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:

Parker Hannifin Corporation
Veriflo Division
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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 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 electroplish
- 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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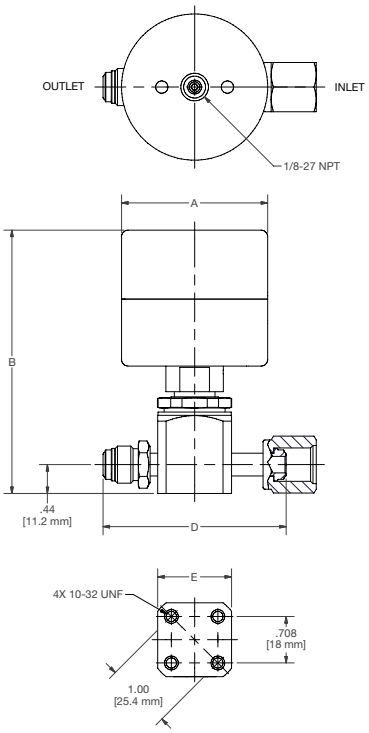
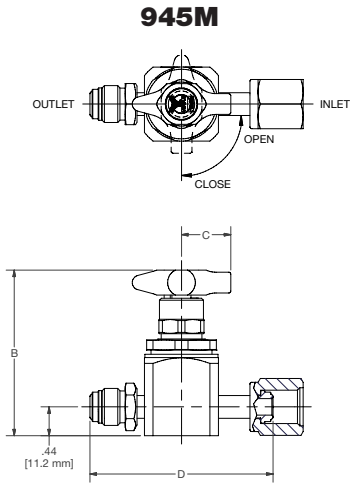
Dimensional Drawings

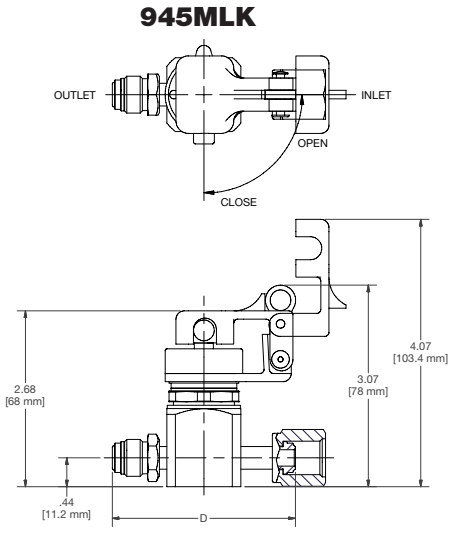
945AOP



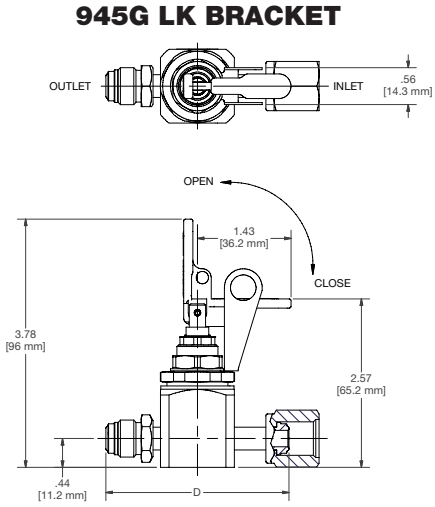
945M



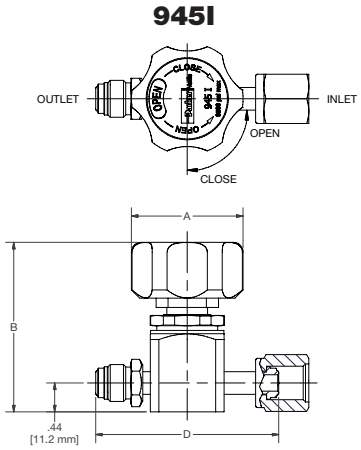
945MLK



945G LK BRACKET



945I



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	-

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

***** See dimensional drawing.

Safety Guide and Installation and Operating Instructions available at
www.parker.com/veriflo

945 Series

Ordering Information

Build a 945 Series 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 from the factory.

	1	2	3	4	5	6
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 *Standard only when configured as FSFS*
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)

945 Series

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 *(Operating limits based upon pressure applied at inlet port.)*	
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	Inboard Test Method
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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