

# 18R Series

UHP Stainless Steel Diaphragm Valve  
High Pressure, High Flow

aerospace  
climate control  
electromechanical  
filtration  
fluid & gas handling  
hydraulics  
pneumatics  
process control  
sealing & shielding

## Value Proposition:

The 18R Series valve provides high flow and positive shut off for high purity fluid systems.

This 1/2" and 3/8" spring type diaphragm valve offers superior leak integrity for manually and pneumatically actuated versions with pressure ranges from vacuum up to 1500 psig.



## 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  
Mobile App: m.parker.com/veriflo

## Product Features:

- Standard surface finish of 10 micro inch Ra
- Serialized and heat code traceable
- Fully functional from vacuum to 1500 psig. (Pneumatic version to 1200 psig)
- 100% Helium leak tested
- Multi-diaphragm for superior cycle life
- Vericlean™, Veriflo's low sulfur high purity 316L Stainless Steel enhances electropolishing, welding, and corrosion resistance

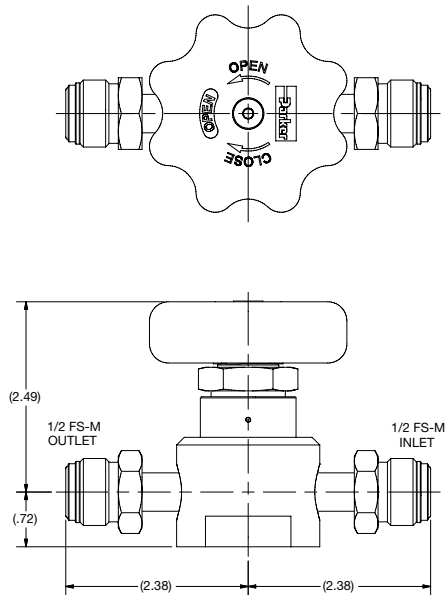


ENGINEERING YOUR SUCCESS.

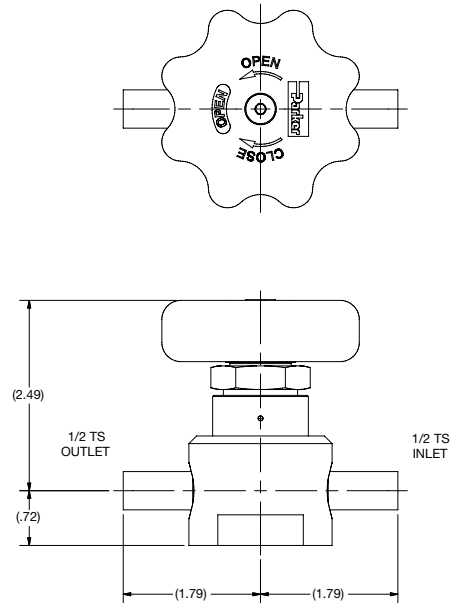
# 18R Series

## Dimensional Drawings

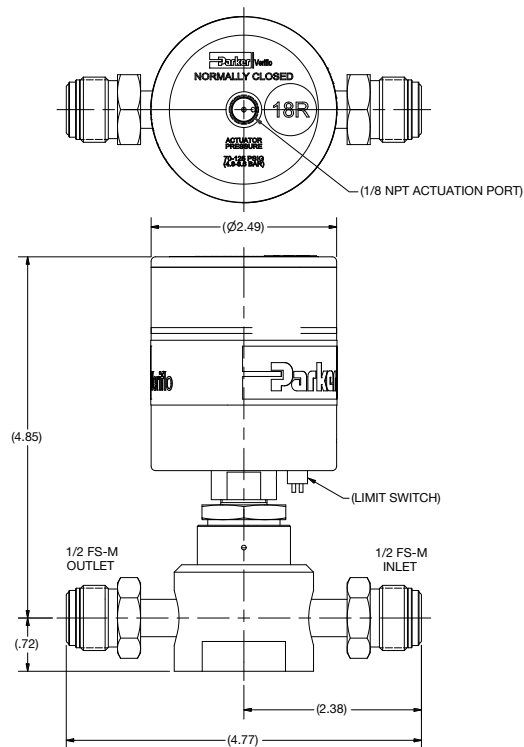
**18RI SERIES VACUSEAL™**



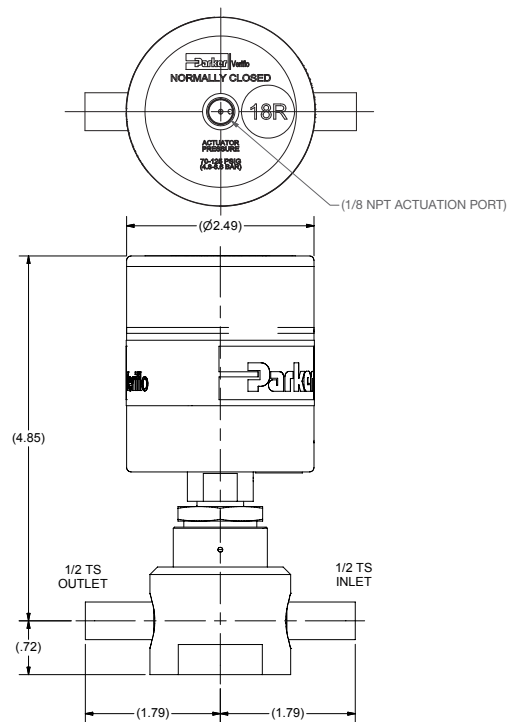
**18RI SERIES TUBE STUB**



**18R AOPNC SERIES VACUSEAL™**



**18R AOPNC SERIES TUBE STUB**



# 18R Series

## Ordering Information

Build an 18R Series valve by replacing the numbered symbols with an option from the corresponding tables 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)


Sample:  **18R**  **AOPNC**  **S**  **FS8MM** 


Finished Order: **18RAOPNC SFS8MM**

 **Basic Series**  
18R = 18R

 **Type**  
AOPNC = Air Operated,  
Normally Closed *Air*  
*Connection is 1/8" NPT*  
I = Indicating Hand  
wheel

 **Body Material**  
S = 316L Stainless Steel

 **Inlet/Outlet Connection**  
FS8MM = 1/2" Face Seal  
FS8FF = 1/2" Face Seal  
**TS6** = **3/8" Tube Stub**  
*End-to-End length: 2.74"*  
TS8 = 1/2" Tube Stub  
FS12MM = 3/4" Face Seal  
*End-to-End length: 5.79"*  
FS12FF = 3/4" Face Seal  
*End-to-End length: 5.79"*

 **Optional Features**  
This section can have multiple options  
**LSC** = **Limit Switch Closed** *Available*  
*with AOPNC option only*  
**LSO** = **Limit Switch Open** *Available*  
*with AOPNC option only*  
**PI** = **Polyimide Seat**  
**3.25** = **1/2" Fixed Male Face**  
**Seal** *Inlet/Outlet*

Additional configurations available upon request

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## Specifications

Materials of Construction	
<b>Wetted</b>	
Body	VeriClean™ 316L Stainless Steel (Electropolished)
Diaphragm	Elgiloy® or equivalent
Seat Options	PCTFE (std) or Polyimide
Lower Stem	VeriClean™ 316L Stainless Steel (Passivated)
Spring	316 Stainless Steel (Electropolished)
<b>Non-wetted</b>	
<b>Pneumatic</b>	
Actuator Housing	Aluminum
Piston	303 Stainless Steel
Bonnet	17-4 Stainless Steel
Support Diaphragm	Sliver plated Beryllium Copper/ Elgiloy® or equivalent
<b>Manual</b>	
Hand Wheel	Aluminum
Bonnet	17-4 Stainless Steel
Upper Stem	Aluminum Silicon Bronze
Screw	18-8 Stainless Steel
Support Diaphragm	Sliver plated Beryllium Copper/ Elgiloy® or equivalent
Sleeve	Nylon
<b>Limit Switch (Optional)</b>	
Type	Single Pole, Single Throw (SPST) momentary action, non-adjustable
	26 AWG wire, 7", w/o connector
Rating	
AOPNCLSC	1/4 amp at 115 vac (normally closed)
AOPNCLSO	1/2 amp at 115 vac (normally open)

Functional Performance	
<b>Flow Capacity</b>	
Manual	C <sub>v</sub> 1.3
Pneumatic	C <sub>v</sub> 1.0
<b>Leak Rate</b>	
Design Internal	< 4 X 10 <sup>-9</sup> scc/sec He Inboard Test Method
Design External	< 1 X 10 <sup>-9</sup> scc/sec He Inboard Test Method
Production Leak Test	Outboard sniffer probe at 1000-1500 psig, 20-25% Helium
<b>Surface Finish</b>	10 micro inch Ra
<b>Internal Volume</b>	11.77 cc
<b>Approx. Weight</b>	
Manual	1.85 lbs. (0.84 kgs)
Pneumatic	3.35 lbs. (1.52 kgs)
<b>Operating Conditions</b>	
<b>Operating Pressure</b>	
Manual	Vacuum to 1500 psig (103.4 barg)
Pneumatic	Vacuum to 1200 psig (82.7 barg) at 70°F
Actuator	70 psig (4.8 barg) minimum to 125 psig (8.6 barg) maximum
Max Differential Back Pressure	200 psid (13.8 barg)
<b>Temperature</b>	
Manual	-40°F to 150°F (-40°C to 65°C)
Pneumatic	+15°F to 150°F (-9°C to 65°C)

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

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