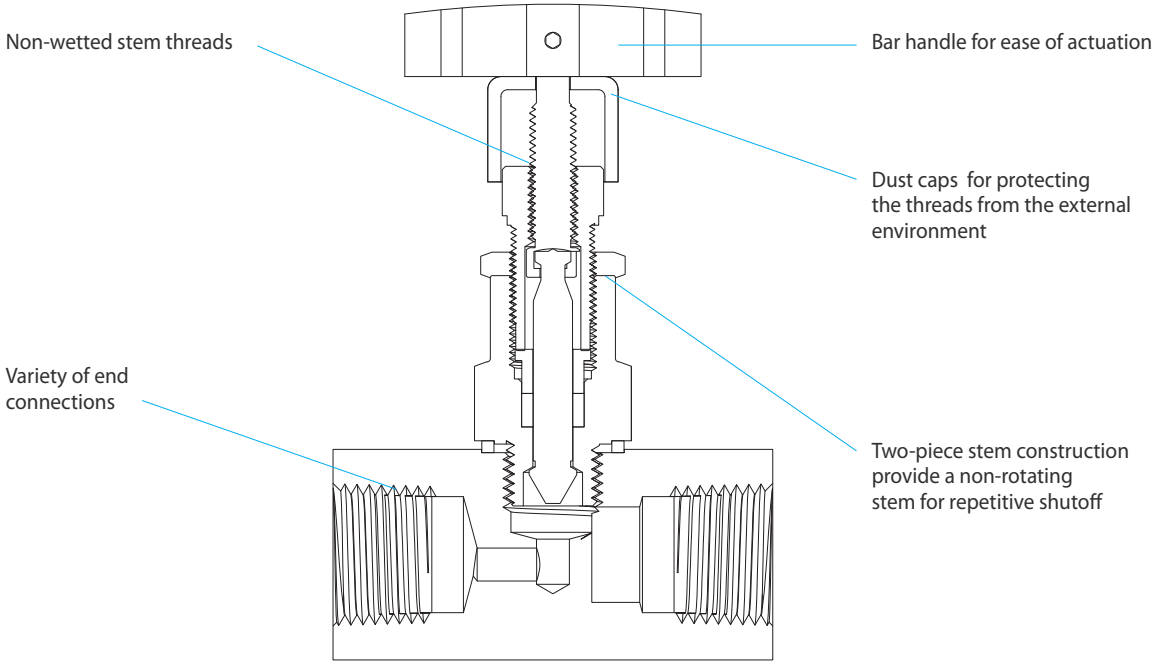
VG16 Series General Utility Service Needle Valves

No.VG16-0
March 2015

Pressure up to 6,000 psig (413 bar)

Features

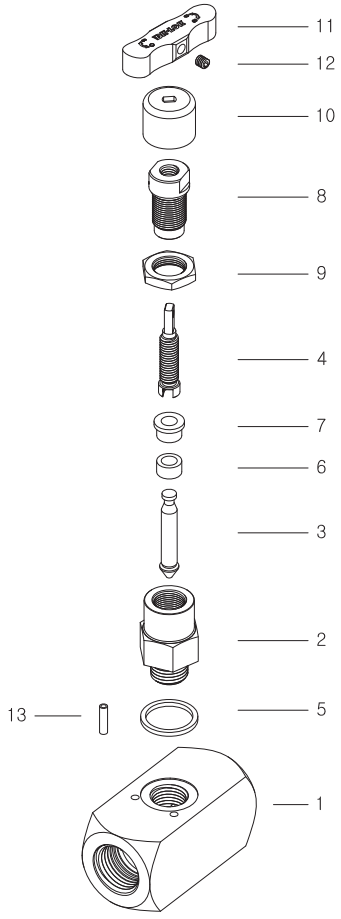
- Compact and sturdy design.
- Sintered molded handle for the user of the handle operational convenience.
- Stainless steel spring pin in order to prevent the loosening of bonnet.
- The fluid is not in contact with the threaded stem.
- VG16 series Isolates and vents the system media in instrument air, nitrogen header, lube oil, and general utility service applications in the oil and gas, chemical, petrochemical, and other general industrial markets.



Design

- Straight and angle patterns.
- Standard PTFE packing, and optional Graphite packing for higher temperature service.
- Broad choices of end connections include reliable NPT & ISO Male & Female pipe threads.

Material of Construction



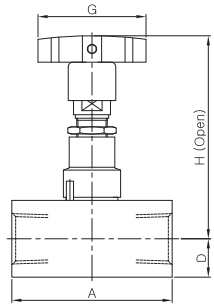
Component	Valve Body Materials	
	Stainless Steel	Carbon Steel
	Material Grade/ASTM Specification	
1. Body	SS316 / A276	Zinc plated carbon steel/AISI 1018
2. Bonnet	SS316 / A276	
3. Stem	SS316 / A276	
4. Stem disc	S17400 SS / A564 Condition H1150D	
5. Bonnet seal ring	SS316 / A276	
6. Packing	Carbon/glass-filled PTFE or graphite	
7. Gland	SS316 / A276	
8. Packing Bolt	SS316 / A276	
9. Lock nut	SS316 / A276	
10. Cap	SS316 / A276	
11. Handle	Stainless steel	
12. Set screw	Stainless steel	
13. Spring pin	Stainless steel	

Wetted parts are listed in blue.

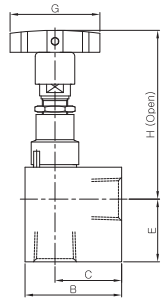
Pressure-Temperature Ratings

Temperature, °F(°C)	Packing Material	
	PTFE	Graphite
	Working Pressure, psig(bar)	
-20 (-28) to 0 (-17)	-	6000 (413)
0 (-17) to 100 (37)	6000 (413)	6000 (413)
200 (93)	5160 (355)	5160 (355)
300 (148)	4680 (322)	4680 (322)
400 (204)	4260 (293)	4260 (293)
450 (232)	4110 (283)	4110 (283)
500 (260)	-	3960 (272)
600 (315)	-	3780 (260)
650 (343)	-	3660 (252)

Ordering Information and Table of Dimensions



In-line pattern

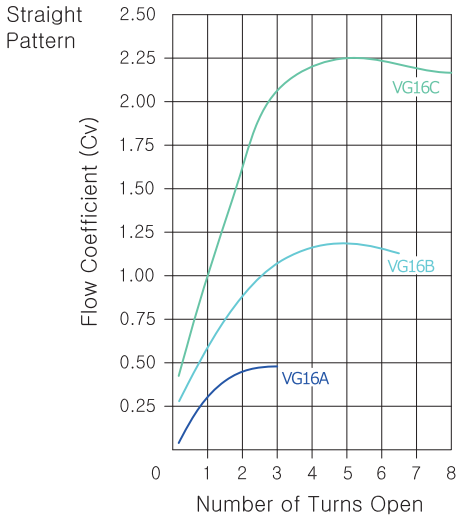


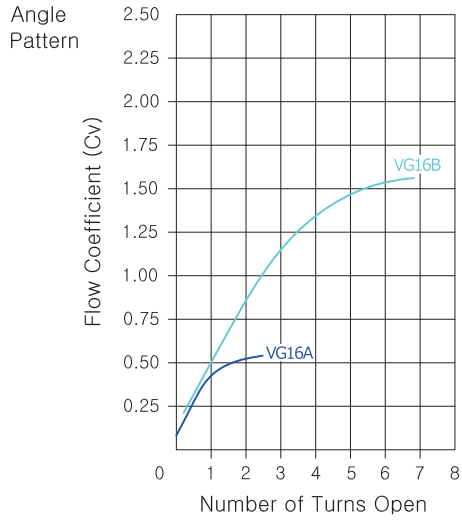
Angle pattern

Valve Basic Ordering Number		End Connections Inlet	End Connections Outlet	Orifice mm(in.)	Cv	DIMENSION, mm(in.) G	D	H	A	E	B	C
VG16A	F-4N	1/4″ Female NPT		5.0(0.20)	0.45	45(1.77)	12.7(0.50)	81.2(3.20)	54.1(2.13)	-	-	-
	F-4N-A	1/4″ Female NPT			0.55		-		-	21.6(0.85)	38.1(1.50)	25.4(1.00)
	F-6N	3/8″ Female NPT			0.45		12.7(0.50)		57.2(2.25)	-	-	-
	F-6N-A	3/8″ Female NPT			0.55		-		-	27.9(1.10)	44.5(1.75)	31.8(1.25)
	F-8N	1/2″ Female NPT			0.45		16.0(0.63)	84.6(3.33)	66.8(2.63)	-	-	-
	F-8N-A	1/2″ Female NPT			0.55		-		-	31.2(1.23)	51.0(2.00)	33.3(1.31)
	MF-4N	1/4″ Male NPT	1/4″ Female NPT		0.45		12.7(0.50)	81.2(3.20)	60.5(2.38)	-		
	MF-6N	3/8″ Male NPT	3/8″ Female NPT									
	MF-8N	1/2″ Male NPT	1/2″ Female NPT				16.0(0.63)	84.6(3.33)	70.0(2.76)			
	SW-4P	1/4″ Pipe Socket weld					12.7(0.50)	81.2(3.20)	57.2(2.25)			
	SW-6P	3/8″ Pipe Socket weld					16.0(0.63)	84.6(3.33)				
	SW-8P	1/2″ Pipe Socket weld					19.1(0.75)	87.6(3.45)	63.5(2.50)			
	SW-4T	1/4″Tube Socket weld					12.7(0.50)	81.2(3.20)	50.8(2.00)			
	SW-6T	3/8″Tube Socket weld										
	SW-8T	1/2″Tube Socket weld							57.2(2.25)			
	SW-6M	6mm Tube Socket weld							60.5(2.38)			
	SW-8M	8mm Tube Socket weld							51.0(2.00)			
	SW-10M	10mm Tube Socket weld										
	SW-12M	12mm Tube Socket weld							57.2(2.25)			
VG16B	F-8N	1/2″ Female NPT		8.0(0.31)	1.20	64(2.52)	16.0(0.63)	98.3(3.87)	70.0(2.76)	-	-	-
	F-8N-A	1/2″ Female NPT			1.60		-		-	31.2(1.23)	51.0(2.00)	35.1(1.38)
	F-12N	3/4″ Female NPT			1.20		19.1(0.75)	101(3.98)	76.2(3.00)	-	-	-
	F-12N-A	3/4″ Female NPT			1.60		-		-	40.6(1.60)	63.5(2.50)	38.1(1.50)
	F-16N	1″ Female NPT			1.20		25.4(1.00)	108(4.25)	88.9(3.50)	-	-	-
	F-16N-A	1″ Female NPT			1.60		-		-	40.6(1.60)	70.0(2.76)	44.5(1.75)
	MF-8N	1/2″ Male NPT	1/2″ Female NPT		1.20		16.0(0.63)	98.3(3.87)	76.2(3.00)	-		
	MF-12N	3/4″ Male NPT	3/4″ Female NPT				19.1(0.75)	101(3.98)	79.6(3.13)			
	MF-16N	1″ Male NPT	1″ Female NPT				25.4(1.00)	108(4.25)	88.9(3.50)			
	SW-8P	1/2″ Pipe Socket weld					19.1(0.75)	101(3.98)	66.8(2.63)			
	SW-12P	3/4″ Pipe Socket weld					22.4(0.88)	105(4.13)	82.6(3.25)			
	SW-16P	1″ Pipe Socket weld					25.4(1.00)	108(4.25)	88.9(3.50)			
	SW-8T	1/2″Tube Socket weld					16.0(0.63)	98.3(3.87)	66.8(2.63)			
	SW-12T	3/4″Tube Socket weld										
	SW-16T	1″Tube Socket weld					19.1(0.75)	101(3.98)				
	SW-12M	12mm Tube Socket weld					16.0(0.63)	98.3(3.87)				
	SW-14M	14mm Tube Socket weld										
	SW-16M	16mm Tube Socket weld										
VG16C	F-12N	3/4″ Female NPT		11.0(0.43)	2.25	64(2.52)	22.4(0.88)	133(5.24)	82.6(3.25)	-		
	F-16N	1″ Female NPT					25.4(1.00)	136(5.35)	102(4.02)			
	MF-12N	3/4″ Male NPT	3/4″ Female NPT				22.4(0.88)	133(5.24)	88.9(3.50)			
	MF-16N	1″ Male NPT	1″ Female NPT				25.4(1.00)	136(5.35)	102(4.02)			
	SW-12P	3/4″ Pipe Socket weld					22.4(0.88)	133(5.24)	88.9(3.50)			
	SW-16P	1″ Pipe Socket weld					25.4(1.00)	136(5.35)				
	SW-12T	3/4″Tube Socket weld					22.4(0.88)	133(5.24)	82.6(3.25)			
	SW-16T	1″Tube Socket weld										
	SW-14M	14mm Tube Socket weld							95.3(3.75)			
	SW-16M	16mm Tube Socket weld							88.9(3.50)			
	SW-18M	18mm Tube Socket weld							82.6(3.25)			
	SW-25M	25mm Tube Socket weld										

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

Flow Data @ 100°F(38°C)





Factory Test and Cleaning

Every valve is tested with the nitrogen gas @ 1,000 psig (68.9 bar) for leakage at the seat to a maximum allowable leak rate of 0.1 SCCM.
The packing is tested for no detectable leakage. Optional hydrostatic shell test with additional cost is performed with pure water at 1.5 times the working pressure.

Every valve is cleaned and packaged in accordance with DK-Lok cleaning standard DC-01.

Sour Gas Service

Valves for use in sour gas are available. Valve wetted components are selected to the requirements of NACE MR0175 for sulfide stress cracking resistant materials.
To order, insert -SG in the basic ordering number.

How to order

VG16A-MF4N- **-A** **-GF** **-S**

Valve Pattern Designator	Packing Material Designator	Valve Material Designator
Nil : In-line **A** : Angle	**Nil** : PTFE **GF** : Graphite	**S** : SS316 **C** : Carbon Steel

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.

DK-LOK® Fittings & Valves
www.dklok.com

DK-LOK Corporation
Mailing Address
7, Golden root-ro 129beon-gil, Juchon-myeon, Gimhae-si, Gyeongsangnam-do, South Korea 621-842

DK-Lok contact information
Tel. (82) 55-338-0114
Fax. (82) 55-901-0143
E-mail : sales@dklok.com

For International customers
Tel. (82) 55-338-0031/2
Fax. (82) 55-901-0142
E-mail : dklok@dklok.com