

945 Series

UHP Stainless Steel Diaphragm Valve
High Pressure, Welded

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

Value Proposition:

Parker Hannifin Corporation's Veriflo Division presents the 945 Valve. This was designed specifically for semiconductor process control and has all of the features and benefits of the 944 Series with reduced internal volume and body size.

A unique feature of the 945 is the machined on tube stubs, which allows for improved dimensional control.



Contact Information:

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Product Features:

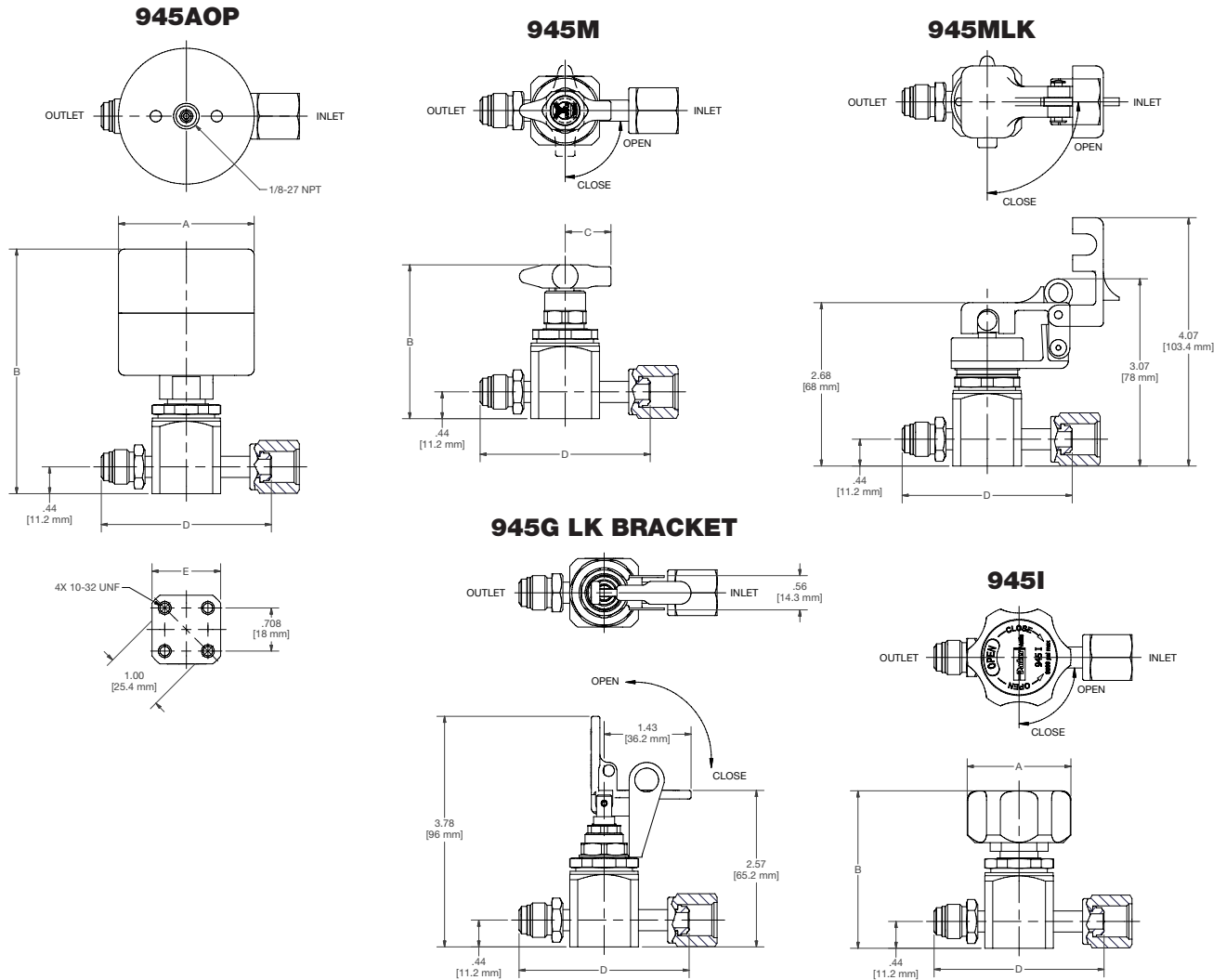
- Standard surface finish of 5 micro inch Ra
- Internally threadless and springless
- Unique compression member which loads the seal uniformly without the need for threaded components or crimping operations
- Standard full internal electropolish
- 100% Helium leak tested
- Fully functional from vacuum to 3500 psig
- Minimal particle generation and particle entrapment areas
- Vericlean™, Veriflo's low sulfur high purity 316L Stainless Steel enhances electropolishing, welding, and corrosion resistance



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Dimensional Drawings



Actuator Style	Actuator Diameter (A)	Height (B)	Lever Radius (C)
AOPHPNC	2.22	4.01	-
G	-	*	-
I	1.70	2.58	-
L	-	2.56	1.75
M	-	2.56	.75
S	2.00	2.83	-

* See dimensional drawing.

Port Style	End-To-End Length (D)	Square Body Size (E)
FS	2.78	1.125
FS8	4.14	1.250
TS	1.75	1.125
TS6	2.24	1.125
TS8	2.24	1.250

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Ordering Information

Build a 945 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

Sample: **9 45 L S FS FM VESP**
Finished Order: **945LSFSFMVESP**

1 Basic Series
45 = 945

2 Type
AOPHPNC = Air Operated, High Pressure, Normally Closed
G = Toggle
I = Indicating Handwheel
L = Lever
M = Mini-Lever
S = Handwheel

3 Body Material
S = 316L Stainless Steel

4 Port Style
FS = 1/4" Face Seal
FS8 = 1/2" Face Seal
TS = 1/4" Tube Stub *Standard only when configured as TSTS*
TS6 = 3/8" Tube Stub
TS8 = 1/2" Tube Stub
Note: 1/2" Connections: Use larger size body, please see dimensional drawings.
Note: For Multiport: See 25000178 Valve Selection Guide. All Multiport configurations are Special Order.

5 Port Configuration
M = Male Face Seal
F = Female Face Seal

6 Optional Features
This section can have multiple options
BL008 = Bleed Valve .008 Orifice
BL015 = Bleed Valve .015 Orifice
BK = Black Lever
BU = Blue Indicating Lever
LK = LockOut-TagOut *LK includes LockOut-TagOut bracket for G-Type Valve; LOTO Clamp for M-type Valve*
PM = Panel Mount *Not available on I and AOP versions*
TH = Hastelloy C-22® Trim
VESP = Vespel® Seat *Recommended for Nitrous Oxide (N2O) Service*
PEEK = PEEK™ Seat
2.3 = 1/4" Fixed Male Face Seal (2 Port Only)

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Specifications

Materials of Construction	
Wetted	
Body	VeriClean™ 316L Stainless Steel
Compression Member Options	316L Stainless Steel (std) or Hastelloy C-22®
Diaphragm	Elgiloy® or equivalent
Seat Options	PCTFE (std), PEEK™ or Vespel®
Non-wetted	
Cap	17-4 Stainless Steel
Nut	316L Stainless Steel
Actuator Housing	Anodized Aluminum
Operating Conditions	
<i>(Operating limits based upon pressure applied at inlet port.)</i>	
Maximum Pressure	
AOPHP, I, L, M, S	3,500 psig (241 barg)
G	125 psig (8.6 barg)
Minimum Pressure	Vacuum
Temperature	-40°F to 150°F (-40°C to 66°C)
AOP Actuation Pressure	75 psig (5 barg) nominal
AOP Air Inlet	1/8-27 NPT

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

Functional Performance	
Design	
Proof Pressure	
AOPHP, I, L, M, S	5,250 psig (362 barg)
G	188 psig (13 barg)
Burst Pressure	
AOPHP, I, L, M, S	10,500 psig (724 barg)
G	375 psig (26 barg)
Flow Capacity	
AOP, G, S, I	C _v 0.25
Lever	C _v 0.18
Leak Rate	
Internal	≤ 1 X 10 ⁻⁹ scc/sec He
External	≤ 2 X 10 ⁻¹⁰ scc/sec He
Surface Finish	5 micro inch Ra
Internal Volume	1.26 cc
Approx. Weight	0.9 lbs. (0.42 kg)

Vespel® is a registered trademark of DuPont Performance Elastomers L.L.C.
 Elgiloy® is a registered trademark of Elgiloy Company
 Hastelloy C-22® is a registered trademark of Haynes International, Inc.
 VeriClean™ is a trademark of Parker Hannifin Corporation
 PEEK™ is a trademark of Victrex plc.

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