

Diaphragm Valves

Selection Guide for Multi-Port, Angle and Elbow Diaphragm Valves (Special Order)

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

Safe Valve Selection

When selecting a valve, the total system design must be considered to ensure safe, trouble-free performance. Valve function, material compatibility, adequate ratings, proper installation, operation, and maintenance are the responsibility of the system designer and end-user.

Selection Guide

Customize a valve to meet your system requirements. Your choice of Valve Actuation, End Connections and Flow Path are described in this section. The model designation options start with selection of the actuator in Figure 1.

Note: All Multiport items are Special Order.



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

Valve Actuation - Figure 1

Actuator Style	Pressure Range Vacuum to...	Description of Actuator	Actuator Designator
Manual 930, 955, 945, 830, 855, 845	125 psig (8.6 barg) 250 psig (17 barg) 300 psig (20.7 barg) 3000 psig (207 barg) ¹ 3500 psig (240 barg) ¹	Round Handwheel 1/4 Turn Lever Indicating Handwheel Mini 1/4 Turn Lever Toggle	S L I M G
Pneumatic (low pressure) 930, 830, 855, 955	125 psig (8.6 barg) 250 psig (17 barg)	Normally Closed ² Normally Open ²	AOPLP1NC ³ AOPLPNC AOPLP1NO ³ AOPLPNO
Pneumatic (medium pressure) 930, 830	300 psig (20.7 barg)	Normally Closed ²	AOPMPNC
Pneumatic (high pressure) 945, 845	3500 psig (240 barg) ¹	Normally Closed ²	AOPHPNC

1. For oxygen: 2200 psig (150 bar) 2. Actuation pressure - 75 psig nominal (60-120 psig) 3. "1" Designates Integral Cartridge Fitting for 1/8" O.D. Plastic Tube.

Note: Use 930 or 945 to replace 944 valves.



ENGINEERING YOUR SUCCESS.

Diaphragm Valve Selection Guide

Flow Path

Select a body configuration with the desired internal flow path in Figure 2. The flow path is shown as viewed from the top of the body.

Although high purity valves will operate in either flow direction, the “O” port is generally used as the outlet or downstream port and the “I” port is normally used as the inlet or upstream port. The Flow Path Designator letter will be used in the Valve Ordering Information.

Flow Path Designator – Figure 2

A (3 Port)	B (3 Port)	C (3 Port)	D (4 Port)	E (4 Port)	F (3 Port)	G (3 Port)

H (2 Port Elbow)	I (2 Port Elbow)	J (2 Port Angle)	K (4 Port Angle)	L (4 Port)	M (3 Port)

Port numbering / End Connections

Starting with Port 1 and continuing in numerical sequence with Ports 2, 3, 4, and 5 as shown in Figure 3, select a designator for each port that will be used, i.e. two designators for a two port body, three designators for a three port body, and so on, even if the connections are identical. Select the desired End Connection using the End Connection Style Chart (Figure 4) for each port on the body.

Figure 3

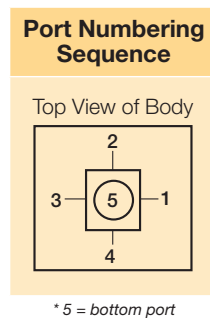


Figure 4

End Connection Size/Style	Designator
1/4" Tube Stub (.250 x .035)	1
1/4" Face Seal Male Swivel	2
1/4" Face Seal Female Swivel	3
3/8" Tube Stub (.375 x .035)	4
1/2" Face Seal Male Swivel	5
1/2" Face Seal Female Swivel	6
1/2" Tube Stub (.500 x .049)	7

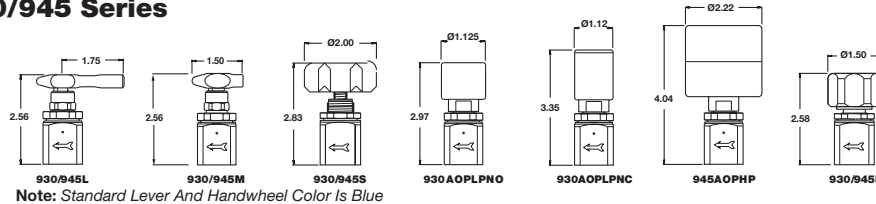
Diaphragm Valve Selection Guide

930/945 Dimensions

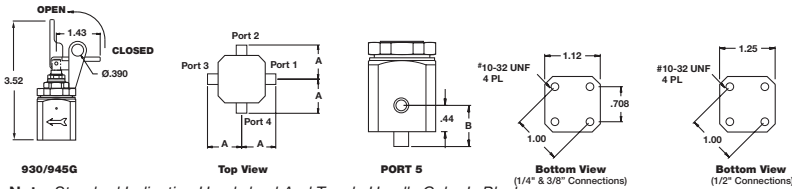
Overall height and actuator dimensions are shown in Figure 7. Centerline to port dimensions are shown in Figure 8. Port to port dimensions are determined by adding the “A” dimensions together.

Note: All dimensions are in inches. For reference only.

Figure 7 - 930/945 Series



Note: Standard Lever And Handwheel Color Is Blue



Note: Standard Indicating Handwheel And Toggle Handle Color Is Black

Figure 8

Standard Dimensions (inches)				Dimension Tolerance +/- 0.03			
End Connection	A	B	Designator		A	B	Designator
1/4" Tube Stub (.250 x .035)	0.875	0.69	1	3/8" Tube Stub (.375 x .035)	1.12	0.94	4
1/4" Face Seal Male Swivel (.347 O.D. Gland)	1.39	1.26	2	1/2" Face Seal Male Swivel ¹	2.07	1.89	5
1/4" Face Seal Female Swivel (.347 O.D. Gland)	1.39	1.26	3	1/2" Face Seal Female Swivel ¹	2.07	1.89	6
				1/2" Tube Stub (.500 x .049) ¹	1.12	0.94	7

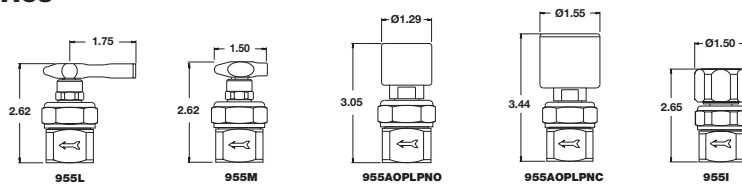
1. 1/2" connections use 1.25" square body

955 Dimensions

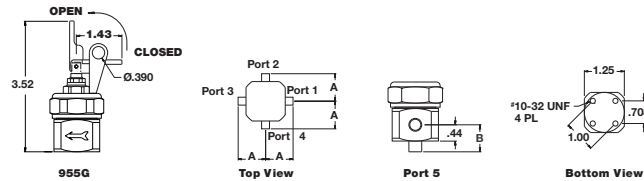
Overall height and actuator dimensions are shown in Figure 9. Centerline to port dimensions are shown in Figure 10. Port to port dimensions are determined by adding the “A” dimensions together.

Note: All dimensions are in inches. For reference only.

Figure 9 - 955 Series



Note: Standard Lever And Handwheel Color Is Blue



Note: Standard Indicating Handwheel And Toggle Handle Color Is Black

Figure 10

Standard Dimensions (inches)				Dimension Tolerance +/- 0.03			
End Connection	A	B	Designator		A	B	Designator
1/4" Tube Stub (.250 x .035)	1.12	0.94	1	3/8" Tube Stub (.375 x .035)	1.12	0.94	4
1/4" Face Seal Male Swivel (.347 O.D. Gland)	1.48	1.26	2	1/2" Face Seal Male Swivel	2.10	1.89	5
1/4" Face Seal Female Swivel (.347 O.D. Gland)	1.48	1.26	3	1/2" Face Seal Female Swivel	2.10	1.89	6
				1/2" Tube Stub (.500 x .049)	1.12	0.94	7

Diaphragm Valve Selection Guide

Example of Multiport Valve Configuration, Special Order

Build a valve by replacing the numbered symbols with an option from the corresponding tables below.

Sample: **9** **1** **2** **3** **4** **5** **6**
 55 **L** **S** **C** **323** **VESP**
Finished Order: **955LSC323VESP**

1 **Basic Series**
55 = 955

2 **Type**
AOPLPNC = Air Operated, Low Pressure, Normally Closed Air Connection is 1/8" NPT

AOPLPNO = Air Operated, Low Pressure, Normally Open Air Connection is 1/8" NPT

G = Toggle
I = Indicating Handwheel
L = Lever
M = Mini-Lever

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

4 ***Flow Path**
A, B, C, D, E, F, G, H, I, J, K, L, M
Refer to Figure 2

5 **End Connections**
Port 1
Port 2 *Refer to Figures 3 and 4*
Port 3
Port 4
Port 5

6 **Optional Features**
This section can have multiple options

BL008 = Bleed Valve .008 Orifice
BL015 = Bleed Valve .015 Orifice
LK = LockOut-TagOut LK includes LockOut-TagOut bracket for G-Type Valve; LOTO Clamp for M type Valve

PM = Panel Mount Not available with Indicating Handwheel (I)

PEEK = PEEK™ Seat
VESP = Vespel® Seat Recommended for Nitrous Oxide (N2O) Service

2.3 = 2.3" End-To-End 1/4" FS Only
2.78 = 2.78" End-To-End 1/4" FS Only

Vespel® is a registered trademark of DuPont Performance Elastomers L.L.C.
PEEK™ is a trademark of Victrex plc.