

# 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:

Parker Hannifin Corporation  
**Veriflo Division**  
250 Canal Blvd  
Richmond, California 94804

**phone 510 235 9590**  
**fax 510 232 7396**  
**veriflo.sales@parker.com**

[www.parker.com/veriflo](http://www.parker.com/veriflo)  
Mobile App: [m.parker.com/veriflo](http://m.parker.com/veriflo)

## Product Features:

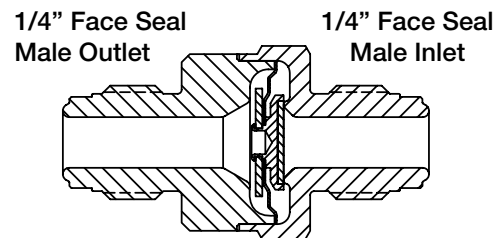
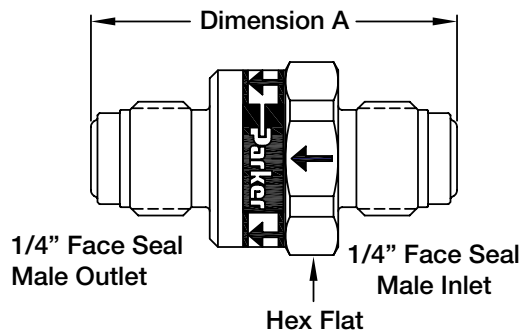
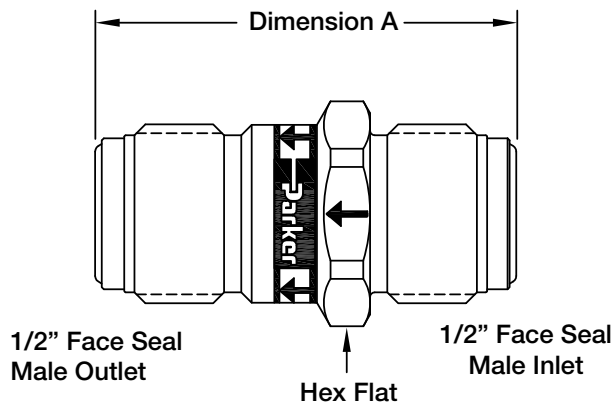
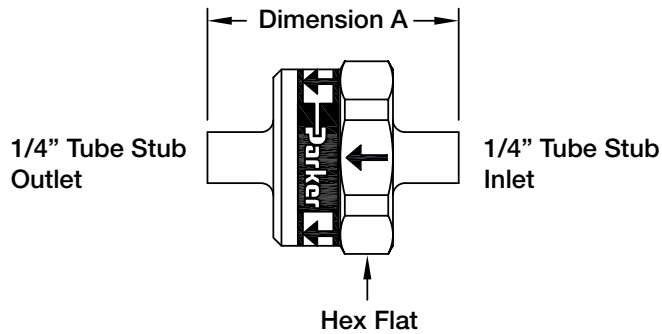
- Noise Free Operation with the patented asymmetric spring design
- Reduced footprint with the welded design
- Two seal offerings to meet all SEMI gas compatibility requirements
- Class 100 clean room assembled and packaged
- Electropolished (EP) version for Ultra High Purity applications available
-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



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## 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. If choosing the same Inlet and Outlet Port Type and Size, only call out the designation one time as per example below.

**Color Explanations:** Black = Standard Lead Time Configurations  
Blue = Extended Lead Time Configurations

For an explanation of Ordering options please reference literature 25000275 at [www.parker.com/veriflo](http://www.parker.com/veriflo)

Samples: **F9**      **M**      **4**      **M**      **8**      **V**      **-EP**  
                 **F9**      **T**      **6**      **M**      **8**      **KR**

Finished Orders: **F9M4V-EP**  
                         **F9T6M8KR**

**1 Inlet Port Type**  
M = Face Seal Male  
T = Tube Stub

**3 Outlet Port Type**  
M = Face Seal Male  
T = Tube Stub

**5 Seal Material**  
V = Fluorocarbon Elastomer (FKM) *Rated at 3,000 psig max. pressure*  
KR = Perfluoroelastomer (FFKM) *Rated at 1,000 psig max. pressure*

**2 Inlet Port Size**  
4 = 1/4"  
6 = 3/8" *Not available with Face Seal Male*  
8 = 1/2"

**4 Outlet Port Size**  
4 = 1/4"  
6 = 3/8" *Not available with Face Seal Male*  
8 = 1/2"

**6 Internal Surface Finish**  
-EP = Electropolish 7 R<sub>a</sub> *Blue label*  
Omit = Passivate 10 R<sub>a</sub> *Gold label*

Additional configurations available upon request

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## Specifications

Materials of Construction		
<b>Wetted</b>		
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		
<i>Based Upon Seal Options:</i>	Fluorocarbon Elastomer (FKM)	Perfluoroelastomer (FFKM)
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)
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)	

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

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