

# **V103 Series Toggle Valves**

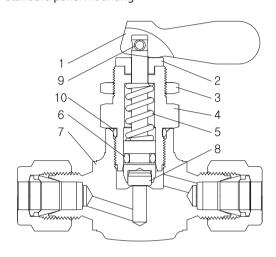
No.V103-4 December 2013

Pressure Rating up to 300 psig (20.6 bar)

# Toggle Valves for Quick Shut-Off

#### **Features**

- Quick open and close
- Soft seat for repetitive shut-off
- Sturdy Aluminum handle
- Standard panel mounting



#### **Materials of Construction**

	Valve Body Material					
Component	SS316	Brass				
	Grade/ASTM Specification					
1. Handle	Aluminium Black Anodized					
2. Washer	Aluminium Black Anodized					
3. Panel Nut	SS316/A276	Brass 360/B16				
4. Packing nut	33310/A270	DIdSS 300/ D 10				
5. Spring	Stainless Steel 302					
6. Stem O-ring	FKM					
7. Body	SS316/A182	Brass 337/B283				
8. Stem tip	PTFE/D1710					
9. Handle Pin	Stainless Steel					
10. Body O-Ring	FKM (V103C only)					

Wetted component listed in blue and silicon based lubricdant.

## **Operation**

- To open the valve, lift the handle.
- Spring forces the valve to close.
- Soft seat provides leak-tight sealing under positive pressure and vacuum conditions.
- Stem O-ring seal eliminates packing adjustment.

#### Design

- Valves are designed for use in gas sampling, analysis systems and test equipment.
- In-line and angle flow pattern.
- O-ring seal below stem spring protects the spring from contamination.

### **Technical Data**

#### **Pressure and Temperature Ratings**

Valve Series	Ori	fice	Pressure Rating @ 100 °F (37 °C)	Temperature Rating		
valve series	inch mm		for SS316, Brass body	remperature nating		
V103A	0.080	2.00	300 maio	FKM O-ring		
V103B	0.125	3.20	300 psig	-20 to 200 °F		
V103C	0.250	6.40	200 psig	(-28 to 93 °C)		

#### **Optional O-Ring Material**

FKM O-rings are standard and other materials are Buna C, EPDM and Kalrez.

#### **Low Temperature Service**

O-ring	Temperature Range, °F(°C)
Buna C	-65 to 200 (-53 to 93)

#### **Factory test**

Every valve is factory tested at 200psig (13 bar) with nitrogen gas at the seat and seal.











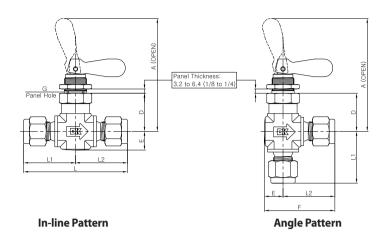














# **Ordering Information and Dimensions**

Basic Ordering Number		End Connection		Orifice		Cv	Dimensions mm (in.)							
		Inlet	Outlet	in.	mm	CV	L	L1	L2	D	E	F	G	Α
V103A-	M-2N-	1/8 in.	Male NPT				38.1 (1.5)	19.05 (0.75)	19.05 (0.75)		Ì	27.0 (1.06)		
	D-2T-	1/8 in.	1/8 in. DK-Lok		2	0.11	49.8 (1.96)	24.9 (0.98)	24.0 (0.00)	23.4	10.6		13.5	72.9
	D-3M-	3 mm DK-Lok		0.08			49.8 (1.90)	24.9 (0.98)	24.9 (0.98)	(0.92)	(0.42)	32.8 (1.29)	(0.53)	(2.87)
	MD-2N2T-	1/8 in. Male NPT	1/8 in. DK-Lok	1			43.9 (1.73)	19.05 (0.75)	24.9 (0.98)					
V103B	F-2N-	1/8 in.	Female NPT				41.4 (1.63)	20.6 (0.81)	20.6 (0.81)	21.8		30.2 (1.19)		
	M-2N-	1/8 in.	Male NPT	0.135			43.7 (1.72)	21.8 (0.86)	21.8 (0.86)			31.2 (1.23)		
	M-4N-	1/4 in.	Male NPT				49.8 (1.96)	24.9 (0.98)	24.9 (0.98)			34.5 (1.36)		
	D-4T-	1/4 in.	DK-Lok		3.2	0.2	57.4 (2.26)	28.7 (1.13)	28.7 (1.13)		9.5	38.1 (1.5)	13.5	71.4
	D-6M-	6 mm DK-Lok		0.125	3.2	0.2	57.4 (2.26)	28.7 (1.13)	28.7 (1.13)	(0.86)	(0.38)	38.1 (1.5)	(0.53)	(2.81)
	D-8M-	8 mm DK-Lok					56.4 (2.22)	28.2 (1.11)	28.2 (1.11)			37.6 (1.48)		
	MF-2N-	1/8 in. Male NPT	1/8 in. Female NPT				41.4 (1.63)	20.6 (0.81)	20.6 (0.81)			30.2 (1.19)		
	MD-4N4T-	1/4 in. Male NPT	1/4 in. DK-Lok				53.6 (2.11)	24.9 (0.98)	28.7 (1.13)			38.1 (1.5)		
	F-4N-	1/4 in.	Female NPT		6.4		53.8 (2.12)	26.9 (1.06)	26.9 (1.06)	26.9	12.7	39.6 (1.56)		
V103C-	M-6N-	3/8 in.	Male NPT				57.2 (2.25)	28.4 (1.12)	28.4 (1.12)			41.1 (1.62)		
	D-6T-	3/8 in.	DK-Lok	0.25		0.7	65.5 (2.58)	32.8 (1.29)	32.8 (1.29)			45.5 (1.79)	16.8	90.4
	D-8T-	1/2 in.	DK-Lok			0.7	71.1 (2.8)	35.6 (1.4)	35.6 (1.4)	(1.06)	(0.5)	48.3 (1.9)	(0.66)	(3.56)
	D-10M-	10 mm	DK-Lok				69.1 (2.72)	34.5 (1.36)	34.5 (1.36)			47.2 (1.86)		
	D-12M-	12 mm	DK-Lok				74.2 (2.92)	37.1 (1.46)	37.1 (1.46)			49.8 (1.96)		

All dimensions shown are for reference only and subject to change. Dimensions with Dk-Lok nuts are in finger-tight position.

#### **How to Order**

Select basic ordering number, applicable valve pattern, O-ring and body material designators listed below.

V103B-D-4T -A	-BC	-S			
<b>↓</b>	<b>↓</b>	<b>↓</b>			
Valve Pattern	O-ring Designator	Body Material			
<ul> <li>Nil: Inline pattern</li> <li>A: Angle pattern</li> </ul>	• Nil : FKM • KZ : Kalrez • BC : Buna-C • EP : EPDM	• S : SS316 • B : Brass			

We reserve the right to change specifications stated in this catalog for our continuing program of improvement.

#### **Safe Valve Selection**

The selection of a valve for any application or system design must be considered to ensure safe performance. Valve function, valve rating, material compatibility, proper installation, operation and maintenance remain the sole responsibility of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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