V103 Series Toggle Valves

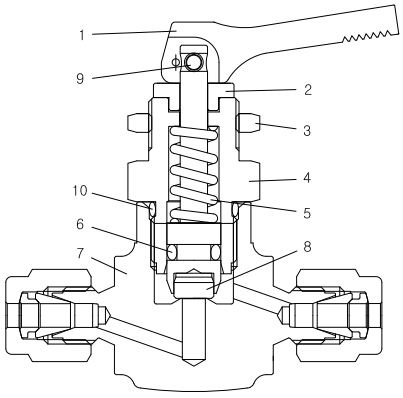
No.V103-4
March 2015

Pressure Rating up to 300 psig (20.6 bar)

Design & Features

- Valves are designed for use in gas sampling, analysis systems and tset equipment.
- In-line and angle flow pattern.
- O-ring seal below stem spring protects the spring from contamination.
- Quick open and close.
- Soft seat for repetitive shut-off
- Standard panel mounting.

Materials of Construction



Component	Valve Body Material	
	SS316	Brass
	Grade/ASTM Specification	
1. Handle	Nylon	
2. Washer	Nylon	
3. Panel Nut	SS316/A276	Brass B16
4. Packing nut		
5. Spring	Stainless Steel 302	
6. Stem O-ring	FKM	NBR
7. Body	SS316/A182	Brass B283
8. Stem tip	PTFE/D1710	
9. Handle Pin	Stainless Steel	
10. Body O-Ring	FKM	NBR

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.

Technical Data

Pressure and Temperature Ratings

Valve Series	Orifice		Pressure Rating @ 100 °F (38 °C) for SS316, Brass body	Temperature Rating
	inch	mm		
V103A	0.080	2.00	300 psig	FKM O-ring -20 to 200 °F (-28 to 93 °C)
V103B	0.125	3.20		
V103C	0.250	6.40	200 psig	

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.

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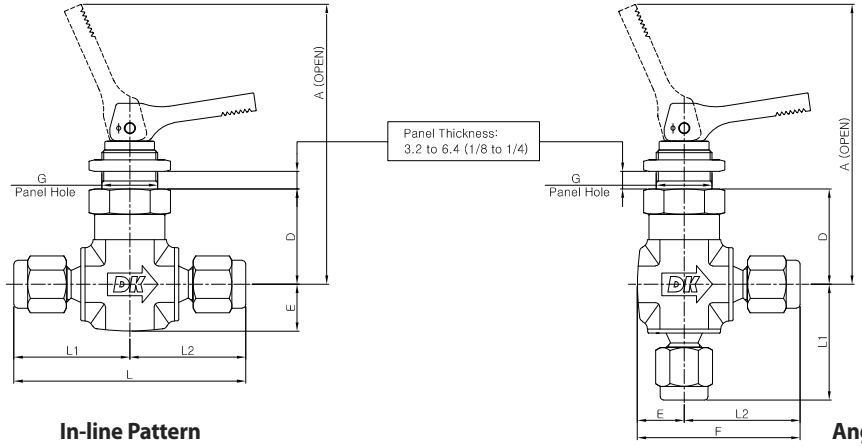

In-line Pattern **Angle Pattern**

Ordering Information and Dimensions

Basic Ordering Number		End Connection Inlet	End Connection Outlet	Orifice in.	Orifice mm	Cv	Dimensions mm (in.) L	L1	L2	D	E	F	G	A
V103A-	M-2N-	1/8 in. Male NPT		0.08	2	0.11	38.1 (1.5)	19.05 (0.75)	19.05 (0.75)	23.4 (0.92)	10.6 (0.42)	27.0 (1.06)	13.5 (0.53)	72.9 (2.87)
	D-2T-	1/8 in. DK-Lok					49.8 (1.96)	24.9 (0.98)	24.9 (0.98)			32.8 (1.29)		
	D-3M-	3 mm DK-Lok												
	MD-2N2T-	1/8 in. Male NPT	1/8 in. DK-Lok				43.9 (1.73)	19.05 (0.75)	24.9 (0.98)					
V103B	F-2N-	1/8 in. Female NPT		0.125	3.2	0.2	41.4 (1.63)	20.6 (0.81)	20.6 (0.81)	21.8 (0.86)	9.5 (0.38)	30.2 (1.19)	13.5 (0.53)	71.4 (2.81)
	M-2N-	1/8 in. Male NPT					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					57.4 (2.26)	28.7 (1.13)	28.7 (1.13)			38.1 (1.5)		
	D-6M-	6 mm DK-Lok					57.4 (2.26)	28.7 (1.13)	28.7 (1.13)			38.1 (1.5)		
	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)		
V103C-	F-4N-	1/4 in. Female NPT		0.25	6.4	0.7	53.8 (2.12)	26.9 (1.06)	26.9 (1.06)	26.9 (1.06)	12.7 (0.5)	39.6 (1.56)	16.8 (0.66)	90.4 (3.56)
	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					65.5 (2.58)	32.8 (1.29)	32.8 (1.29)			45.5 (1.79)		
	D-8T-	1/2 in. DK-Lok					71.1 (2.8)	35.6 (1.4)	35.6 (1.4)			48.3 (1.9)		
	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**

Valve Pattern	O-ring Designator	Body Material
• Nil: Inline pattern • A : Angle pattern	• Nil : FKM • KZ : Kalrez • BC : Buna-C • EP : EPDM	• S : SS316 • B : Brass

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 responsibillty of the system designer and the user. DK-Lok accepts no liability for any improper selection, installation, operation or maintenance.

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