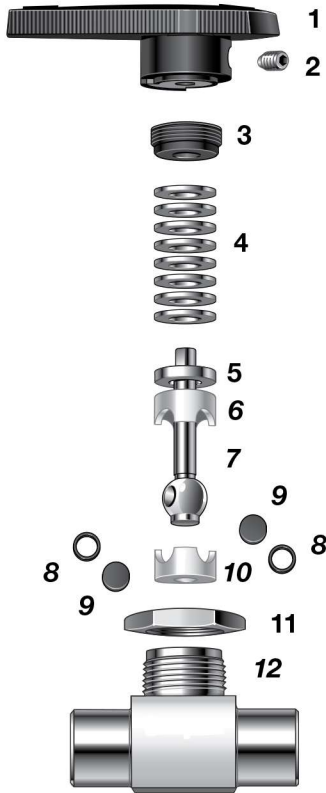


One-Piece Instrumentation Valves



- On-off, switching, and flow control
- Working pressures up to 3000 psig (206 bar)
- Temperatures from -65 to 300°F (-53 to 148°C)
- Environmental and heated-process applications
- 1/16 to 3/4 in. and 3 to 12 mm end connections



Component	Valve Body Materials		
	Stainless Steel	Brass	Alloy 400
	Material Grade/ASTM Specification		
1 Handle	Nylon with brass insert Nylon with powdered metal 300 series SS insert		
2 Set screw	S17400 SS/A564		
3 Packing bolt	Powdered metal 300 series SS or 316 SS/A276, A479	Brass CDA 360/B16	Alloy 400/B164
4 Springs [Ⓢ]	Molybdenum disulfide-coated S17700 SS/A693		
5 Gland	Powdered metal 300 series SS		
6 Upper packing	PTFE/D1710 type 1, Grade 1, Class B		
7 Ball stem	316 SS/A276 and A479		Alloy 400/B164
8 Side rings	fluorocarbon-coated powdered metal 300 series SS/B783;		Fluorocarbon-coated alloy 400
9 Side discs	300 series powdered metal SS/B783		powdered metal
10 Lower packing	PTFE/D1710 type 1, Grade 1, Class B		
11 Panel nut	Powdered metal 300 series SS/B783	Brass CDA 360/B16	Powdered metal 300 series SS/B783
12 Body	316 SS/A276, A479	Brass CDA 360/B16	Alloy 400/B164
Wetted lubricant	hydrocarbon- and silicone-based		
Nonwetted lubricant	Molybdenum disulfide with hydrocarbon binder coating		

Switching (3-Way) Valves

Flow Pattern

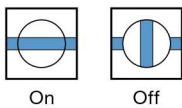
On-Off Switching Service

Center-Off Position

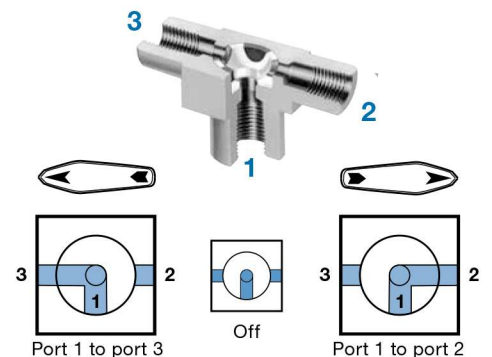
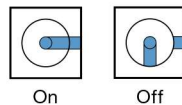
On-Off (2-Way) Valves

Flow Patterns Straight and Angle Patterns for On-Off Service

Straight Pattern



Angle Pattern



Accessories

Directional Name Plates

■ Indicate the direction of flow.



Needle Valves

Introduction

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
- ▶ Inline and angle patterns
- ▶ 100% factory tested

Specifications

Pressure Rating:

R Stem: 6000 psig (414 bar) CWP

K Stem: 3000 psig (207 bar) CWP

Temperature Rating:

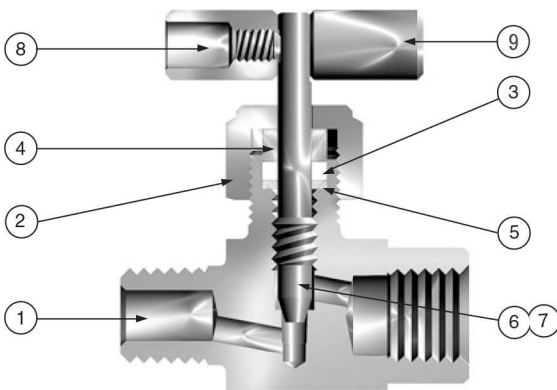
PTFE Packing:

-65°F to 450°F (-54°C to 232°C)

PCTFE Stem Tip:

-65°F to 350°F (-54°C to 177°C)

Materials of Construction



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

** Handles for valves with R stem types are stainless steel T-bars.
Lubrication: Perfluorinated polyether.