



Catalog No. H-CW100
May 2023

All Welded Check Valves

CVW Series



Design & Engineering

All Welded design provides excellent sealing of fluid
Compact Design
Maximum working pressure is up to 3000 psig (206bar)
Temperature rating is up to 400°F (204°C)
ZCR, tube butt weld, and Hy-Lok tube fitting
100% helium leak tested

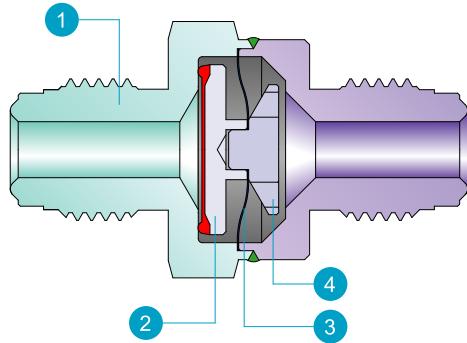
Application

Semiconductor
Biotech
Pharmaceutical
Ultra-Pure, Flammable,
or toxic Fluid line

HY-LOK CORPORATION

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Cleaning & Testing

Passivation is done at Nitrogen environment. Fine cleaning is one by Ultrasonic cleansing with resistivity over $18M\Omega$ D.I water after finishing the passivation. Inboard helium leak tested to a rate of $4 \times 10^{-9} \text{ cm}^3/\text{s}$.

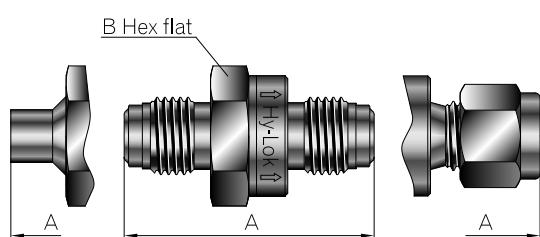
Assembly & Packaging

Assembly and Packaging is performed in the clean room of Class 10. Valves are packed with anti-static polyethylene bag that is pressured into the high purity nitrogen gas.

Dimensions

All Dimensions are in millimeters, except for the O.D size.

In case of the end connection for Hy-Lok tube fitting, dimensions shown with Hy-Lok nuts in finger-tight position, where applicable.



Material

No.	Description	Material / ASTM Specification
1	Body	Single Vacuum Melt 316L / A479
2	Poppet	Type 316 / A479
3	Spring	Elgiloy / AMS5876
4	Stopper	Type 316 / A479

Specification

Cracking Pressure	Max. Pressure Drop	Pressure - Temperature Ratings	
		Temperature °F (°C)	Working Pressure psig (bar)
Less than 2 psig	145 psig	-10(-23) to 100(37)	3000(206)
		200(93)	2530(174)
		300(148)	2270(156)
		400(204)	2065(142)

Internal Surface Grade

Grade	Designator	Roughness Average Ra. (E.P)	Packing Standard Class 10
B.A.	B	0.25 μm (10 μin)	Double
High	H	0.13 μm (5 μin)	

• Grade "B.A." is standard.

End Connection	Ordering No.	Size	Cv	A	B
Male ZCR Fitting	CVWVM-4	1/4"	0.7	45.7	22.2 (7/8")
	CVWVM-8	1/2"		52.3	
Hy-Lok Tube Fitting	CVWH-4	1/4"	0.55	49.8	22.2 (7/8")
	CVWH-6M	6mm			
Female ZCR Fitting	CVWVF-4	1/4"	0.7	62.0	25.4 (1")
	CVWVF-8	1/2"		63.0	
Tube Butt Weld	CVWBW-4	1/4"	0.55	31.5	22.2 (7/8")
	CVWBW-6	3/8"			
	CVWBW-8	1/2"	0.7		
	CVWBW-6M	6mm			

Ordering Informations

CVW

Series Designator

- CVW - All Welded Check Valve

BW

End Connection Designator

- VM - Male ZCR Fitting
- BW - Tube Butt Weld
- H - Hy-Lok Tube Fitting
- VF - Female ZCR Fitting

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Size Designator

- 4 - 1/4"
- 6 - 3/8"
- 8 - 1/2"

BU

Seal Material Designator

- Nil - FKM (Standard)
- BU - Buna-N
- EP - Ethylene Propylene

H

Surface Grade Designator

- Nil- Grade "B.A"
- H - Grade "High"

SM6L

Body Material Designator

- SM6L - Single Vacuum Melt 316L ASTM A479

SAFETY in VALVE SELECTION

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