~ 150 psi
- C : 150 ~ 350 psi
- D : 350 ~ 600 psi

KA — **O - Ring Designator***
- Viton - Standard for SS316 Body
- Buna-N - Standard for Brass Body
- * KA - Kalrez
- * PE - PTFE
- * NE - Neoprene
- * EP - Ethylene Propylene

S316 — **Body Material Designator**
- S316 - 316 Stainless Steel
- BRAS - Brass

Note "*" : No designator is required for standard
e.g. CVA-M4N-B - S316

■ QUALITY SYSTEM CERTIFICATES

ISO 9001
CERTIFICATE NO.GQC 212

ASME SECT Ⅲ (MO)
CERTIFICATE NO. QSC 584

SAFETY in VALVE SELECTION

Proper installation, material compatibility, operation and maintenance of the valve is the responsibility of the user. The total system design must be taken into consideration to ensure optimal performance and safety.