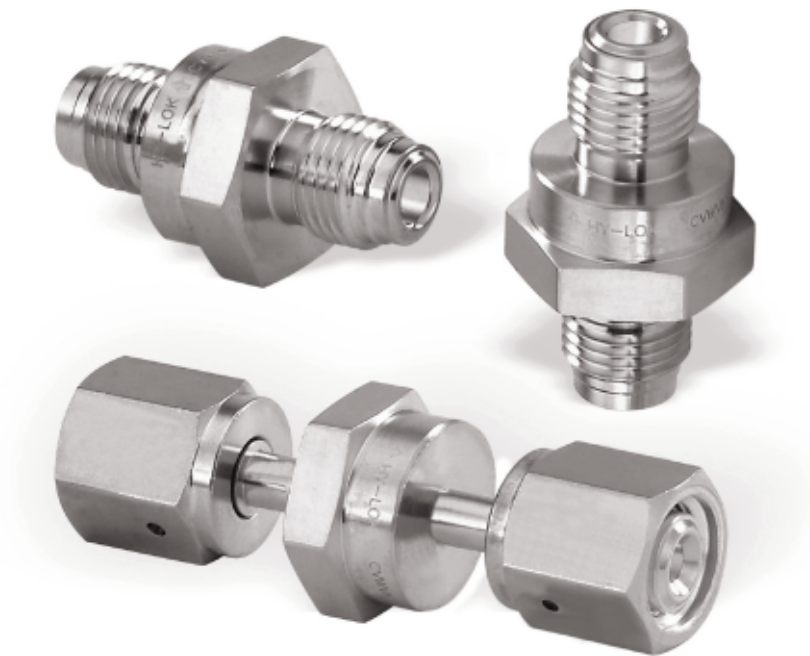




Catalog No. H-CW100
May 2023

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

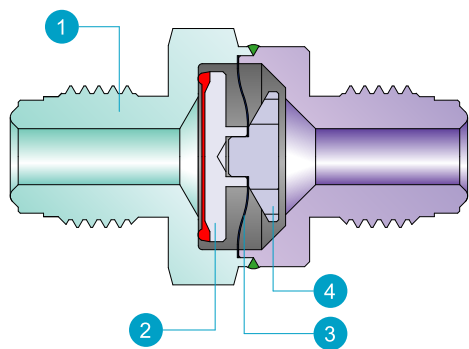
Application

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 Ω . D.I water after finishing the passivation. Inboard helium leak tested to a rate of 4×10^{-9} cm³ /s.

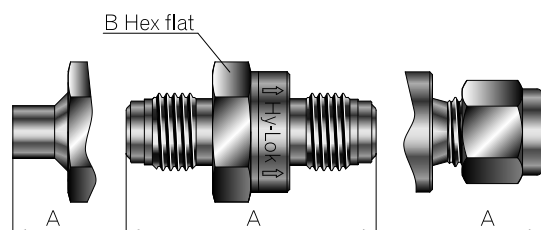
Assembly & Packaging

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 μ m (10 μ in) | Double |
| High | H | 0.13 μ m (5 μ in) | |

• 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 | |
| | 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.