

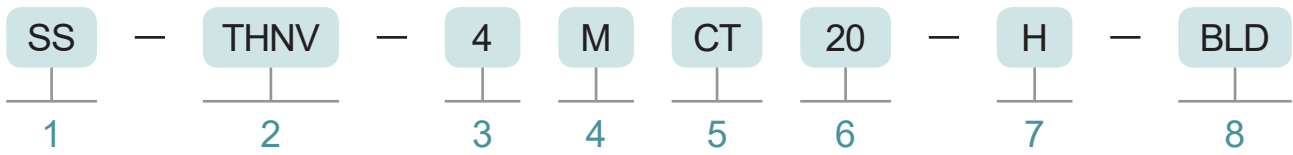
# High Pressure Needle Valves



## THNV SERIES

- Maximum Working Pressure : Up to 20,000psi(1,380bar)
- Working Temperature Range : -40°F(-40°C) to 250°F(121°C)
- Size from 1/4" to 3/4" is available
- Cone and Thread connection

## ORDERING INFORMATION



### 1. BODY MATERIAL

Material	Designator
316 SS	SS

### 2. NEEDLE VALVE SERIES

### 3. CONNECTION SIZE

Size	Designator
1/4"	4
3/8"	6
1/2"	8
9/16"	9
3/4"	12
1"	16

### 4. WORKING PRESSURE

Working Pressuer	Designator
Medium	M

### 5. CONNECTION TYPE

Inlet / Outlet Connection Type	Designator
Cone & Thread	CT
Female NPT	NF

### 6. PRESSURE SERIES

Description	Designator
10,000 psi	10
15,000 psi	15
20,000 psi	20

### 7. FLUID & PURPOSE

Fluid & Purpose	Designator
General Gas, Water	Blank
General Hydrogen	H
Hydrogen Station 	XM

### 8. OPTION

Description	Designator
Bonnet Locking Bracket	BLD

## FEAUTRES

- Vee or regulating stem tip
- Packing below stem threads
- Integral through holes for bracket mounting
- Non-rotating stem prevents stem to seat galling

## PRESSURE RANGES & TEMPERATURE RANGES

Part No.	Pressure Range	Temperature Range
THNV-□MCT20	20,000 psig (1,387 bar)	-40°F (-40°C) to 250°F (121°C)
THNV-□MCT20-H	20,000 psig (1,387 bar)	-40°F (-40°C) to 185°F (85°C)
THNV-□MCT20-XM	10,153 psig (700bar)	-40°F (-40°C) to 185°F (85°C)

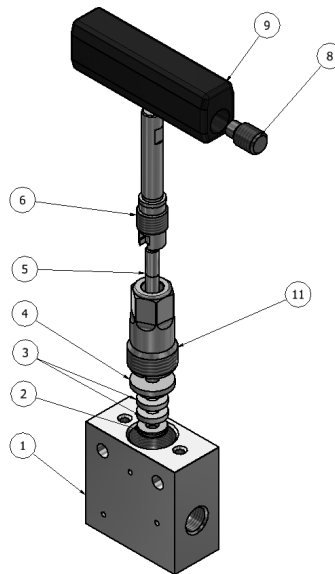
## TESTING

- Needle valve is factory tested with water up to its maximum pressure rating to a requirement of no detectable leakage at the seat and packing.

## CLEANNING AND PACKAGING

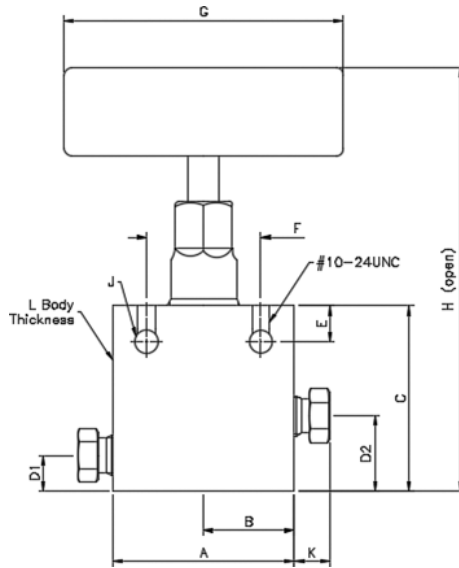
- Every valve is cleaned and packaged in accordance with the standard specification of cleaning and packaging.

## MATERIAL OF CONSTRUCTION



No.	Description	Material	
		Material Grade / ASTM Specification	
		THNV-□MCT20	THNV-□MCT20-H,-XM
1	Body	316 SS CW / A479	
2	Bottom Packing Washer	316 SS	
3	Packing	Reinforced PTFE	
4	Top Packing Washer	316 SS	
5	Lower Stem	630 SS / A564	XM-19 / A276
	Vee Stem Regulating Stem		
6	Upper Stem	XM-19 / A276	
7	Bonnet	316 SS CW / A479	
8	Handle Screw	SCM435	
9	Handle	A6061	

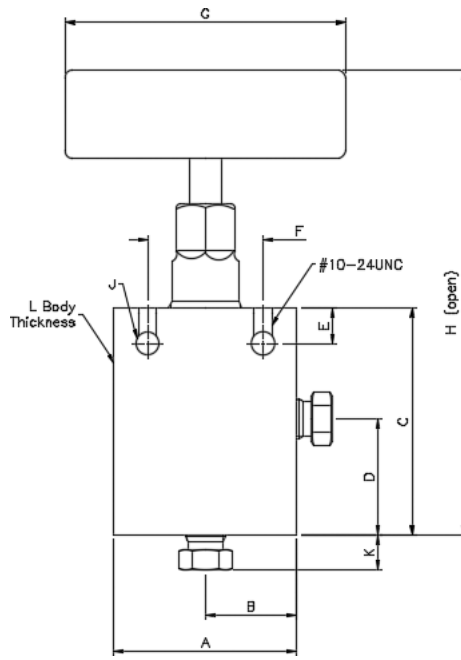
DIMENSIONS



2-WAY STRAIGHT

Ordering Number		Orifice in. (mm)	End Connection		Dimensions, in. (mm)												
Series	Part No.		Inlet	Outlet	A	B	C	D1	D2	E	F	G	H	J	K	L	
<b>15,000 psig (1,034 bar)</b>																	
THNV	4MNF15	0.250 (6.4)	1/4" Female NPT		2.00 (50.8)	1.00 (25.4)	2.00 (50.8)	0.38 (9.7)	0.81 (20.6)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	4.84 (123.0)	0.25 (6.4)	-	1.00 (25.4)	
	6MNF15	0.312 (7.9)	3/8" Female NPT		2.50 (63.5)	1.25 (31.8)	2.88 (73.2)	0.50 (12.7)	1.13 (28.7)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.46 (139.0)	0.34 (8.6)	-		
	8MNF15	0.312 (7.9)	1/2" Female NPT		2.50 (63.5)	1.25 (31.8)	3.00 (76.2)	0.62 (15.7)	1.25 (31.8)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.58 (142.0)	0.34 (8.6)	-	1.25 (31.8)	
	<b>20,000 psig (1,378 bar)</b>																
	4MCT20	0.125 (3.2)	1/4" Cone & Thread		1.97 (50.0)	0.98 (25.0)	2.00 (50.8)	0.38 (9.7)	0.81 (20.6)	0.38 (9.7)	1.24 (31.5)	3.03 (77.0)	4.84 (123.0)	0.25 (6.4)	0.38 (9.7)		
	6MCT20	0.200 (5.1)	3/8" Cone & Thread		1.97 (50.0)	0.98 (25.0)	2.00 (50.8)	0.38 (9.7)	0.81 (20.6)	0.38 (9.7)	1.24 (31.5)	3.03 (77.0)	4.84 (123.0)	0.25 (6.4)	0.48 (12.2)	1.00 (25.4)	
	9MCT20	0.312 (7.9)	9/16" Cone & Thread		2.50 (63.5)	1.25 (31.8)	2.88 (73.2)	0.50 (12.7)	1.13 (28.7)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.46 (139.0)	0.34 (8.6)	0.68 (17.3)		
12MCT20	0.440 (11.2)	3/4" Cone & Thread		3.00 (76.2)	1.50 (38.1)	3.75 (95.3)	0.75 (19.1)	1.50 (38.1)	0.62 (15.7)	1.76 (44.7)	8.00 (203.0)	8.84 (225.0)	0.44 (11.2)	0.59 (15.0)	1.38 (35.1)		

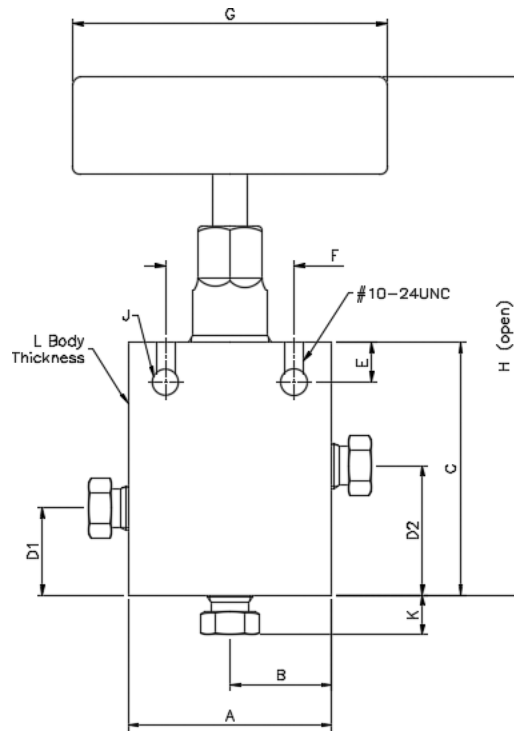
DIMENSIONS



2-WAY ANGLE

Ordering Number		Orifice in. (mm)	End Connection		Dimensions, in. (mm)										
Series	Part No.		Inlet	Outlet	A	B	C	D	E	F	G	H	J	K	L
<b>15,000 psig (1,034 bar)</b>															
THNVA	4MNF15	0.250 (6.4)	1/4" Female NPT		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (134)	0.25 (6.4)	-	1.00 (25.4)
	6MNF15	0.312 (7.9)	3/8" Female NPT		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102)	5.96 (151)	0.34 (8.6)	-	
	8MNF15	0.312 (7.9)	1/2" Female NPT		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102)	5.96 (151)	0.34 (8.6)	-	1.25 (31.8)
	<b>20,000 psig (1,378 bar)</b>														
THNVA	4MCT20	0.125 (3.2)	1/4" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (123.0)	0.25 (6.4)	0.38 (9.7)	1.00 (25.4)
	6MCT20	0.200 (5.1)	3/8" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (123.0)	0.25 (6.4)	0.48 (12.2)	
	9MCT20	0.312 (7.9)	9/16" Cone & Thread		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.96 (151.0)	0.34 (8.6)	0.68 (17.3)	
	12MCT20	0.440 (11.2)	3/4" Cone & Thread		3.00 (76.2)	1.50 (38.1)	4.50 (114.0)	2.25 (57.2)	0.62 (15.7)	1.76 (44.7)	8.00 (203.0)	9.58 (243.0)	0.44 (11.2)	0.59 (15.0)	

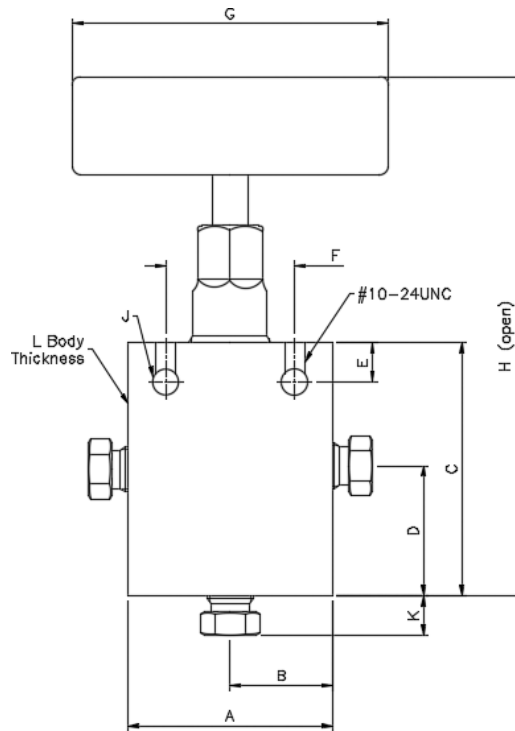
DIMENSIONS



3-WAY, 2 INLET PORTS

Ordering Number		Orifice in. (mm)	End Connection		Dimensions, in. (mm)												
Series	Part No.		Inlet	Outlet	A	B	C	D1	D2	E	F	G	H	J	K	L	
<b>15,000 psig (1,034 bar)</b>																	
THNV32I	4MNF15	0.250 (6.4)	1/4" Female NPT		2.00 (50.8)	1.00 (25.4)	2.62 (66.5)	1.00 (25.4)	1.43 (36.3)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.46 (139.0)	0.25 (6.4)	-	1.00 (25.4)	
	6MNF15	0.312 (7.9)	3/8" Female NPT		2.50 (63.5)	1.25 (31.8)	3.62 (91.9)	1.24 (31.5)	1.87 (47.5)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	6.20 (157.0)	0.34 (8.6)	-		
	8MNF15	0.312 (7.9)	1/2" Female NPT		2.50 (63.5)	1.25 (31.8)	3.62 (91.9)	1.24 (31.5)	1.87 (47.5)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	6.20 (157.0)	0.34 (8.6)	-	1.25 (31.8)	
	<b>20,000 psig (1,378 bar)</b>																
		4MCT20	0.125 (3.2)	1/4" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.62 (66.5)	1.00 (25.4)	1.43 (36.3)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.46 (139.0)	0.25 (6.4)	0.38 (9.7)	
		6MCT20	0.200 (5.1)	3/8" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.62 (66.5)	1.00 (25.4)	1.43 (36.3)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.46 (139.0)	0.25 (6.4)	0.48 (12.2)	1.00 (25.4)
	9MCT20	0.312 (7.9)	9/16" Cone & Thread		2.50 (63.5)	1.25 (31.8)	3.63 (92.2)	1.25 (31.8)	1.88 (47.8)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	6.21 (158.0)	0.34 (8.6)	0.68 (17.3)		

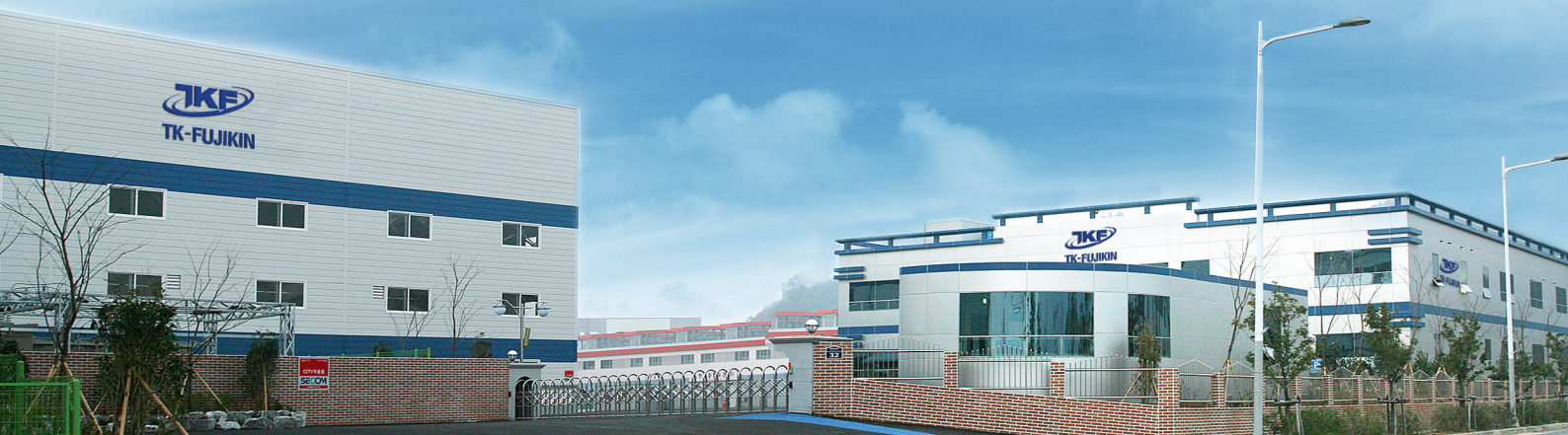
DIMENSIONS



3-WAY, 2OUTLET PORTS

Ordering Number		Orifice in. (mm)	End Connection		Dimensions, in. (mm)											
Series	Part No.		Inlet	Outlet	A	B	C	D	E	F	G	H	J	K	L	
<b>15,000 psig (1,034 bar)</b>																
THNV320	4MNF15	0.250 (6.4)	1/4" Female NPT		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (134.0)	0.25 (6.4)	-	1.00 (25.4)	
	6MNF15	0.312 (7.9)	3/8" Female NPT		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.96 (151.0)	0.34 (8.6)	-		
	8MNF15	0.312 (7.9)	1/2" Female NPT		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.96 (151.0)	0.34 (8.6)	-	1.25 (31.8)	
	<b>20,000 psig (1,378 bar)</b>															
		4MCT20	0.125 (3.2)	1/4" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (123.0)	0.25 (6.4)	0.38 (9.7)	
		6MCT20	0.200 (5.1)	3/8" Cone & Thread		2.00 (50.8)	1.00 (25.4)	2.44 (62.0)	1.25 (31.8)	0.38 (9.7)	1.24 (31.5)	3.00 (76.2)	5.28 (123.0)	0.25 (6.4)	0.48 (12.2)	1.00 (25.4)
	9MCT20	0.312 (7.9)	9/16" Cone & Thread		2.50 (63.5)	1.25 (31.8)	3.38 (85.9)	1.63 (41.4)	0.50 (12.7)	1.38 (35.1)	4.00 (102.0)	5.96 (151.0)	0.34 (8.6)	0.68 (17.3)		

## HIGH PRESSURE NEEDLE VALVES



**TKF** TK-FUJIKIN CORPORATION  
Fujikin Carp Group

**Head Office** : 7, Noksansandan 261-ro 88beon-gil, Gangseo-gu, Busan, Korea

**2nd Factory** : 579-8 Hwajeon-dong, Gangseo-gu, Busan, Korea

TEL. 82-51-970-6700 FAX. 82-51-831-1215

E-mail : [tc@tk-fujikin.com](mailto:tc@tk-fujikin.com)