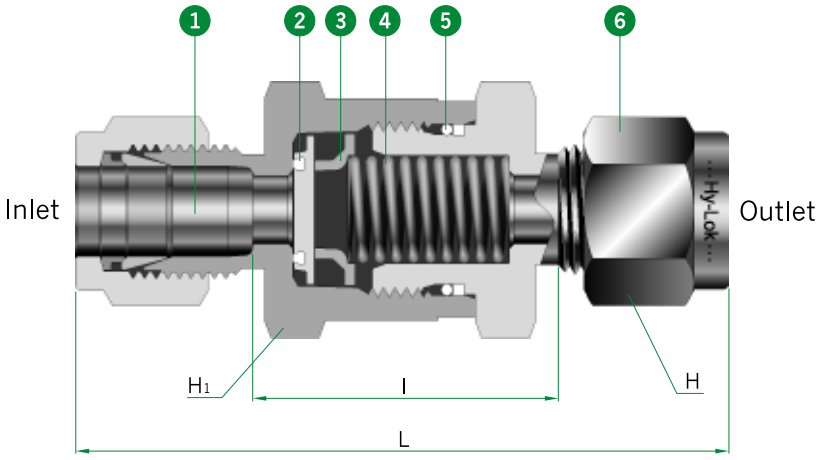


1 **Orifice**
- is max. flow design for min. pressure drop. include flow dia from 4.8mm to 15.0mm

2 **Poppet**
- provides leak tight shut-off with elastomer seal

3 **Poppet Stopper**
- provides minimizes spring stress.

4 **Springs**
- are available for the cracking pressure in the range from 1/3psig to 25psig

5 **O-ring and Back Up Rings**
- are halves for ensures closure to the rated pressure

6 **Variety of End Connection**
- include Hy-Lok tube fittings, male and female NPT, ISO tapered threads, ZCO ends and Matal Gasket Seal ends.

Technical Data

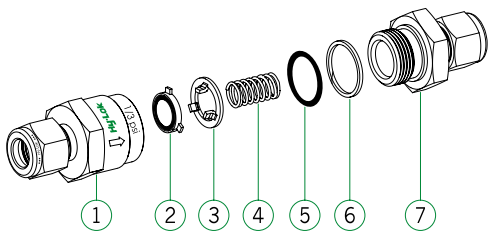
Series	CVH1	CVH2	CVH3
Max. Working Pressure	6000 psig (413bar)		5000 psig (344bar)
Operating Temperature Range	FKM : -10°F to 375°F (-23°C to 191°C) NBR : -10°F to 250°F (-23°C to 121°C)		
Nominal Cracking Pressure	1/3, 1, 5, 10, 25 psig		

Table of Dimensions

Basic Part No.		Flow Dia.	Cv	End Connection		Pressure Rating psig (bar)			Dimensions			
				Inlet	Outlet	SS316	Carbon Steel	Alloy 400	L	I	H (Nut Hex)	H_1 (Body Hex)
CVH1	- H - 2T	4.8	0.67	1/8" Hy-Lok		6000 (413)	-	5000 (345)	57.7	32.1	11.1	17.5
	- H - 4T			1/4" Hy-Lok					61.7	31.2	14.2	
	- H - 6M			6mm Male NPT						31.1	14.0	
	- F - 4N			1/4" Female NPT					54.1	-	-	
	- M - 2N			1/8" Male NPT					45.5			
	- M - 4N			1/4" Male NPT					55.1			
	- ZCR - 4			1/4" Metal Gasket Seal				-	57.9			
	- ZCO - 4			1/4" O-Ring Face Seal					50.3			
CVH2	- H - 6T	7.8	1.80	3/8" Hy-Lok		6000 (413)		5000 (345)	69.9	36.1	17.5	25.4
	- H - 8T			1/2" Hy-Lok					75.2	29.5	22.2	
	- H - 8M			8mm Hy-Lok					68.6	36.2	16.0	
	- H - 10M			10mm Hy-Lok					71.1	36.7	19.0	
	- H - 12M			12mm Hy-Lok					75.2	29.6	22.0	
	- F - 6N			3/8" Female NPT		5000 (345)	5300 (365)	5000 (345)	64.8	-	-	
	- F - 8N			1/2" Female NPT		4600 (316)	4900 (337)	4600 (316)	77.0			26.9
	- M - 6N			3/8" Male NPT		6000 (413)		5000 (345)	59.9			25.4
	- M - 8N			1/2" Male NPT					69.3			
	- ZCR - 8			1/2" Metal Gasket Seal		3500 (241)	-	-	69.3			
	- ZCO - 8			1/2" O-Ring Face Seal		6000 (413)	-	-	59.7			
CVH3	- H - 12T	15.0	4.70	3/4" Hy-Lok		5000 (345)		4700 (323)	89.4	40.6	28.6	41.3
	- H - 16T			1" Hy-Lok					98.6	36.1	38.1	
	- H - 22M			22mm Hy-Lok					88.4	36.4	32.0	
	- H - 25M			25mm Hy-Lok					98.6	36.0	40.0	
	- F - 12N			3/4" Female NPT		4300 (296)			82.0	-	-	
	- F - 16N			1" Female NPT		4100 (282)			97.3			
	- M - 12N			3/4" Male NPT		5000 (345)		4700 (323)	83.6			
	- M - 16N			1" Male NPT					93.2			
	- ZCR - 12			3/4" Metal Gasket Seal		3000 (206)	-	-	96.0			
	- ZCO - 12			3/4" O-Ring Face Seal		5000 (345)	-	-	73.7			
	- ZCO - 16			1" O-Ring Face Seal								

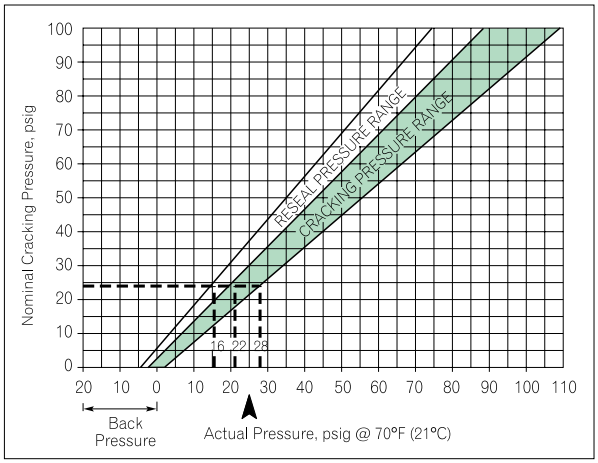
All dimensions in milimeters, reference only subject to change. Dimensions shown with Hy-Lok nuts in finger-tight position, where applicalble.
(-)blank is not applicable

Materials of Construction



No.	Component	Valve Body Materials
		Material Grade / ASTM Specification
1	Inlet Body	TP316 / A479 or A276
2	Poppet①	FKM - bonded TP316 / A479
3	Poppet Stopper	TP316 / A479 or A276
4	Spring	TP302 / A313
5	O-Ring①	FKM
6	Back Up Ring	PTFE
7	Outlet Body②	TP316 / A479 or A276

① Fluorocarbon-Based.
② Molybdenum dry film lubricaut on thread.



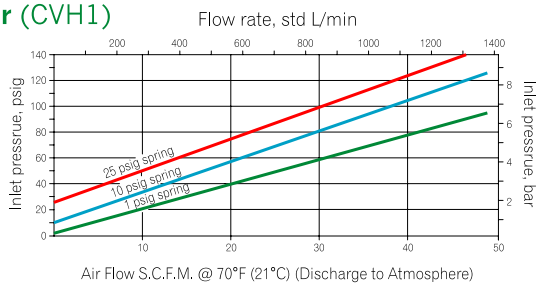
Cracking and Reseal Pressure

- From the graph, the actual cracking pressure of nominal 25psi is shown to range between 22psi to 28psi, and the reseal pressure 16psi to 22psi.

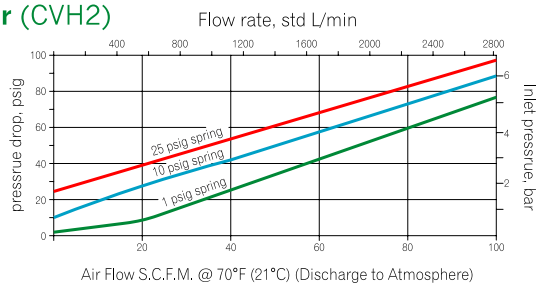
Back pressure may be required to reseal the valves with nominal cracking pressure of 5psi or lower.
1.Cracking pressure : The upstream pressure at which the first indication of flow occurs.
2.Reseal pressure : The upstream pressure at which there is no indication of flow.

Flow Rate at 70°F (20°C)

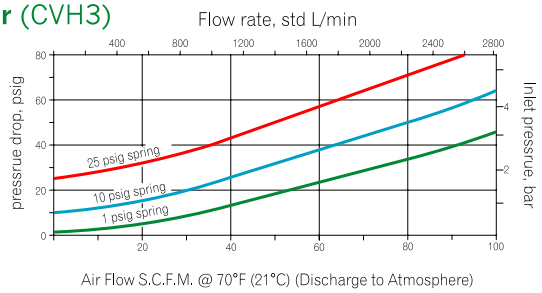
Air (CVH1)



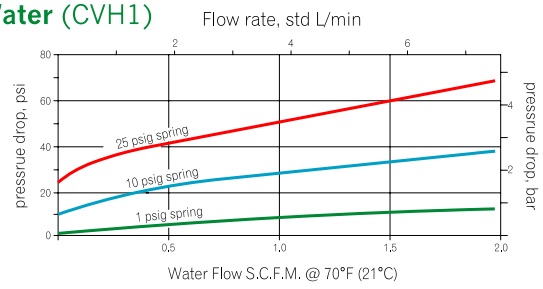
Air (CVH2)



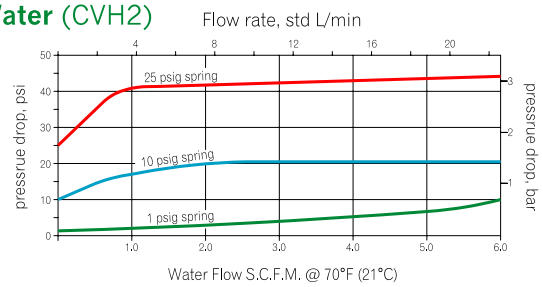
Air (CVH3)



Water (CVH1)



Water (CVH2)



Water (CVH3)