

F9 Series

UHP Check Valve
Stainless Steel, Welded



Value Proposition:

Veriflo Division presents the F9 Series Check Valve, a high purity, all welded check valve, featuring a patented asymmetric spring design for a consistently quiet operation.

The F9 Series Check Valve offers high Cv (up to Cv = 0.90) in a small footprint to conserve much needed panel space.

Two seal materials achieve compatibility with all semiconductor gases, reducing inventory requirements.



Contact Information:

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Product Features:

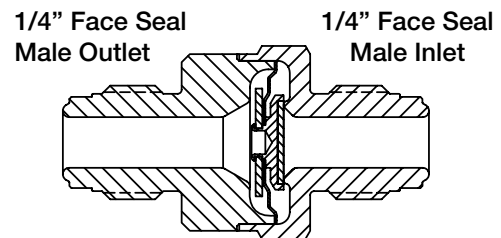
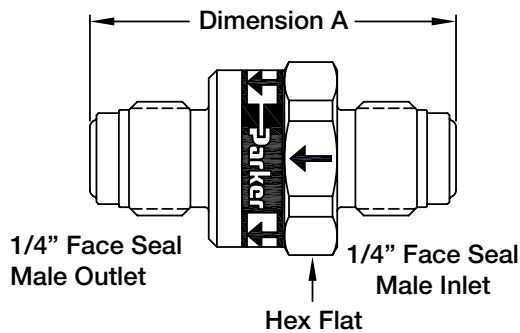
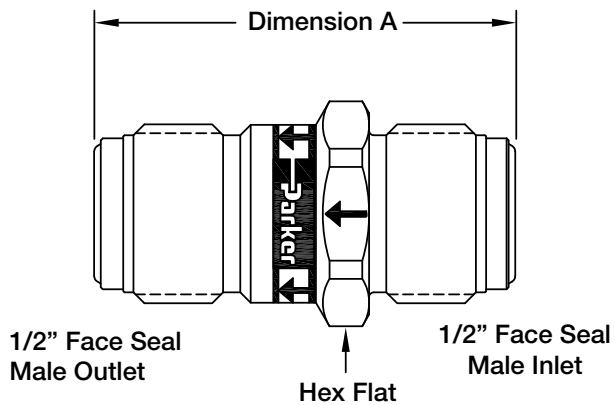
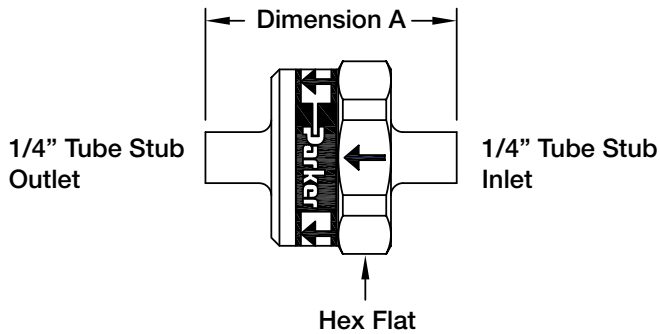
- Noise Free Operation with the patented asymmetric spring design
- Reduced footprint with the welded design
- Two seal offerings to meet all SEMI gas compatibility requirements
- Class 100 clean room assembled and packaged
- Electropolished (EP) version for Ultra High Purity applications available
- VeriClean™ 316L Stainless Steel enhances electropolishing and corrosion resistance



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F9 Series

Dimensional Drawing



| DIMENSION TABLE | | | |
|------------------------|------|-------------|------|
| Connection Type | Size | A in. (mm) | Hex |
| Male Face Seal Fitting | 1/4" | 1.80 (45.7) | 7/8" |
| | 1/2" | 2.06 (52.3) | 1.0" |
| Tube Stub | 1/4" | 1.24 (31.5) | 7/8" |
| | 3/8" | 1.24 (31.5) | 7/8" |
| | 1/2" | 1.24 (31.5) | 7/8" |





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Ordering Information


Build an F9 Series Check Valve by replacing the numbered symbols with an option from the corresponding tables below.


Contact factory for most up to date lead time information.


Blue = Configurations that have selections in blue will require a price quote and lead time from the factory.

Sample: **F9**  **M8**  **V**  **-EP**  **A**
Finished Order: **F9M8V-EPA**

 **Inlet/Outlet Port Type**
M4 = 1/4" Face Seal Male
M8 = 1/2" Face Seal Male
T4 = 1/4" Tube Stub
T6 = 3/8" Tube Stub

 **Seal Material**
V = Fluorocarbon Elastomer (FKM) See operating conditions for pressure rating
KR = Perfluoroelastomer (FFKM) Rated at 1,000 psig max. pressure

 **Internal Surface Finish**
-EP = Electropolish 7 R_a Blue label
Omit = Passivate 10 R_a Gold label
Additional configurations available upon request

 **Pressure Rating**
A = ASME B16.34 Shell Pressure Test Rated
Omit = Standard Pressure Rating

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Specifications

| Materials of Construction | | |
|------------------------------|---|---------------------------|
| Wetted | | |
| Body | VeriClean™ 316L Stainless Steel | |
| Spring | Elgiloy® or equivalent | |
| Seal Options | Fluorocarbon Elastomer (FKM) or Perfluoroelastomer (FFKM) | |
| | <i>The user is solely responsible for selecting and insuring that the product and materials of constructions are compatible with the process fluid.</i> | |
| | <i>Contact factory for seat material and bonding agent MSDS.</i> | |
| Poppet | 316L Stainless Steel | |
| Stop | 316L Stainless Steel | |
| Operating Conditions | | |
| Based Upon Seal Options: | Fluorocarbon Elastomer (FKM) | Perfluoroelastomer (FFKM) |
| Cracking | ≤ 2 psig (0.13 barg) | ≤ 2 psig (0.13 barg) |
| Reset | ≤ 2 psig (0.13 barg) | ≤ 2 psig (0.13 barg) |
| Temperature | -10°F to 150°F (-23°C to 66°C) | |
| Standard Pressure Rating * | | |
| Maximum Pressure | 3,000 psig (206 barg) | 1,000 psig (68 barg) |
| Maximum Back Pressure | 3,000 psig (206 barg) | 1,000 psig (68 barg) |
| Option "A" Pressure Rating * | | |
| Maximum Pressure | 2,000 psig (138 barg) | 1,000 psig (68 barg) |
| Maximum Back Pressure | 2,000 psig (138 barg) | 1,000 psig (68 barg) |

| Functional Performance | |
|------------------------|--|
| Flow Capacity | <i>Flow curves available. Please consult factory.</i> |
| 1/4" Tube Stub | C _V 0.45 (X _T 0.89) |
| 1/4" & 1/2" Face Seal | C _V 0.90 (X _T 0.78) |
| 3/8" & 1/2" Tube Stub | C _V 0.90 (X _T 0.78) |
| Leak Rate | |
| Internal | Bubble Tight |
| External | < 1 x 10 ⁻⁹ scc/sec He Inboard Test Method |
| Surface Finish | |
| Omit | 10 Ra Passivate (std) (<i>gold label</i>) |
| EP | 7 Ra Electropolished (<i>blue label</i>) |
| Internal Volume | |
| 1/4" Face Seal Male | 0.14 cubic inch (2.29 cc) |
| Approx. Weight | |
| 1/4" Face Seal Male | 0.15 lbs. (2.4 oz) |
| 1/4" Tube Stub | 0.07 lbs. (1.2 oz) |

Elgiloy® is a registered trademark of Elgiloy Company
VeriClean™ is a trademark of Parker Hannifin Corporation

For additional information on materials of construction, functional performance and operating conditions, please contact factory.

* F9 check valves are pressure tested to the maximum standard pressure rating. Customers requiring compliance to ASME B16.34 shell pressure test should order option "A". Option "A" valves are shell pressure tested to 1.5X the pressure rating shown.

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