GENERANT

SCREWED BONNET NEEDLE VALVE
1/8" - 1/2" NPT
Globe and Block Configuration
Brass, 303 and 316 Stainless Steel

3000 SERIES

Description

Series 3000 bar stock, screwed bonnet type needle valves are available in brass, 303 and 316 stainless steel with working pressures to 5000 Psig in 1/8" to 1/2" sizes. The unique, externally adjustable, wear compensating, virgin PTFE stem packing offers long trouble free service life in most liquid or gas applications. A wide variety of options including panel mounting, metal to metal seat, soft stem tip and taper proof cap, the Series 3000 provides economical, quality solutions for the most demanding applications. Valves can be ordered cleaned and packaged for oxygen service.



Globe

(Panel Mount Option Shown)

Features

- Adjustable PTFE Stem Packing
- Excellent Gauge Isolation Valve
- Wide variety of options to suit many diverse applications
- Available in 303 SS as an economical alternative to 316 SS (where applicable)
- 100% factory tested

Technical Data

Maximum Operating Pressure @ 100º F (38 º C)
Brass: 3000 Psig (207 Bar)
Stainless: 5000 Psig (345 Bar)
Flow Coefficient
Globe (.187" Orifice): 0.40 Cv
Block (.312" Orifice): 0.90 Cv

Temperature Ratings

Metal to Metal Stem: -320° F to 400°F (-195° C to 204°C)
Kel-F Tip Stem: -65° F to 200°F (-54° C to 93°C)

Leakage

External leakage – zero.
Maximum allowable seat leakage – 0.1 cc/min @ 3000 psig (207 Bar) Nitrogen



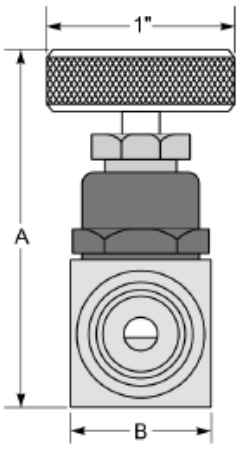
Block

Materials of Construction

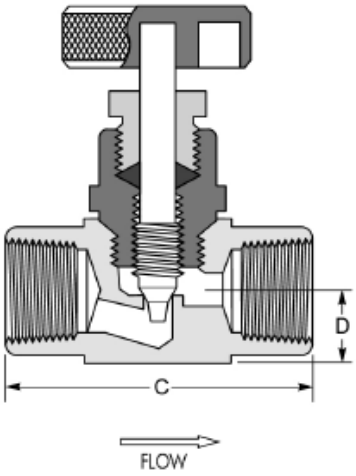
Component	Valve Body Material		
	Brass	303 Stainless	316 Stainless
Valve Body, Bonnet Packing Nut	Brass, ASTM B16	303 SS, ASTM A582	316 SS, ASTM A479
Stem[1]		303 SS, ASTM A582/Kel-F (CTFE)	316 SS, ASTM A479/Kel-F (CTFE)
Handle[2]		Brass, ASTM B16, (Nickel Plated, ASTM 689)	
Set Screw	ANSI B18.3 (Alloy Steel)		
Packing	Virgin TFE		
Panel Nut	Brass, ASTM B16	Brass, ASTM B16, (Nickel Plated, ASTM 689)	
Tamper Proof Cap		N/A	

1. Stainless valves supplied with Kel-F stem, optional metal to metal stem, option code "Q", see ordering information. Block valves not available with soft stem tip option.
2. Optional black phenolic knob, option code "M"

SCREWED BONNET NEEDLE VALVE



Square



Dimensional Data

Valve Number	Pipe Size (NPT)	PORT CONFIGURATION		Orifice	Cv	A (Open)	B (Square)	C	D
		INLET	OULET						
1	1/8"	Female		.187"	0.40	2-1/4"	3/4"	1-5/8"	3/8"
2		Male							
3		Male	Female						
4	1/4"	Female						1-13/16"	
5		Male							
6		Male	Female						
7	3/8"	Male							1/2"
8		Female		.312"	0.90	2-7/16"	1"	2-3/16"	
9		Male	Female						
10	1/2"	Female							
11		Male							
12		Male	Female						

Ordering Information

3000 - 4SS - X

Part Number

Valve Number	Port Configuration	Part Number
1	1/8" Female x 1/8" Female	3000-1
2	1/8" Male x 1/8" Male	3000-2
3	1/8" Male x 1/8" Female	3000-3
4	1/4" Female x 1/4" Female	3000-4
5	1/4" Male x 1/4" Male	3000-5
6	1/4" Male x 1/4" Female	3000-6
7	3/8" Male x 3/8" Male	3000-7
8	3/8" Female x 3/8" Female	3000-8
9	3/8" Male x 3/8" Female	3000-9
10	1/2" Female x 1/2" Female	3000-10
11	1/2" Male x 1/2" Male	3000-11
12	1/2" Male x 1/2" Female	3000-12

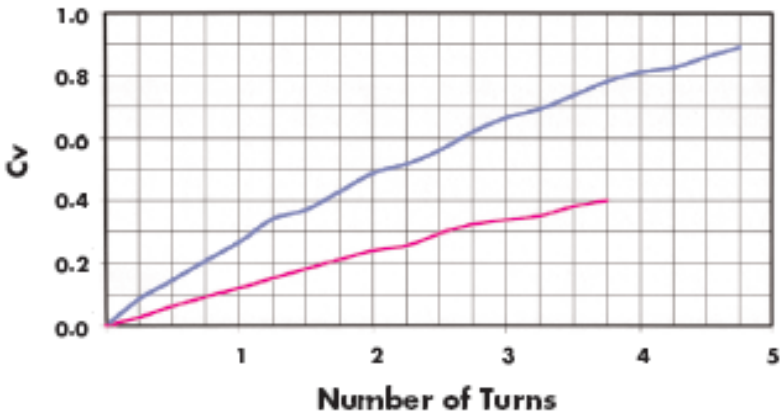
NPT threads per ANSO/ASME B1.20.1. For other thread configurations, consult factory.

Material Code
B - Brass
SS - 303 Stainless Steel
SSS - 316 Stainless Steel

Options
P - Panel Mount (9/16" Hole, 3/16" Max. Panel Thickness)
M - Plastic Knob (1-3/8" Diameter)
N - Kel-F Soft Stem Tip (Standard with SS valves)
T - PTFE Soft Stem Tip
Q - Stainless Steel Stem
QN - Stainless Steel Stem with Kel-F Soft Stem Tip
C - Screw Driver Slotted Stem
QC - Stainless Steel Screw Driver Slotted Stem
X - Cleaned and Packaged for Oxygen Service

Shaded Options are available for Globe Valves Only (1-7)

Flow Coefficient (Cv) @ Turns Open



3/16" Orifice, Valves 1-7 5/16" Orifice, Valves 8-12

PROPER COMPONENT SELECTION – When specifying a component, the total system design must be considered to ensure safe and trouble-free performance. Intended component function, materials compatibility, pressure ratings, installation, environment and maintenance are the responsibility of the system designer.

GENERANT
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