

Needle Valves

Catalog 4110-NV

June 2019

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Introduction

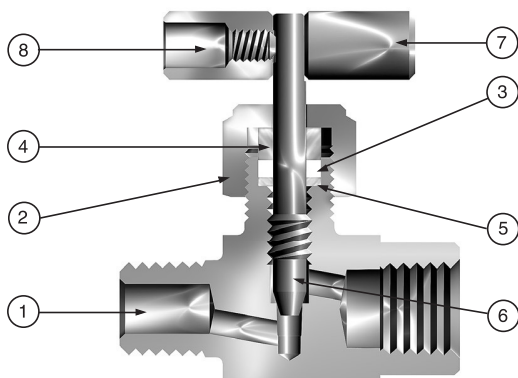
Parker compact SN6 Needle Valves provide shut-off and coarse regulation of liquids and gases utilized in process and instrumentation applications. These rugged valves are manufactured from stainless steel barstock and are integral bonnet designs with packing above the stem threads.

Features

- ▶ Integral bonnet design
- ▶ 316 stainless steel construction
- ▶ Choice of two stem types:
 - R-Stem – All metal, blunt stem tip
 - K-Stem – PCTFE stem tip
- ▶ Choice of PTFE or Grafoil® packing
- ▶ Inline and angle patterns
- ▶ 100% factory tested

Materials of Construction

SN6



Model Shown:
4F4M-SN6LR-SS

Item #	Description	Material
1	Body	ASTM A 182 Type 316
2	Packing Nut	ASTM A 479 Type 316
3	Packing*	PTFE
4	Packing Gland	ASTM A 276 Type 316
5	Packing Washer	Stainless Steel
6	Stem (R-Stem)	ASTM A 276 Type 316
7	Stem (K-Stem)	ASTM A 276 Type 316, with PCTFE
8	Handle**	Aluminum
9	Handle Screw	Stainless Steel

* Optional Grafoil® packing available - See How to Order.

** Handles for Grafoil® packed valves and valves with R stem types are stainless steel T-bars.

Lubrication: Perfluorinated polyether.

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Specifications

Pressure Rating:

R Stem: 6000 psig (414 bar) CWP

K Stem: 3000 psig (207 bar) CWP

Temperature Rating:

PTFE Packing:

-65°F to 450°F (-54°C to 232°C)

PCTFE Stem Tip:

-65°F to 350°F (-54°C to 177°C)

Grafoil® (G) Packing:

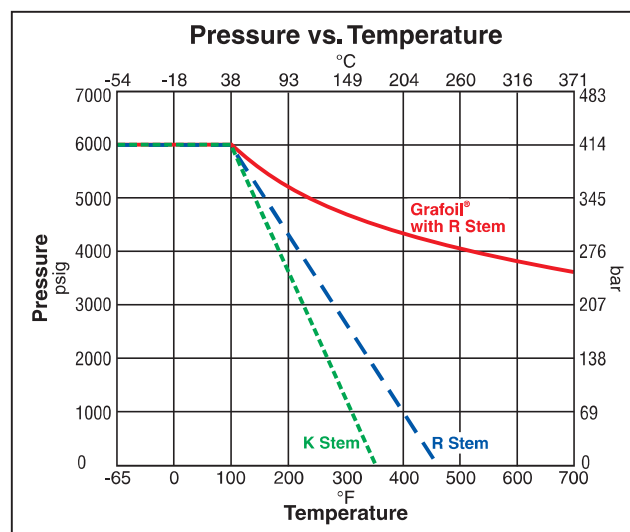
-65°F to 700°F (-54°C to 371°C)

Pressure Rating and Tubing Selection

For working pressures of A-LOK® and CPI™ tube connections, please see the Instrument Tubing Selection Guide (Bulletin 4200-TS), found in the Technical Section of the Parker Instrumentation Process Control Binder, or the Parker Instrument Tube Fitting Installation Manual (Bulletin 4200-B4).

For working pressures of valves with external or internal pipe threads, please see Catalog 4260, Instrumentation Pipe Fittings.

Pressure vs. Temperature

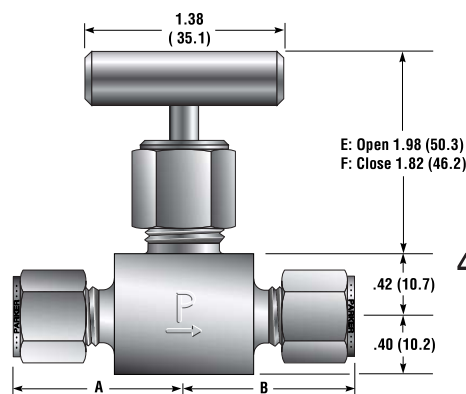


Notes:

To determine MPa, multiply bar by 0.1

When combining seat and seal materials, the most restrictive temperature rating becomes the limiting factor on temperature range.

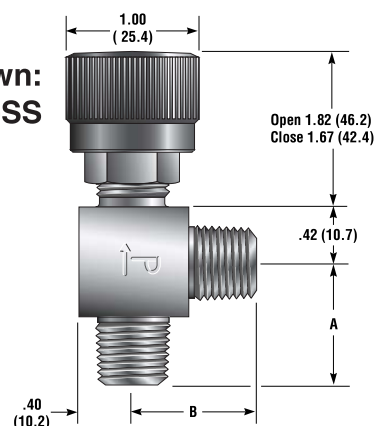
Dimensions / Flow Data



Body width = .80 (20.3)

() Denotes dimensions in millimeters

Model Shown:
4M-SN6AK-SS



Model Shown:
4Z-SN6LR-G-SS

Basic Part Number		End Connections		Stem Type	Flow Data						Dimensions			
Inline	Angle	Inlet (Port 1)	Outlet (Port 2)		Orifice		Inline		Angle		A†		B†	
					Inch	mm	C _V	X _T *	C _V	X _T *	Inch	mm	Inch	mm
4A-SN6LR-SS	4A-SN6AR-SS	1/4" Compression A-LOK®		Blunt	0.125	3.2	0.29	0.56	0.34	0.55	1.17	29.7	1.17	29.7
4A-SN6LK-SS	4A-SN6AK-SS			PCTFE			0.23	0.63	0.27	0.58				
4F-SN6LR-SS	4F-SN6AR-SS	1/4" Female NPT		Blunt	0.125	3.2	0.29	0.56	0.34	0.55	0.94	23.9	0.94	23.9
4F-SN6LK-SS	4F-SN6AK-SS			PCTFE			0.23	0.63	0.27	0.58				
4M-SN6LR-SS	4M-SN6AR-SS	1/4" Male NPT		Blunt	0.125	3.2	0.29	0.56	0.34	0.55	0.99	25.1	0.99	25.1
4M-SN6LK-SS	4M-SN6AK-SS			PCTFE			0.23	0.63	0.27	0.58				
4Z-SN6LR-SS	4Z-SN6AR-SS	1/4" Compression CPI™		Blunt	0.125	3.2	0.29	0.56	0.34	0.55	1.17	29.7	1.17	29.7
4Z-SN6LK-SS	4Z-SN6AK-SS			PCTFE			0.23	0.63	0.27	0.58				
4M4F-SN6LR-SS	4M4F-SN6AR-SS	1/4" Male NPT	1/4" Female NPT	Blunt	0.125	3.2	0.29	0.56	0.34	0.55	0.99	25.1	0.94	23.9
4M4F-SN6LK-SS	4M4F-SN6AK-SS			PCTFE			0.23	0.63	0.27	0.58				

* Tested in accordance with ISA S75.02. Gas flow will be choked when $P_1 - P_2 / P_1 = X_T$.

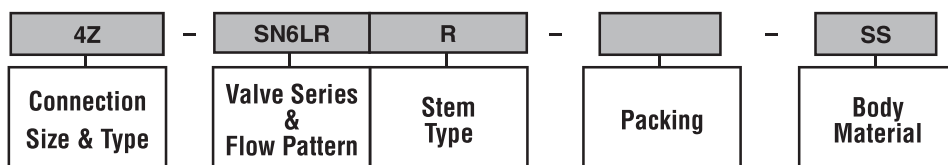
† For CPI™ and A-LOK®, dimensions are measured with nuts in the finger tight position.

Dimensions in inches/millimeters are for reference only, subject to change.

How to Order

The part number sequence identifies product characteristics as shown in the example.

Example: 4Z-SN6LR-SS describes an SN6 valve, inline, blunt stem, 316 SS, 1/4" CPI™ tube inlet and outlet ports, and a PTFE packing.



Note: Handles: SN6 valves with R-Stem are standard with 316 SS T-bar handles. SN6 valves with K-Stem are standard with round anodized aluminum handles, 1.00 inch diameter. SN6 valves are not panel mountable.

Optional Packing – Standard is PTFE (No designator). Add **-G** (Grafoil) temperature ratings to 700°F.

Example: 4F-SN6LR-G-SS

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