

# TPED-Compliant Needle Valves



**FITOK**

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# TPED-Compliant Needle Valves

FITOK TPED-Compliant needle valves have been designed, manufactured, documented and tested in accordance with the requirements of the Transportable Pressure Equipment Directive 2010/35/EU. This directive sets out detailed rules concerning transportable pressure equipment to enhance safety and ensure free movement of such equipment within the European Union. FITOK TPED-Compliant needle valves comply with the Transportable Pressure Equipment Directive 2010/35/EU (TPED), and have been approved by a notified body, and acquired EC Type Approval Certificate.

## Application

FITOK TPED-Compliant needle valves apply to compressed, liquefied or dissolved gases except acetylene, oxygen or oxidizing gas. In addition, they are not suitable for cryogenic equipment, portable fire extinguishers, liquefied and petroleum gas (LPG), and cannot be used as quick-release valves (e.g. for fire-extinguishing, explosion protection and rescue application).

## Test

Every FITOK TPED-Compliant needle valve has been subjected to both internal leak tightness and external leak tightness test with nitrogen or compressed air at 1.2 times of rated working pressure prior to dispatch. The TPED-Compliant needle valves have a maximum allowable internal and external leakage rate of 6 std cm<sup>3</sup>/h.

## Pi (Π) Making

Every FITOK TPED-Compliant needle valve has been Pi-marked and the identification number of the notified body involved in the initial inspections and tests.

# ND Series Needle Valves

## Features

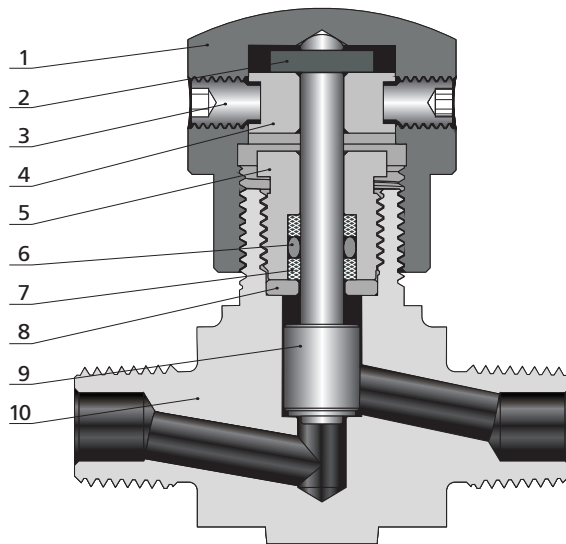
- ⦿ One-piece forged body
- ⦿ Compact design
- ⦿ Non-rotating stem
- ⦿ Soft tip design to seal easily
- ⦿ Special designed handle to stop contamination from entering into the valve



## Technical Data

Rated working temperature	Rated working pressure	Flow coefficient Cv
-4~150 °F (-20~65°C)	2500 psig (172 bar)	0.53

## Standard Materials Of Construction

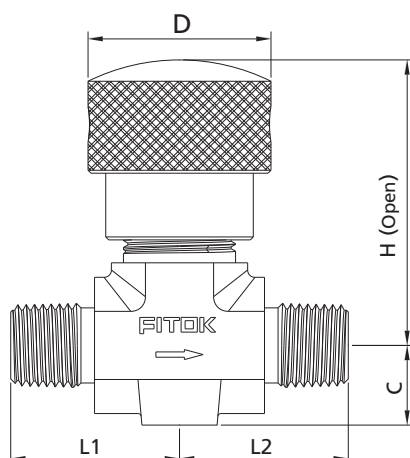


Item	Component	Valve Material 316 SS
		Material Grade/ASTM Specification
1	Handle	C36000/B16
2	Stop Pin	Stainless Steel
3	Set Screw	Steel
4	Spool	Aluminum
5	<i>Packing Bolt</i>	<i>316SS/A479</i>
6	<i>O-Ring</i>	<i>Buna-N(NBR) or Ethylene Propylene Diene Monomer (EPDM)</i>
7	<i>Backup Ring</i>	<i>PTFE/D1710</i>
8	<i>Washer</i>	<i>316SS/A479</i>
9	<i>Stem</i>	<i>316SS/A479</i>
	<i>Stem Tip</i>	<i>PEEK</i>
10	<i>Body</i>	<i>316SS/A182</i>
	Lubricant	Magnesium silicate-based

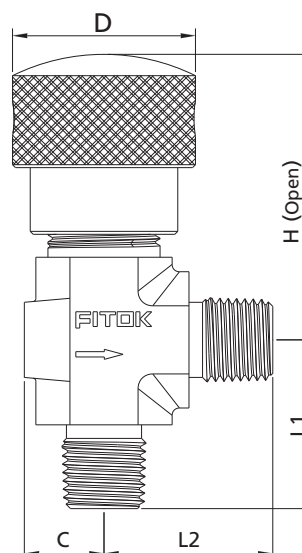
Note: Wetted components listed in italics.

## Dimensions

### Straight Pattern



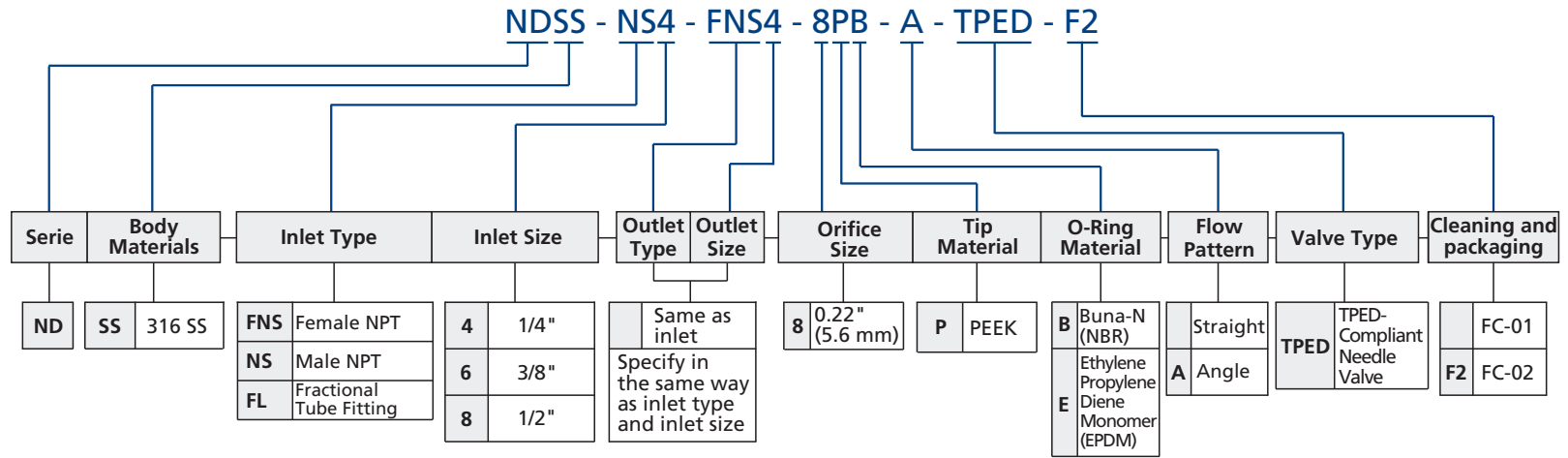
### Angle Pattern



Basic Ordering Number		Connection Type and Size		Orifice in.(mm)	Dimensions, in.(mm)				
Buna N O-Ring	Ethylene Propylene O-Ring	Inlet	Outlet		L1	L2	C	D	H
NDSS-FNS4-8PB-TPED NDSS-FNS4-8PB-TPED-F2 NDSS-FNS4-8PB-A-TPED NDSS-FNS4-8PB-A-TPED-F2	NDSS-FNS4-8PE-TPED NDSS-FNS4-8PE-TPED-F2 NDSS-FNS4-8PE-A-TPED NDSS-FNS4-8PE-A-TPED-F2	1/4 Female NPT	1/4 Female NPT	0.22 (5.6)	1.06 (26.9)		0.49 (12.5)	1.22 (31.0)	2.04 (51.8)
NDSS-NS4-8PB-TPED NDSS-NS4-8PB-TPED-F2 NDSS-NS4-8PB-A-TPED NDSS-NS4-8PB-A-TPED-F2	NDSS-NS4-8PE-TPED NDSS-NS4-8PE-TPED-F2 NDSS-NS4-8PE-A-TPED NDSS-NS4-8PE-A-TPED-F2	1/4 Male NPT	1/4 Male NPT		1.13 (28.6)				
NDSS-NS6-8PB-TPED NDSS-NS6-8PB-A-TPED	NDSS-NS6-8PE-TPED NDSS-NS6-8PE-A-TPED	3/8 Male NPT	3/8 Male NPT		1.13 (28.6)	1.06 (26.9)	0.62 (15.8)		
NDSS-NS4-FNS4-8PB-TPED NDSS-NS4-FNS4-8PB-TPED-F2	NDSS-NS4-FNS4-8PE-TPED NDSS-NS4-FNS4-8PE-TPED-F2	1/4 Male NPT	1/4 Female NPT		1.13 (28.6)	1.06 (26.9)	0.49 (12.5)		
NDSS-NS4-FNS4-8PB-A-TPED NDSS-NS4-FNS4-8PB-A-TPED-F2	NDSS-NS4-FNS4-8PE-A-TPED NDSS-NS4-FNS4-8PE-A-TPED-F2	1/4 Male NPT	1/4 Female NPT		1.32 (33.5)		0.62 (15.8)		
NDSS-NS8-FNS4-8PB-TPED NDSS-NS8-FNS4-8PB-A-TPED	NDSS-NS8-FNS4-8PE-TPED NDSS-NS8-FNS4-8PE-A-TPED	1/2 Male NPT	1/4 Female NPT		1.13 (28.6)	1.29 (32.8)	0.49 (12.5)		
NDSS-NS4-FL6-8PB-TPED NDSS-NS4-FL6-8PB-A-TPED	NDSS-NS4-FL6-8PE-TPED NDSS-NS4-FL6-8PE-A-TPED	1/4 Male NPT	3/8 in. FITOK		1.29 (32.8)		0.49 (12.5)		
NDSS-FL6-8PB-TPED NDSS-FL6-8PB-A-TPED	NDSS-FL6-8PE-TPED NDSS-FL6-8PE-A-TPED	3/8 in. FITOK	3/8 in. FITOK		1.29 (32.8)		0.49 (12.5)		

1. Connection type of "FITOK" means FITOK double ferrule tube fittings. When the connection type of valves is FITOK double ferrule tube fitting, the working pressures of the valves are related to the wall thickness of the tubing applied. For specific working pressure of the valves, please refer to the allowable working pressure in FITOK Catalog *Tubing*.
2. Sizes and types listed are standard.
3. Dimensions are shown with FITOK tube fitting nuts finger-tight. All dimensions are for reference only and are subject to change. For dimensions not shown above, please contact FITOK Group or our authorized distributors.

# Ordering Number Description



Note: "Ordering Number Description" is a reference to understand the combination rules of FITOK product part number. Not all combination is available. If any questions, please contact FITOK Group or our authorized distributors.

**1.Cleaning and Packing:**

FC-01: Standard cleaning and packaging for general industrial procedures.

FC-02: Special cleaning and packaging for wetted system components to ensure compliance with product cleanliness requirement of ASTM G93 Level C.

# NU Series Needle Valves

## Features

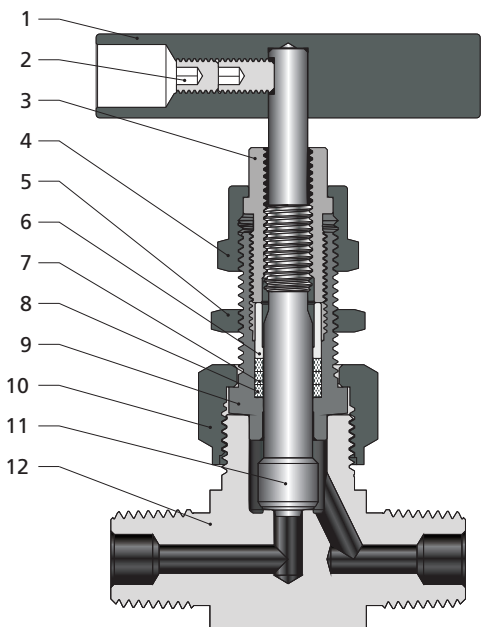
- ⦿ One-piece forged body
- ⦿ Simple stem to operate stably
- ⦿ Soft tip design to seal easily
- ⦿ Safety back seating seal in the fully open position
- ⦿ Union bonnet construction to avoid accidental valve disassembly
- ⦿ Stem thread lubricant isolated from system media
- ⦿ Panel mounting available



## Technical Data

Rated working temperature	Rated working pressure	Flow coefficient Cv
-4~150 °F (-20~65°C)	5000 psig (345 bar)	0.35

## Standard Materials of Construction

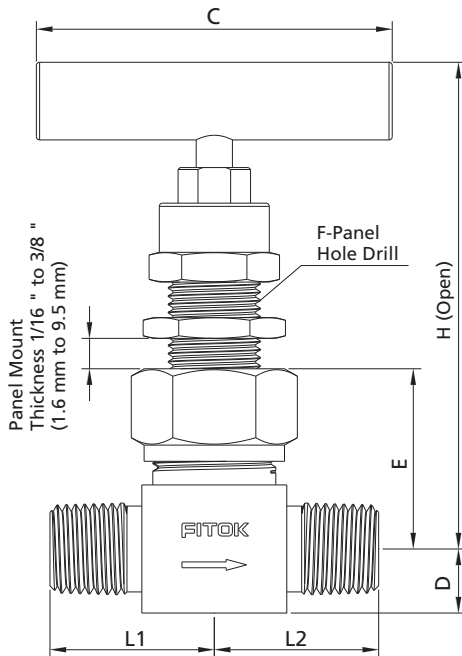


Item	Component	Valve Material 316 SS
		Material Grade/ASTM Specification
1	Handle	Stainless Steel
2	Set Screw	Steel
3	Packing Bolt	304SS/A479
4	Lock Nut	304SS/A479
5	Panel Nut	316SS/A479
6	Gland	316SS/A479
7	<i>Packing</i>	<i>PEEK</i>
8	<i>Packing Washer</i>	<i>PEEK</i>
9	<i>Bonnet</i>	<i>316SS/A479</i>
10	Union Nut	316SS/A479
11	<i>Stem</i>	<i>316SS/A479</i>
	<i>Stem Tip</i>	<i>PEEK</i>
12	Body	316/A182
Lubricant		Magnesium silicate-based

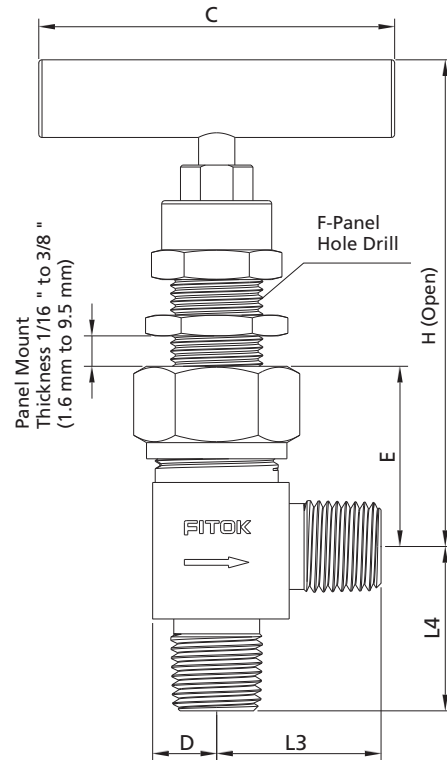
Note: Wetted components listed in italics.

## Dimensions

### Straight Pattern



### Angle Pattern

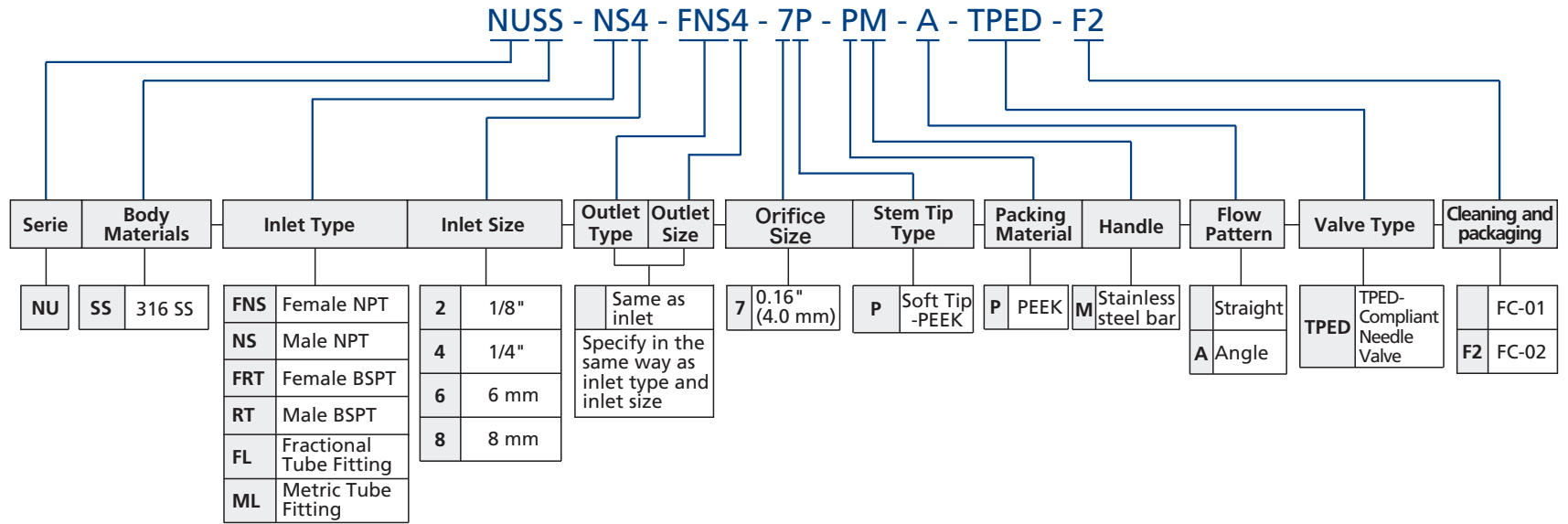


Basic Ordering Number	Connection Type and Size		Orifice in.(mm)	Dimensions, in.(mm)									
	Inlet	Outlet		L1	L2	L3	L4	C	D	E	F	H	
NUSS-FNS2-7P-PM-TPED NUSS-FNS2-7P-PM-A-TPED	1/8 Female NPT	1/8 Female NPT	0.16 (4.0)	1.00 (25.4)		0.85 (21.6)	1.00 (25.4)	2.17 (55)	0.39 (9.9)	1.1 (27.9)	0.59 (15)	3.08 (78.2)	
NUSS-FNS4-7P-PM-TPED NUSS-FNS4-7P-PM-TPED-F2 NUSS-FNS4-7P-PM-A-TPED NUSS-FNS4-7P-PM-A-TPED-F2	1/4 Female NPT	1/4 Female NPT		1.03 (26.2)									
NUSS-NS4-7P-PM-TPED NUSS-NS4-7P-PM-TPED-F2 NUSS-NS4-7P-PM-A-TPED NUSS-NS4-7P-PM-A-TPED-F2	1/4 Male NPT	1/4 Male NPT		1.00 (25.4)		1.00 (25.4)							
NUSS-NS4-FNS4-7P-PM-TPED NUSS-NS4-FNS4-7P-PM-TPED-F2 NUSS-NS4-FNS4-7P-PM-A-TPED NUSS-NS4-FNS4-7P-PM-A-TPED-F2	1/4 Male NPT	1/4 Female NPT		1.00 (25.4)	1.03 (26.2)	0.85 (21.6)							
NUSS-RT4-FRT4-7P-PM-TPED NUSS-RT4-FRT4-7P-PM-A-TPED	R 1/4 Male BSPT	RC 1/4 Female BSPT											
NUSS-FL4-7P-PM-TPED NUSS-FL4-7P-PM-A-TPED	1/4 in. FITOK	1/4 in. FITOK				1.14 (29.0)							
NUSS-ML6-7P-PM-TPED NUSS-ML6-7P-PM-A-TPED	6 mm FITOK	6 mm FITOK		1.22 (30.9)		1.16 (29.5)							1.22 (30.9)
NUSS-ML8-7P-PM-TPED NUSS-ML8-7P-PM-A-TPED	8 mm FITOK	8 mm FITOK				1.17 (29.7)							

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