

# Diaphragm Valves

## Replaceable-Seat Diaphragm Valves DQX Series

### Introduction

Replaceable-Seat Diaphragm Valves are suitable for applications requiring frequent valve maintenance and seat replacement, such as precursor containers and canisters. Their easy operation, long cycle life, and excellent sealing performance help to reduce costs for customers.

### Features

- ⦿ Easily replaceable valve seat, without need for special tools
- ⦿ Valve seat assembly with perfectly symmetrical structure to eliminate need to distinguish the orientation of seats
- ⦿ Corresponding service kits available



### Technical Data

Port Size	1/4"	
Flow Coefficient (Cv)	0.3	
Orifice Size	0.16 in. (4.1 mm)	
Working Pressure	Vacuum to 250 psig (17.2 bar)	
Pneumatic Actuator Working Pressure	60 ~ 90 psig (4.2 ~ 6.2 bar)	
Working Temperature	PCTFE: -10 ~ 176 °F (-23 ~ 80 °C) PFA: -10 ~ 302 °F (-23 ~ 150 °C)	
Leak Rate (Helium)	Internal	≤ 1x10 <sup>-9</sup> std cm <sup>3</sup> /s
	External	≤ 1x10 <sup>-9</sup> std cm <sup>3</sup> /s

### Flow Data

Air @ 70 °F (21 °C)

Water @ 60 °F (16 °C)

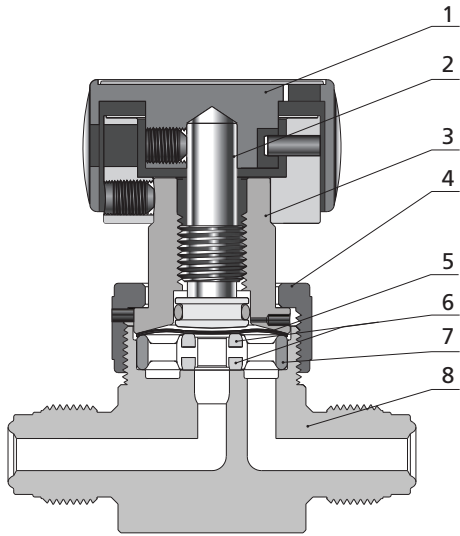
Pressure Drop to Atmosphere psig (bar)	Air (l/min)	Water (l/min)
10 (0.68)	96	3.6
50 (3.4)	250	7.9
100 (6.8)	450	11.0

### Process Specification

Material	316L SS		316L VAR
Process	Standard Cleaning and Packaging (FC-01) Special Cleaning and Packaging (FC-02)		Ultra High Purity (FC-03)
Process Specification	Standard Cleaning and Packaging (FC-01) Special Cleaning and Packaging (FC-02)	Ultra High Purity (FC-03)	Ultra High Purity (FC-03)
Wetted Surface Roughness	Ra 5 μin. (0.13 μm)		
Polishing Process	Electropolishing		

Note: Refer to Page P-01 for a detailed description of Process Specification.

## Major Materials of Construction

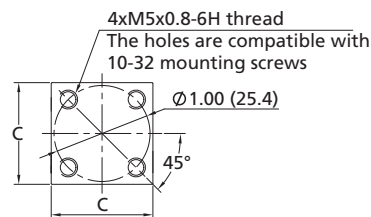
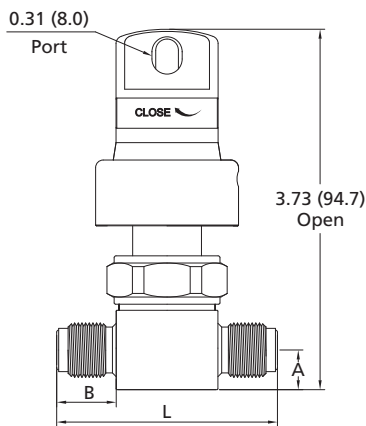
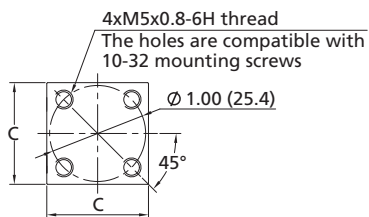
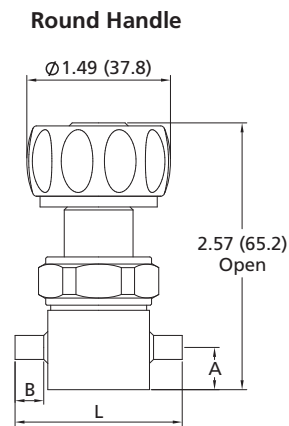


Item	Component		Material/Specification
1	Handle	Round Handle	Aluminum
		Integral Lockout Handle	Aluminum
2	Stem		316 SS/ASTM A479
3	Bonnet		S17400/ASTM A564
4	Bonnet Nut		316 SS/ASTM A479
5	Diaphragm (2)		Cobalt Alloy/AMS 5876
6	Seat		PCTFE/ASTM D1430 or PFA/ASTM D3307
7	Seat Retainer		316L SS or 316L VAR
8	Body		316L SS or 316L VAR

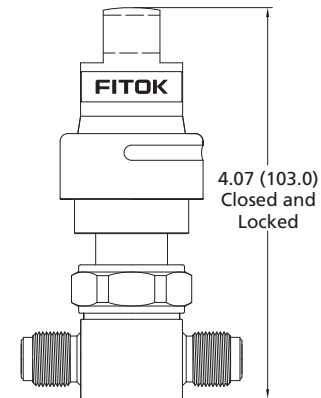
## Dimensions and Ordering Information

### Dimensions

Dimensions, in inches (millimeters), are for reference only.



### Integral Lockout Handle



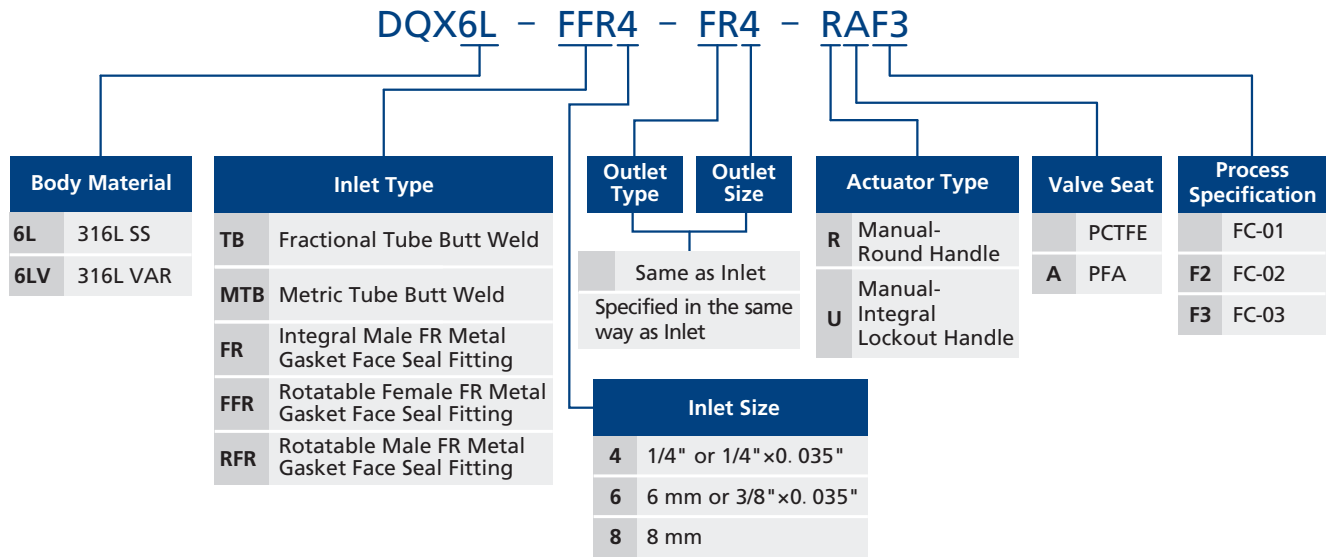
Basic Ordering Number	Connection Type and Size	Dimension, in. (mm)			
		A	B	C	L
DQX□□-TB4-	1/4"×0.035" Tube Butt Weld	0.44 (11.2)	0.30 (7.6)	1.06 (26.9)	1.74 (44.2)
DQX□□-TB6-	3/8"×0.035" Tube Butt Weld	0.44 (11.2)	0.26 (6.6)	1.06 (26.9)	1.74 (44.2)
DQX□□-FFR4-	1/4" Rotatable Female FR Metal Gasket Face Seal Fitting	0.44 (11.2)	0.86 (21.8)	1.06 (26.9)	2.78 (70.6)
DQX□□-RFR4-	1/4" Rotatable Male FR Metal Gasket Face Seal Fitting	0.44 (11.2)	0.86 (21.8)	1.06 (26.9)	2.78 (70.6)
DQX□□-FR4-	1/4" Integral Male FR Metal Gasket Face Seal Fitting	0.44 (11.2)	0.62 (15.7)	1.06 (26.9)	2.30 (58.4)

## Service Kit Ordering Information

Basic Ordering Information	Description	Remarks
<input type="checkbox"/> <input type="checkbox"/> DQX-KIT	Includes 1 piece of seat assembly (seat material: PCTFE), 2 pieces of cobalt alloy diaphragms, and maintenance instructions	Applies to replaceable-seat diaphragm valves
<input type="checkbox"/> <input type="checkbox"/> DQX-A-KIT	Includes 1 piece of seat assembly (seat material: PFA), 2 pieces of cobalt alloy diaphragms, and maintenance instructions	



### Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combinations are available. Should you have any questions, please contact FITOK Group or our authorized distributors.