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DUNS NO. : 86-917-7745



# DS-LOK

INSTRUMENTATION VALVES AND FITTINGS



## NEEDLE VALVE

- Sizes: 1/2" to 3" •
- Pressure Ratings: 150# To 2500# •
- Carbon steel LF2, F51, Duplex, Super •
- Duplex, Monel 400, Hastelloy C276, Inconel 625 •
- Titanium, Incolloy 825, •

## Needle Valve

DS-LOK Needle valves have a slender, tapered point at the end of the valve stem that is lowered through the seat to restrict or block flow. Fluid flowing through the Needle valve turns 90 degrees and passes through an orifice that is the seat for a rod with a cone shaped tip. Needle valves are widely used to accurately regulate the flow of liquids and gases at low flow rates. The fine threading of the stem and the large seat area allow for precise resistance to under pressure. Needle valves are also used in situations where the flow must be gradually brought to a halt, and at used as both on/off valves and for throttling service.

DS-LOK Needle valves are often designed with a metal needle (generally brass, bronze, or stainless or other alloys of steel) and an elastomeric seat (generally PVC, CPVC, PTFE, or a wide range of brand name plastics and thermoplastics). While this is the most common form, valves are available that have a metal - metal, plastic - plastic, or plastic- metal needles and seats. These variations are usually designed with specific applications in mind, especially situations where corrosion, high or low temperatures or extensive wear are possible. In such cases, it is best to consult with the manufacturer to find which type of valve is best for the application at hand.

DS-LOK Needle valves are used in almost every industry in an incredibly wide range of applications - anywhere control or metering of steam, air, gas, oil, water or other non-viscous liquids is required. They can be found in every industry from aerospace to zoological sciences, every service from gas and liquid dispensation to instrumentation control and cooling to power generation. However, Needle valves should be avoided in applications where the media is viscous, or in the dispensation of slurries. The small flow orifice can easily trap thick materials or solids and become blocked.

DS-LOK Brand Make Needle valves are available in materials like -Steel, Stainless Steel, Brass, Monel, & various Alloy & Non Alloy steel.

### Features:-

- Materials include high tensile type 316 stainless steel.
- The location of packing is under the thread of valve stem.
- Non-rotating stem and bar stock body design.
- Easy to assemble and replace packing.
- PTFE encapsulated packing provides dependable stem and body sealing.
- Bonnet lock pin to prevent accidental loosening.
- Dust caps are fitted to contain stem lubricant and prevent the ingress of contaminants.
- One piece bonnet with a metal to metal seal to the valve body below the bonnet threads.
- All bonnets are assembled with a locking pin to prevent accidental removal while in service.
- The stem threads are rolled and lubricated to prevent galling and reduce operating torque.
- Panel mounting options available.
- Variety of end configurations includes PMT Tube Fittings, Male/Female NPT, BSPT, BSPP pipe and tube socket weld connections
- Hardened Stem Tip
- Flow Coefficients (Cv) From 0.31 to 1.40
- Orifice Size : 0.138" (3.5mm) to 0.250" (6.4mm)
- Every valves is factory tested.

### Formulas :-

#### Liquids

$$Q_L = C_V \sqrt{\frac{(P_1 - P_2)(62.4)}{r}}$$

#### Gases (Where $P_2 > .5P_1$ )

$$Q_V = (23.18) C_V \sqrt{\frac{(P_1 - P_2)P_2}{(S.G.) T}}$$

#### Gases (Where $P_2 < .5P_1$ )

$$Q_V = \frac{(11.59) P_1 C_V}{\sqrt{S.G. (T)}}$$

S.G. = Specific Gravity of Gas  
(M.W. of Air/28.96)

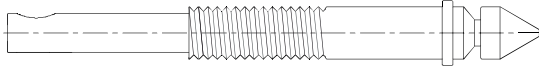
S.G. Air	= 1.000
S.G. Nitrogen	= 0.967
S.G. Oxygen	= 1.105
S.G. Helium	= 0.138
S.G. Hydrogen	= 0.0696

#### Where:

$Q_L$	= Flow (gpm)	$r$	= Density of Liquid (lb/ft <sup>3</sup> )	$T$	= Flowing Temperature (°R)
$Q_V$	= Flow (scfm)	$P_1$	= Upstream Pressure (psia)		(°R = °F + 460)
$P_2$	= Downstream Pressure (psia)	$r$ (Water)	= 62.4lb/ft <sup>3</sup> @60°F [16°C]		

## Different types of Spindle tip :-

### Hard seat Spindle Design :-



### Soft seat Spindle Design :-

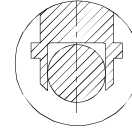


- Spindle is standard for pressure tightness even at elevated temperatures. Regulating Spindle & Soft-seat Spindle are optional.



### Non-rotating Metal Vee Tip :-

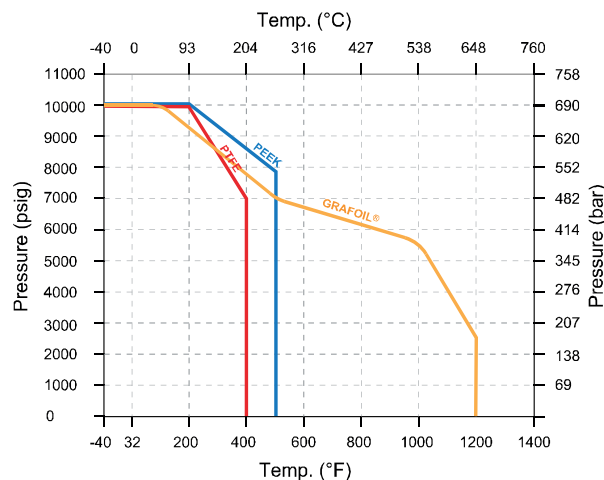
A non-rotating Vee tip is typically used in high cycle applications to extend the service life of the valve. When the valve is closed, the Vee tip contacts the valve seat, and is driven straight into it without rotating.



### Non-rotating Metal Ball Tip:-

A non-rotating Ball tip operates in the same fashion as the non-rotating metal Vee tip but requires less seating torque.

## Pressure temperature rating :-



Body Material	Packing Material	Temperature Rating	Pressure Rating @37° C (100°F)
Stainless steel	PTFE	-54 to 232° C (-65 to 450° F)	413 bar (6,000 psig)
	Grafoil	-54 to 648° C (-65 to 1200° F)	690 bar (10,000 psig)
Carbon steel	PTFE	-29 to 176° C (-20 to 350° F)	413 bar (6,000 psig)
	Grafoil	-29 to 176° C (-20 to 350° F)	690 bar (10,000 psig)

## Applications :-

- General Plant Service
- Hydraulic and Pneumatic
- Pressure measurement devices
- Instrument isolation
- Condensates
- Venting

## Available Options\*

- High Temperature
- High Pressure
- NACE
- Tube End Connection
- Alternates Connection Sizes

## Pressure Rating:-

Valve Size	Orifice	Cv	Max. Working Pressure
1/4"	3.5mm	0.31	10,000 psi (690 kg/cm <sup>2</sup> )
3/8"	3.5mm	0.31	6,000 psi (413 kg/cm <sup>2</sup> )
1/2"	4.8mm	0.52	6,000 psi (413 kg/cm <sup>2</sup> )
3/4"	6.4mm	1.40	

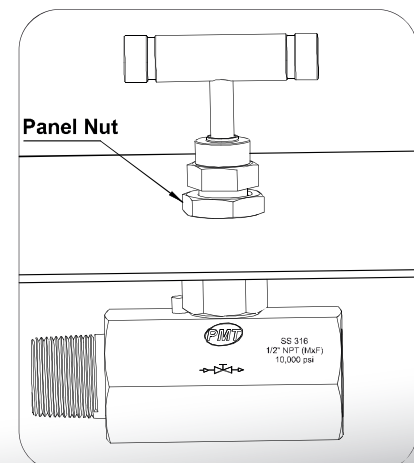
## How to mount the valve on panel:-

### Disassembly

1. Un-tighten the handle set screw using an allen key and remove the handle.
2. Remove the packing nut & panel nut and set aside for later use.
3. Place the valve bonnet in the panel hole.

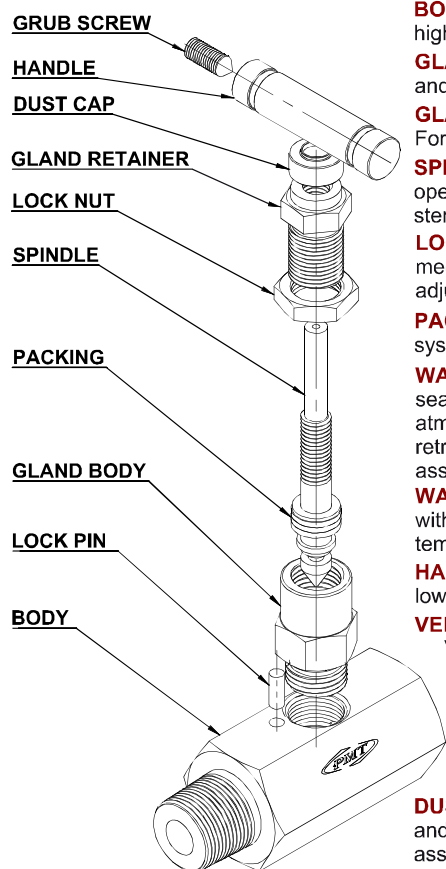
### Reassembly

4. Tighten the panel nut onto the valve bonnet. Keep the panel nut always on the external portion of the panel.
5. Finger tighten the packing nut onto the valve body.
6. Place the round handle on the stem. Align the set screw with the groove on the side of the stem. Tighten the set screw.
7. Fully close the valve and retract the stem two or three turns before torque the packing nut to the torque below.



## Design & Materials of Construction:

### HARD SEAT DESIGN



**BODY** : Forged one piece body construction (no welding) for high strength.

**GLAND BODY** : For maximum packing stability and performance.

**GLAND RETAINER** : Standard Construction For maximum pressure rating.

**SPINDLE** : Designed for low torque operating with high quality micro mirror stem finish for positive gland sealing.

**LOCK NUT** : A secure anti vibration locking mechanism to prevent inadvertent gland adjuster loosening.

**PACKING** : PTFE stem packing seals the system fluid to atmosphere.

**WASHER PACKING (OPTIONAL)** : Annealed sealing washer to ensure complete atmospheric leakage and allowing on site retro-fit of bonnet with 100% re-sealing assurance.

**WASHER (OPTIONAL)** : Metal to metal seal with body suitable for high pressure temperature applications.

**HANDLE** : Removable T-bar handle aids low torque operation.

**VEE TIP** : Self centering, non-rotational VEE tip gives successive positive bubble tight shut off assuring the user of leakage free performance and downstream functional safety.

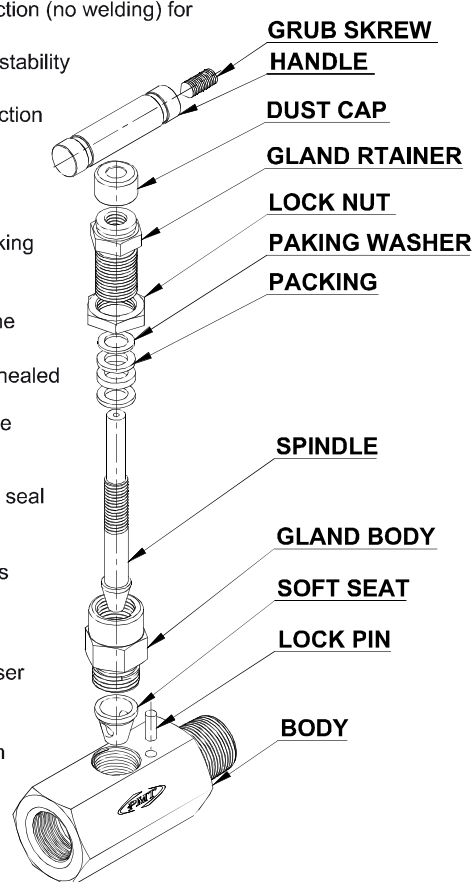
**LOCK PIN** : Safety bonnet lock pin prevents accidental disassembly.

**DUST CAP** : Prevents contamination and lubricant washout of bonnet assembly.

**SOFT SEAT** : PTFE & Delrin Seat to ensure a tight-shut off even in abrasive process conditions.

**GRUB SCREW** : For locking the handle.

### SOFT SEAT DESIGN



### MATERIALS OF CONSTRUCTION

ITEM NO.	PART NAME	MATERIALS	QTY.
1	BODY	A479-316L/A-105	1
2	GLAND BODY	A479-316L/A-105	1
3	GLAND RETAINER	A479-316L/A-105	1
4	SPINDLE	A479-316L/304L	1
5	WASHER (OPTIONAL)	A479-316L/304L	1
6	PACKING	PTFE/GRAPHOIL	3
7	PACKING WASHER	SS 316/304	1
8	LOCK NUT	A479-316L/A-105	1
9	HANDLE	SS 304/CS	1
10	GRUB SCREW	STEEL	1
11	DUST CAP	PLASTIC LD	1
12	VEE TIP (OPTIONAL)	A564-630	1
13	LOCK PIN	SS 304/CS	1
14	VENT PLUG (OPTIONAL)	A479-316L/A-105	1
15	SOFT SEAT (OPTIONAL)	POM	1

### Factory test :-

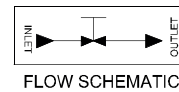
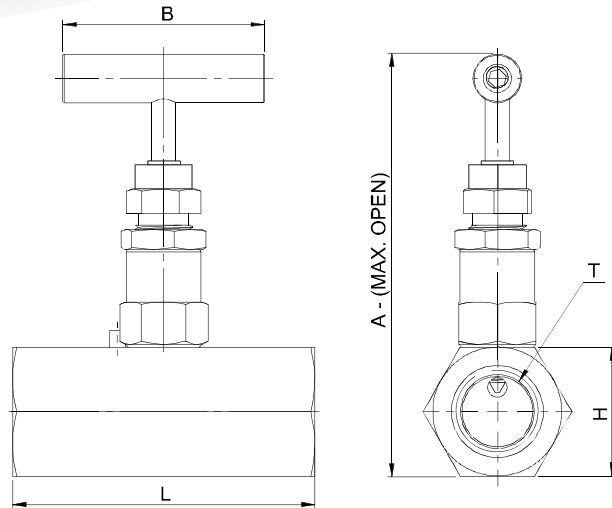
**Standard Test** : Each valve is factory tested with nitrogen at 1000 psig (69 bar) for leakage at the seat and packing, the maximum allowable leak rate of 0.1 sccm.

**Optional Hydrostatic test** : This test is performed with pure water water at 1.5 time the working pressure. Other tests like vibration, temperatures, helium etc are available upon requests.

### Packaging :-

All exposed threads of the products are Protected with plastic caps to prevent damage and each assembly is packed in sealed and clear polyethylene bag for cleanliness and carefully packed in cardboard boxes to prevent transit damage. Each and every package is labeled for proper and easy identification.

## FEMALE x FEMALE



PART NUMBER	T (FEMALE x FEMALE)	LENGTH HEX		HT OPEN	HANDLE B
		L	H	A	
HXV-SS-S-4FF	1/4"	55	25	96	50
HXV-SS-S-6FF	3/8"	55	25	96	50
HXV-SS-S-8FF	1/2"	70	32	103	50
HXV-SS-S-12FF	3/4"	70	36	107	50
HXV-SS-S-16FF	1"	80	45	120	60

### Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

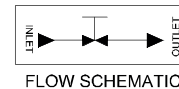
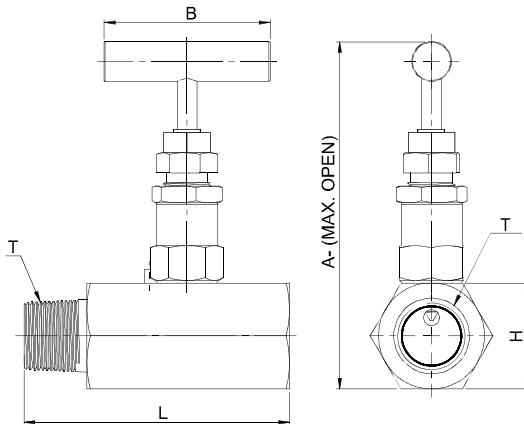
**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

**Connection** : Screwed / Welded

**Handle** : Removable

## MALE x FEMALE



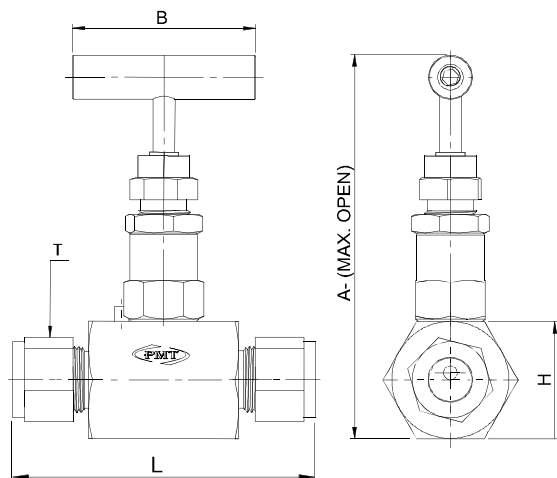
PART NUMBER	T (MALE x FEMALE)	LENGTH HEX		HT OPEN	HANDLE B
		L	H	A	
HXV-SS-S-4MF	1/4"	60	25	96	50
HXV-SS-S-6MF	3/8"	60	25	96	50
HXV-SS-S-8MF	1/2"	80	32	103	50
HXV-SS-S-12MF	3/4"	80	36	107	50
HXV-SS-S-16MF	1"	95	45	120	60

### Note :-

• Other combination sizes available on request. Please contact factory for more details.

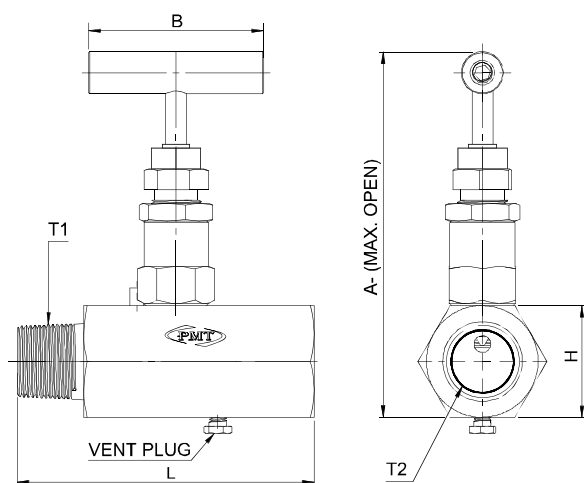


## TUBE END



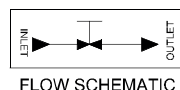
PART NUMBER	T (TUBE END)	LENGTH	HEX	HT OPEN	HANDLE
		L	H	A	B
HXV-SS-S-4TE	1/4"	70	25	96	50
HXV-SS-S-6TE	3/8"	72	25	96	50
HXV-SS-S-8TE	1/2"	76	32	103	50
HXV-SS-S-12TE	3/4"	76	36	107	50

## MALE x FEMALE WITH VENT



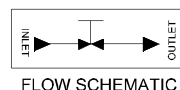
PART NUMBER	T1	T2	LENGTH	HEX	HT OPEN	HANDLE
	MALE	FEMALE	L	H	A	B
HXV-SS-S-8MFV	1/2"	1/2"	85	32	103	50
HXV-SS-S-8M12FV	1/2"	3/4"	85	32	103	50

DS-LOK Hex type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



### Specifications :-

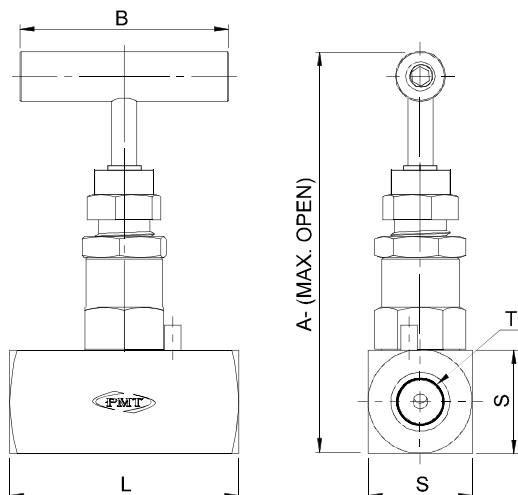
<b>Max. Pressure</b>	: 6,000 psi (413 bar) @100°F (38°C) 10,000 psi (789 bar) @77°F (25°C)
<b>Seat Type</b>	: Soft Seat /Hard Seat
<b>Gland packing</b>	: <b>PTFE</b> : For temp. -73°C (-99.4°F) to 210°C(410°C) <b>Graphoil</b> : For temp. (180°C 356°F) to 540°C (1001°F)
<b>Materials</b>	: Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)
<b>Service Medium</b>	: Liquid Gas or Vapor Service
<b>Steam</b>	: Needle (Standard) Ball tip (optional)
<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable



### Note :-

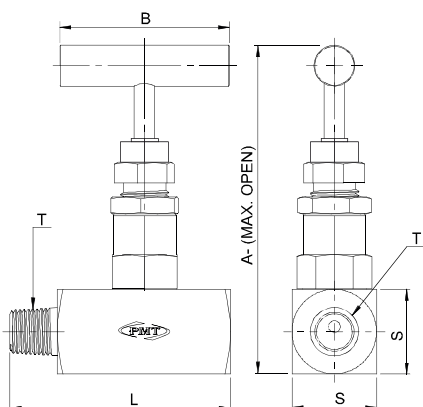
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## FEMALE x FEMALE



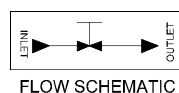
PART NUMBER	T (FEMALE x FEMALE)	LENGTH		HT OPEN		HANDLE B
		L	S	A		
SQV-SS-S-4FF	1/4"	55	25	96	50	
SQV-SS-S-6FF	3/8"	55	25	96	50	
SQV-SS-S-8FF	1/2"	65	28	103	50	
SQV-SS-S-12FF	3/4"	70	38	109	50	
SQV-SS-S-16FF	1"	80	45	120	60	

## MALE x FEMALE



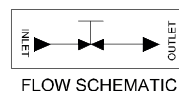
PART NUMBER	T (MALE x FEMALE)	LENGTH		HT OPEN		HANDLE B
		L	S	A		
SQV-SS-S-4MF	1/4"	65	25	96	50	
SQV-SS-S-6MF	3/8"	65	25	96	50	
SQV-SS-S-8MF	1/2"	75	28	103	50	
SQV-SS-S-12MF	3/4"	75	38	109	50	
SQV-SS-S-16MF	1"	95	45	120	60	

DS-LOK Square type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



## Specifications :-

<b>Max. Pressure</b>	: 6,000 psi (413 bar) @100°F (38°C) 10,000 psi (789 bar) @77°F (25°C)
<b>Seat Type</b>	: Soft Seat /Hard Seat
<b>Gland packing</b>	: <b>PTFE</b> : For temp. -73°C (-99.4°F) to 210°C(410°C) <b>Graphoil</b> : For temp. (180°C 356°F) to 540°C (1001°F)
<b>Materials</b>	: Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)
<b>Service Medium</b>	: Liquid Gas or Vapor Service
<b>Steam</b>	: Needle (Standard) Ball tip (optional)
<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable

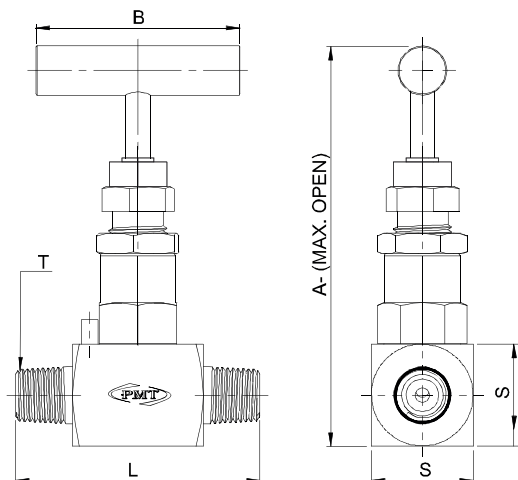


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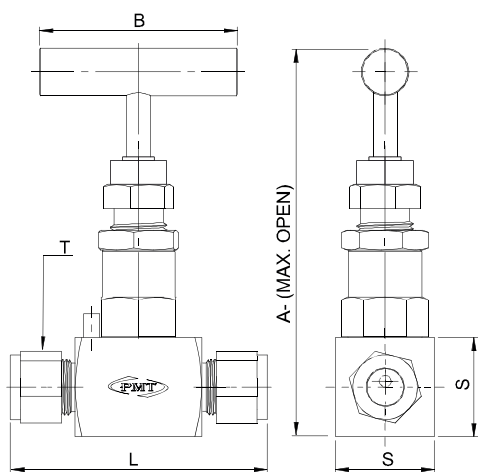


## MALE x MALE



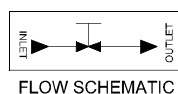
PART NUMBER	T (MALE x MALE)	LENGTH	SQUARE	HTOPEN	HANDLE
		L	S	A	B
SQV-SS-S-4MM	1/4"	65	25	96	50
SQV-SS-S-6MM	3/8"	65	25	96	50
SQV-SS-S-8MM	1/2"	76	28	103	50
SQV-SS-S-12MM	3/4"	80	38	109	50
SQV-SS-S-16MM	1"	95	45	120	60

## TUBE END



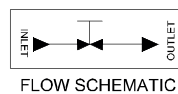
PART NUMBER	T (TUBE END)	LENGTH	SQUARE	HTOPEN	HANDLE
		L	S	A	B
SQV-SS-S-4TE	1/4"	65	25	96	50
SQV-SS-S-6TE	3/8"	65	25	96	50
SQV-SS-S-8TE	1/2"	70	28	103	50
SQV-SS-S-12TE	3/4"	70	38	109	50

DS-LOK Square type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



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<b>Handle</b>	: Removable

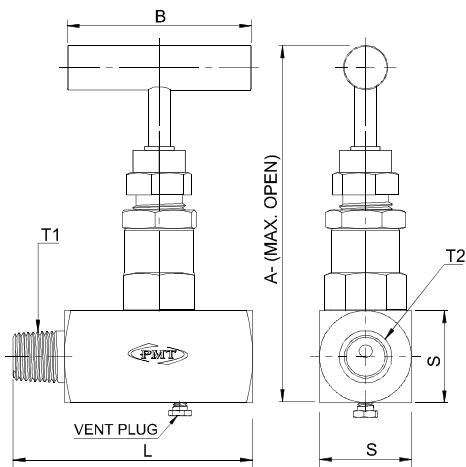


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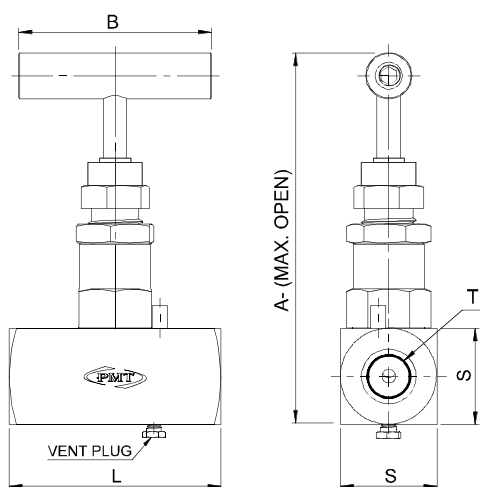


## FEMALE x FEMALE WITH VENT



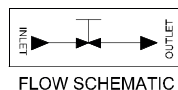
PART NUMBER	T1	T2	LENGTH		SQ.	HT OPEN	HANDLE
	MALE	FEMALE	L	S	A	A	B
SQV-SS-S-8MFV	1/2"	1/2"	85	32	103	50	
SQV-SS-S-12M8FV	3/4"	1/2"	85	32	103	50	

## FEMALE x FEMALE WITH VENT



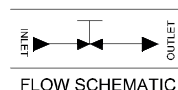
PART NUMBER	T	LENGTH		SQ.	HT OPEN	HANDLE
	(FEMALE x FEMALE)	L	S	A	A	B
SQV-SS-S-8FFV	1/2"	85	32	103	50	
SQV-SS-S-12FFV	3/4"	85	32	103	50	

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<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable

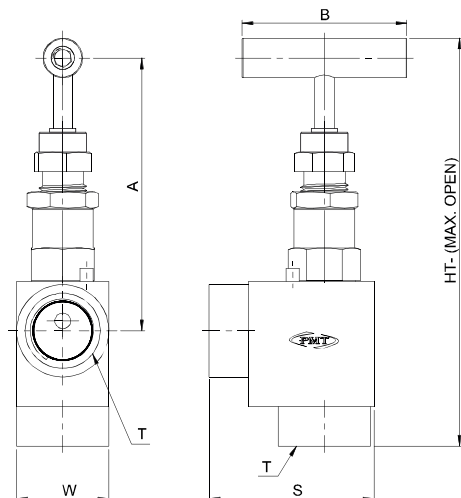


### Note :-

• Other combination sizes available on request. Please contact factory for more details.

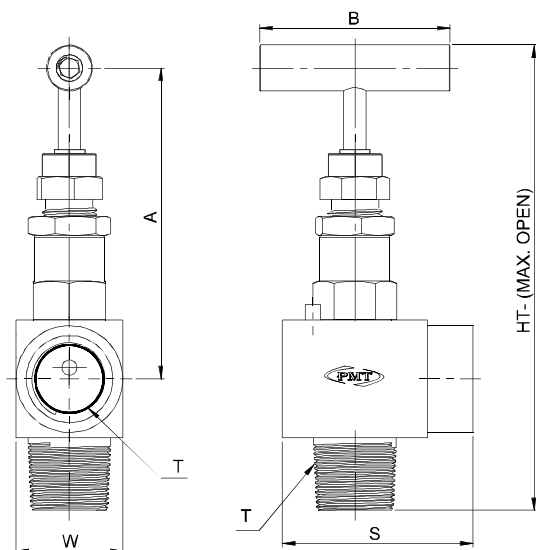


## FEMALE x FEMALE



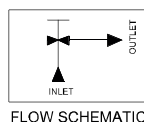
PART NUMBER	T (FEMALE x FEMALE)	S	W	B	A	HT-OPEN
ANV-SS-S-4FF	1/4"	38	25	50	77	109
ANV-SS-S-6FF	3/8"	38	25	50	77	109
ANV-SS-S-8FF	1/2"	50	28	50	80	121

## MALE x FEMALE



PART NUMBER	T (MALE x FEMALE)	S	W	B	A	HT-OPEN
ANV-SS-S-4MF	1/4"	38	25	50	77	109
ANV-SS-S-6MF	3/8"	38	25	50	77	109
ANV-SS-S-8MF	1/2"	50	28	50	80	121

DS-LOK Angle type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

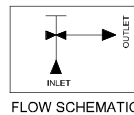
**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

**Connection** : Screwed / Welded

**Handle** : Removable

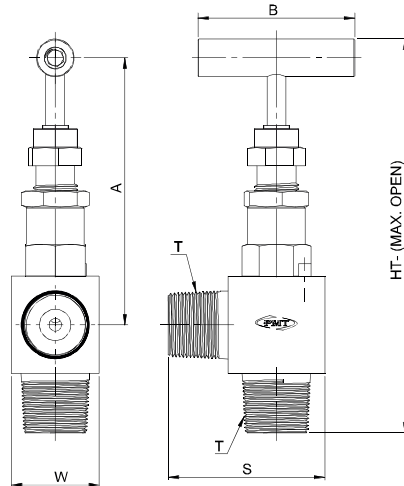


## Note :-

• Other combination sizes available on request. Please contact factory for more details.

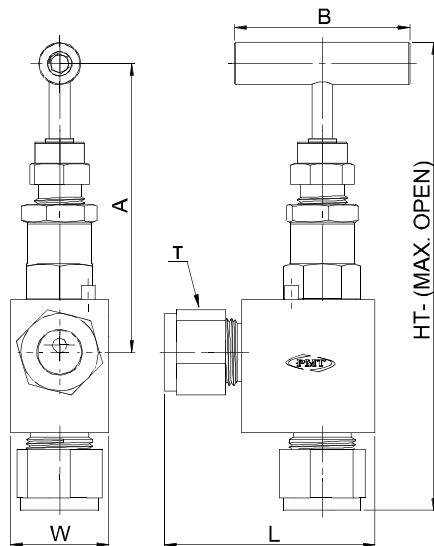


## MALE x MALE



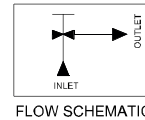
PART NUMBER	T (MALE x MALE)	S	W	B	A	HT-OPEN
ANV-SS-S-4MM	1/4"	38	25	50	77	109
ANV-SS-S-6MM	3/8"	38	25	50	77	109
ANV-SS-S-8MM	1/2"	50	28	50	80	121

## TUBE END



PART NUMBER	T (TUBE END)	L	W	B	A	HT-OPEN
ANV-SS-S-4TE	1/4"	56	25	50	74	129
ANV-SS-S-6TE	3/8"	58	25	50	74	129
ANV-SS-S-8TE	1/2"	60	28	50	80	131

DS-LOK Angle type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

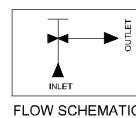
**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

**Connection** : Screwed / Welded

**Handle** : Removable



## Note :-

• Other combination sizes available on request. Please contact factory for more details.



## **High pressure Needle valve :-** **PRESSURE RATING :- 15,000 PSI**

DS-LOK High Pressure Needle Valve 15,000 PSI is designed for leak free closure, regulation and management of fluids in process systems. With a wide variety of port sizes, end connections, style, temperature and pressure tolerance DS-LOK Needle Valve are critical for instrumentation, fluid and process control system.

DS-LOK High Pressure Needle valve can be manufacture up to Working Pressure 15,000 psi & Burst pressure up to 15,000 psi. High Pressure Needle valves are widely used for Severe Service Operation as regulating and shut off type in critical High pressure up to 10,000 psi.

DS-LOK High Pressure Needle valves are available in Steel, Stainless Steel, Brass Materials & can be applicable for Fluid like water, oil, petrol, grease, chemicals, viscous gases. Needle valves can be made in Forged body & also in Solid bar stock body.

DS-LOK Brand Make Needle valves are available in materials like - Steel, Stainless Steel, Steel Phosphatised / Yellow chrometize / trivalent Zinc Blue Passivation.

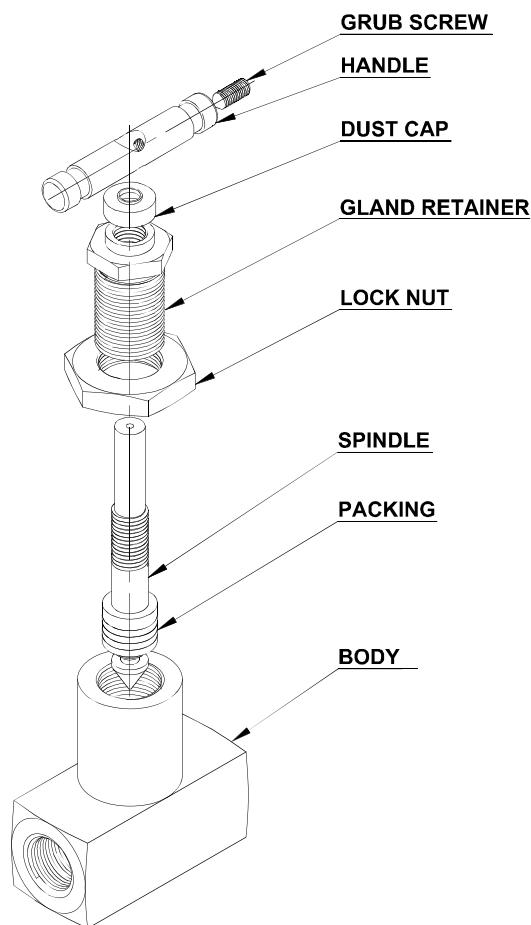
### **High Pressure Needle valve special features :-**

- Valve bodies through 10,000 psi are high tensile Type 316 stainless steel, 15,000 psi valve bodies are 17-4 PH stainless steel.
- Their rugged construction provides assurance of fail-safe operation at pressures ranging to 15,000 PSI (1030 bar).
- Available in a variety of Body styles, the valves are designed for operation at temperatures ranging from -100° to +600°F (-73° to +315°C).
- Stem packing below the threads prevents thread galling & contamination.
- Easy handling even at high pressure (switching through 90°)
- Low torque operating T bar handle..

### **Features :-**

- Materials include high tensile type 316 stainless steel.
- One piece bonnet with a metal to metal seal to the valve body below the bonnet threads.
- Non-rotating stem and bar stock body design.
- Easy to assemble and replace packing.
- Bonnet lock pin to prevent accidental loosening.
- Dust caps are fitted to contain stem lubricant and prevent the ingress of contaminants.
- The stem threads are rolled and lubricated to prevent galling and reduce operating torque.
- The material of packing gland and upper stem have been selected to achieve reduced handle torque and extended thread cycle life.
- 100% factory test. Every valve is tested with nitrogen for leak-tight performance at its maximum working pressure.

## Design & Materials of Construction:-



### MATERIALS OF CONSTRUCTION

ITEM NO.	PART NAME	MATERIALS	QTY.
1	BODY	A479-316L/A-105	1
2	SPINDLE (STEM)	A479-316L/A-105	1
3	GLAND RETAINER	A479-316L/A-105	1
4	LOCK NUT	A479-316L/A-105	1
5	HANDLE	SS 304/CS	1
6	PACKING	PTFE	3
7	PACKING WASHER	A479-316L/A-105	2
8	GRUB SCREW	STEEL	1
9	FLOATING CONICAL TIP	A564-630	1
10	DUST CAP	PLASTIC	1

Forged one piece body construction (no welding) for high strength.

Standard Construction For maximum pressure rating.

Designed for low torque operating with high quality micro mirror stem finish for positive gland sealing.

A secure anti vibration locking mechanism to prevent inadvertent gland adjuster loosening.

PTFE stem packing seals the system fluid to atmosphere.

Removable T-bar handle aids low torque operation.

Self centering, non-rotational VEE tip gives successive positive bubble tight shut off assuring the user of leakage free performance and down stream functional safety.

Prevents contamination and lubricant washout of bonnet assembly.

For locking the handle.

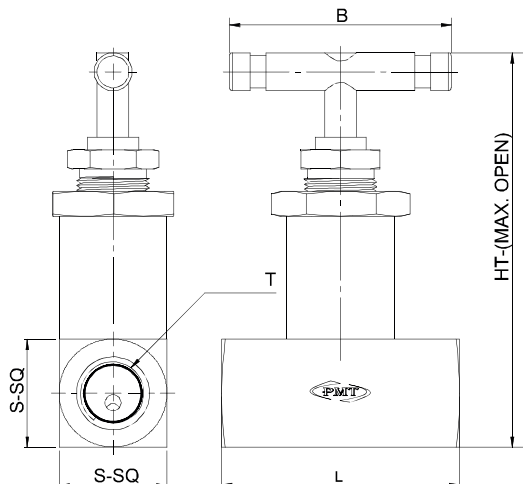
### Testing :-

Each valve is Hydrostatically tested in accordance with MSS-SP-99. This procedure includes testing of the body cavity. Hydrostatic test is performed with pure water or other liquid of similar or lower viscosity at 1.5 times and seat leakage test at 1.1 times of the maximum working pressure. Other tests like vibration, temperatures, helium etc are available upon requests.

### Packaging :-

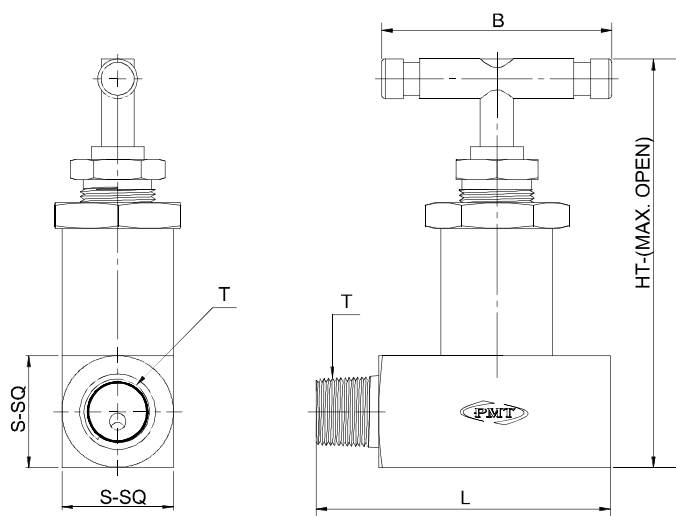
All exposed threads of the products are Protected with plastic caps to prevent damage and each assembly is packed in sealed and clear polyethylene bag for cleanliness and carefully packed in cardboard boxes to prevent transit damage. Each and every package is labeled for proper and easy identification.

## FEMALE x FEMALE



PART NUMBER	T (FEMALE x FEMALE)	ORIFICE	L	S-SQ	B	HT-OPEN
HP20-SS-S-4FF	1/4"	5mm	55	25	60	86
HP20-SS-S-6FF	3/8"	5mm	55	28	60	86
HP20-SS-S-8FF	1/2"	5mm	75	34	70	98
HP20-SS-S-12FF	3/4"	5mm	80	38	70	98

## MALE x FEMALE



PART NUMBER	T (MALE x FEMALE)	ORIFICE	L	S-SQ	B	HT-OPEN
HP20-SS-S-4MF	1/4"	3.5mm	60	25	60	86
HP20-SS-S-6MF	3/8"	3.5mm	60	28	60	86
HP20-SS-S-8MF	1/2"	4.8mm	82	34	70	98
HP20-SS-S-12MF	3/4"	6.4mm	87	38	70	98

DS-LOK High pressure Needle valve with hard seat and are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 1".

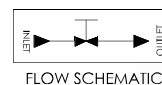


## Specifications :-

<b>Max. Pressure</b>	: 10,000 psi (789 bar) @100°F (38°C) 15,000 psi (1034 bar) @77°F (25°C)
<b>Seat Type</b>	: Hard Seat
<b>Gland packing</b>	: <b>PTFE</b> : For temp. -73°C (-99.4°F) to 210°C(410°C) <b>Graphoil</b> : For temp. (180°C 356°F) to 540°C (1001°F)
<b>Materials</b>	: Stainless Steel (316L, 316, 304, 304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)
<b>Service Medium</b>	: Liquid Gas or Vapor Service
<b>Steam</b>	: Needle (Standard) Ball tip (optional)
<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable

### Note :-

Other combination sizes available on request. Please contact factory for more details.



## LOW TEMPERATURE NEEDLE VALVE

**BODY** : Forged one piece body construction (no welding) for high strength.

**GLAND BODY** : For maximum packing stability and performance.

**SPINDLE** : Designed for low torque operating with high quality micro mirror stem finish for positive gland sealing.

**GLAND NUT** : A secure anti vibration locking mechanism to prevent inadvertent gland adjuster loosening.

**GLAND BUSH** : Annealed sealing washer to ensure complete atmospheric leakage and allowing on site retro-fit of bonnet with 100% re-sealing assurance.

**PACKING** : PTFE stem packing seals the system fluid to atmosphere.

**HANDLE** : Removable T-bar handle aid low torque operation.

**LOCK PIN** : Safety bonnet lock pin prevents accidental disassembly.

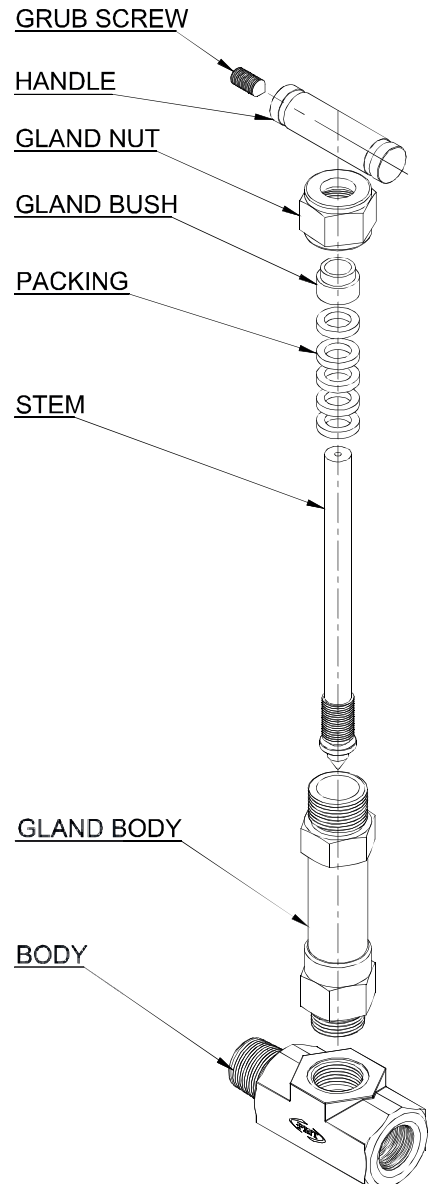
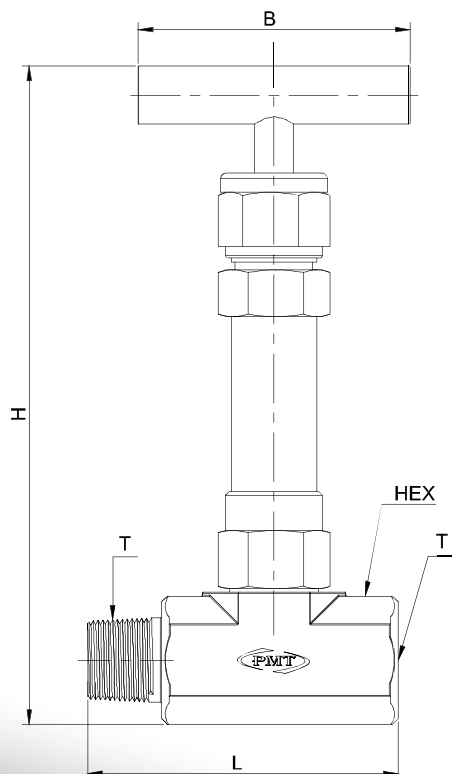
**DUST CAP** : Prevents contamination and lubricant washout of bonnet assembly.

**SOFT SEAT** : PTFE & Delrin Seat to ensure a tight-shut off even in abrasive process conditions.

**GRUB SCREW** : For locking the handle.

### Features:-

- Upper packing provides secondary containment system above the bellows
- Hydraulic-formed multilayer bellows enhanced cycle life
- Non-rotating stem tip eliminates galling within the seat area
- Strictly controlled bellows stroke to improve safety and cycle life
- Suitable to working temperature °F (°C) -321 (-196) to 176 (80)
- Suitable to working Pressure, psig (bar) 6000 (413)



PART NUMBER	T (MALE x FEMALE)	ORIFICE	L	HEX	B	HT-OPEN
CRNV-SS-S-4MF	1/4"	3.5mm	60	25	60	152
CRNV-SS-S-6MF	3/8"	3.5mm	60	28	60	152
CRNV-SS-S-8MF	1/2"	4.8mm	80	34	70	190
CRNV-SS-S-12MF	3/4"	6.4mm	80	38	70	190
CRNV-SS-S-16MF	1"	6.4mm	95	45	70	230

## HIGH TEMPERATURE NEEDLE VALVE

**BODY** : Forged one piece body construction (no welding) for high strength.

**GLAND BODY** : For maximum packing stability and performance.

**GLAND NUT** : Standard Construction For maximum pressure rating.

**STEM** : Designed for low torque operating with high quality micro mirror stem finish for positive gland sealing.

**PANEL NUT** : A secure anti vibration locking mechanism to prevent inadvertent gland adjuster loosening.

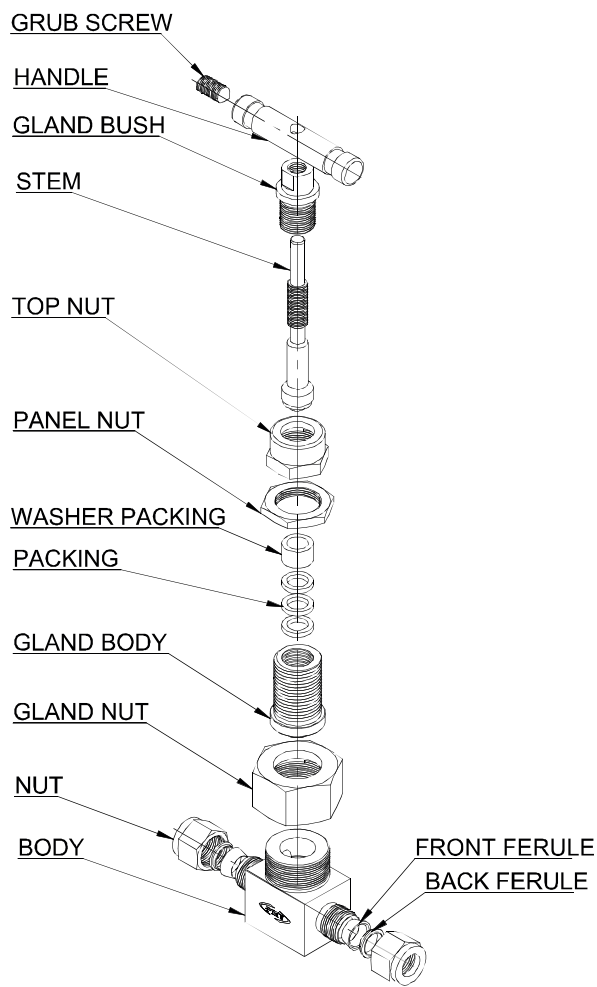
**PACKING** : PTFE stem packing seals the system fluid to atmosphere.

**WASHER PACKING** : Annealed sealing washer to ensure complete atmospheric leakage and allowing on site retro-fit of bonnet with 100% re-sealing assurance.

**GLAND BUSH** : Metal to metal seal with body suitable for high pressure temperature applications.

**HANDLE** : Removable T-bar handle aids low torque operation.

**GRUB SCREW**: For locking the handle.



### Features :-

- Material: 316SS, Titanium, Other Material on request.
- Working Pressure: upto 10000 psi (689 bar)
- Working Temperature : -65°F to 1200°F (-53°C to 648°C)
- End Connection Type : Metric and Fractional tube fittings, NPT threads, ISO/BSP threads, Weldend
- End Connection Size : 1/8" to 3/4" and 3mm to 20mm

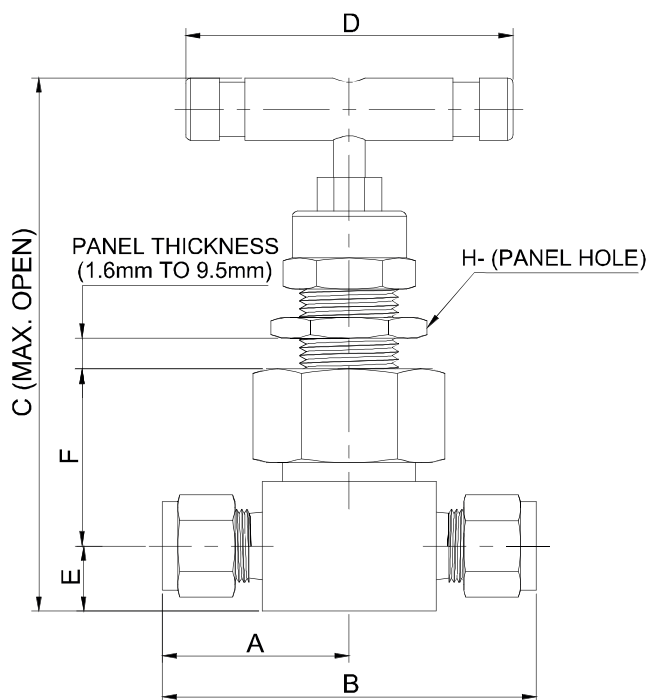
### Order info

A	Body Material	B	Valve Series	C	DN	D	End Connection Type						
	316 = 316 SS		N4 = Union-bonnet Needle Valve		4 = 4.0mm		M = Metric Tube Fitting						
	304 = 304 SS				6 = 6.0mm		F = Fractional Tube Fitting						
	321 = 321 SS				10 = 10.0mm		MTB = Metric Butt Weld						
	TI = Titanium						TB = Fractional Butt Weld						
	400 = Alloys 400						MTS = Metric Socket Weld						
	C276 = Alloys C-276					TS = Fractional Socket Weld							
							UMB = Union Butt Weld						
E	End Connection Size												
Code	2	3	4	6	8	10	12	14	16	18	20	22	25
Fractional	1/8 in.		1/4 in.	3/8 in.	1/2 in.		3/4 in.		1 in.				
Metric		3mm			8mm	10mm	12mm	14mm	16mm	18mm	20mm	22mm	25mm

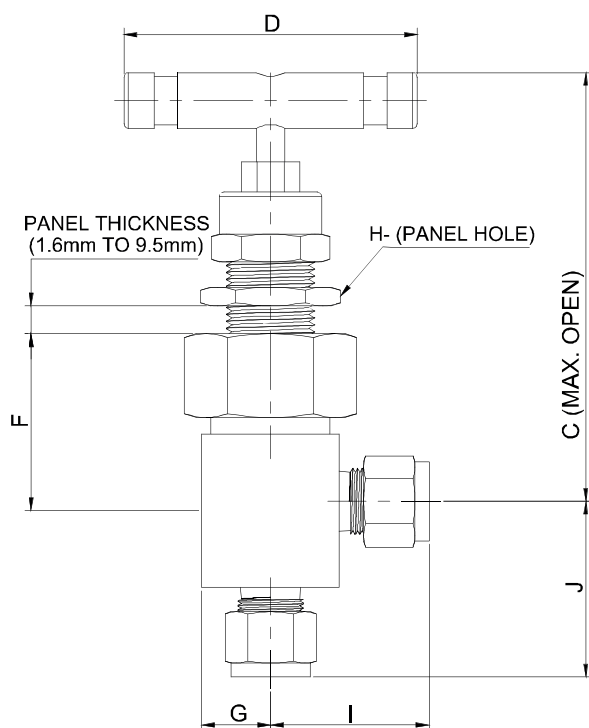
Straight 2-way type is standard for N4 series Needle valve add A as a suffix if angle type is required e.g. : 316-N4 10-F8-A



## STRAIGHT



## ANGLE



End Connection Inlet / Outlet	Size	DN (mm)	Cv	Size (mm)									
				A	B	C	D	E	F	G	H	I	J
Fractional Tube fitting	3/8 in.	6.0	0.86	35.8	71.6	94.0	65.0	12.7	34.5	12.7	19.8	32.8	42.2
	1/2 in.			38.6	77.2							35.6	41.9
	3/4 in.	10.0	2.18	49.8	99.6							123.0	75.0
Metric Tube Fitting	10mm	6.0	0.86	36.1	72.2	94.0	65.0	12.7	34.5	12.7	19.8	33.0	39.4
	12mm			38.6	77.2							35.6	41.9
		10.0	2.18	49.8	99.6							123.0	75.0
Metric Socket Weld	10mm	6.0	0.86	28.4	56.8	94.0	65.0	12.7	34.5	12.7	19.8	25.4	28.4
	14mm			39.6	79.2							33.3	42.9
	16mm	10.0	2.18	49.8	99.6							123.0	75.0
NPT(F)	1/4 in.	6.0	0.86	28.4	56.8	94.0	65.0	12.7	34.5	12.7	19.8	25.4	28.4
	3/8 in.			39.6	79.2							33.3	42.9
	1/2 in.	10.0	2.18	41.1	82.2							123.0	75.0
NPT(F)	3/4 in.	10.0	2.18	39.6	79.2	123.0	75.0	19.8	43.5	17.5	22.8	33.3	42.9
				41.1	82.2							-	-

## **MINI NEEDLE VALVE - SOFT SEAT**

**PRESSURE RATING :- 6,000 PSI /10,000 PSI**

DS-LOK Mini Needle Valves are specially designed and ruggedly manufactured for use in corrosive & hazardous environment. These valves are excellent for both throttling and straight isolation in process and flow control application. These Valves are precision machined, designed durability and maximum efficiency to provide high quality and low cost alternatives in fluid and gaseous control systems of different applications, to meet the exacting standards of our growing and demanding customers.

### **Standard features for hard seat & soft seat valves :-**

Stem and bonnet threads are rolled for greater strength and smoother operation.

All 316SS stems (even in steel valves) for longer life.

Viton® O-Ring & Teflon® back-up ring stem seals.

Stem packing below the threads prevents thread galling and contamination.

One piece bonnet with a metal to metal seal to the valve body below the bonnet threads.

Bonnet lock pin to prevent accidental loosening.

Dust caps are fitted to contain stem lubricant and prevent the ingress of contaminants.

Replaceable Graphoil/PTFE seat.

Low torque operating T bar handle.

The stem threads are rolled and lubricated to prevent galling and reduce operating torque.

Stem packing below the threads prevents thread galling & contamination.

Patented body-to-bonnet, metal-to-metal seal is designed to significantly increase the pressure range of the valve without compromising the flow, and help maintain the integrity of the bonnet threads by segregating them from the process media.

100% factory test. Every valve is tested with nitrogen for leak-tight performance at its maximum working pressure.

### **Soft Seat valve feature :-**

Soft seat design is 100% Helium leak tested to  $1 \times 10^{-4}$  ml/s at 200 psi.

6,000 psi pressure rating (@ 100°F maximum)

Replaceable Delrin seat.

Straight through porting for bi-directional, high capacity flow and easy roddable cleaning.

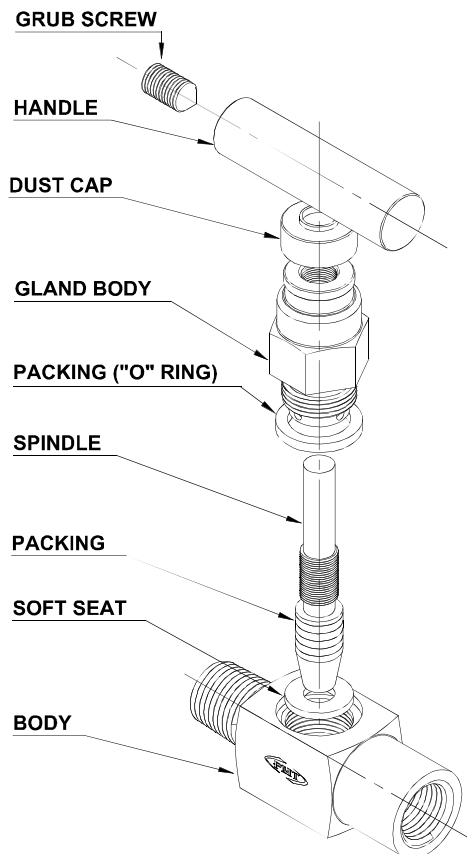
### **Hard Seat valve feature :-**

Metal to metal hard seat design is 100% Helium leak tested to  $1 \times 10^{-4}$  ml/s at 200 psi.

10,000 psi pressure rating (@ 100°F maximum)

Replaceable Delrin seat.

## MINI NEEDLE VALVE - SOFT SEAT



### MATERIALS OF CONSTRUCTION

ITEM NO.	PART NAME	MATERIALS	QTY.
1	BODY	A479-316L/A-105	1
2	SPINDLE	A479-316L/304L	1
3	GLAND BODY	A479-316L/A-105	1
4	SOFT SEAT (OPTIONAL)	DELRIN/POM	1
5	PACKING	PTFE	2
6	O-RING	VITON	2
7	GLAND BODY O-RING	VITON	1
8	HANDLE	SS 304L/CS	1
9	DUST CAP	PLASTIC LD	1
10	GRUB SCREW	STEEL	1
11	LOCK PIN	SS 304/CS	1

## PRESSURE RATING :- 6,000 PSI

Forged one piece body construction (no-welding) for high strength.

For maximum packing stability and performance.

Designed for low torque operating with high quality micro mirror stem finish for positive gland sealing.

PTFE stem packing seals the system fluid to atmosphere.

Viton O-Ring & Teflon back-up ring stem seals.

Removable T-bar handle aids low torque operation.

PTFE & Delrin Seat to ensure a tight shut off even in abrasive process conditions.

Prevents contamination and lubricant washout of bonnet assembly.

For locking the handle.

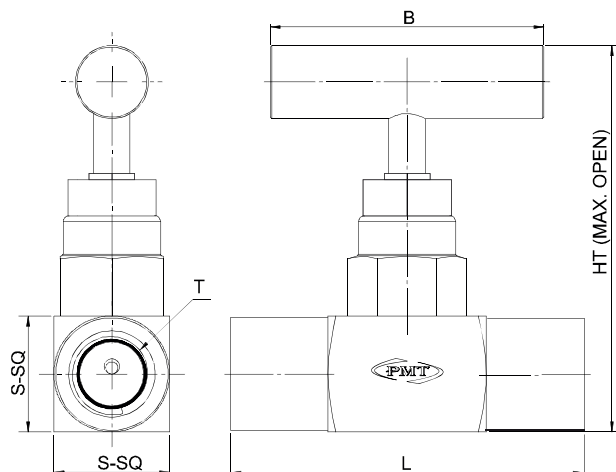
## Testing

Soft seat design is 100% Helium leak tested to  $1 \times 10^{-4}$  ml/s at 200 psi. 6,000 psi pressure rating (@ 100°F maximum) Other tests like vibration, temperatures, helium etc are available upon requests.

## Packaging

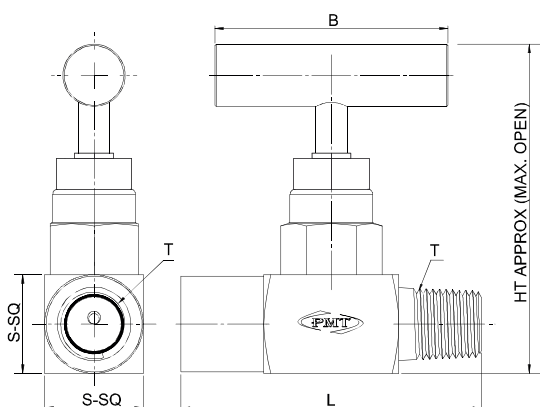
All exposed threads of the products are Protected with plastic caps to prevent damage and each assembly is packed in sealed and clear polyethylene bag for cleanliness and carefully packed in cardboard boxes to prevent transit damage. Each and every package is labeled for proper and easy identification.

## FEMALE x FEMALE



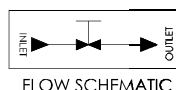
PART NUMBER	T (FEMALE x FEMALE)	L	S-SQ	B	HT-OPEN
SQMNV-SS-S-4FF	1/4"	55	19	46	64.5
SQMNV-SS-S-6FF	3/8"	55	25	46	70.5
SQMNV-SS-S-8FF	1/2"	60	28	50	73.5
SQMNV-SS-S-12FF	3/4"	60	35	50	80.5

## MALE x FEMALE



PART NUMBER	T (MALE x FEMALE)	L	S-SQ	B	HT-OPEN
SQMNV-SS-S-4MF	1/4"	58	19	46	64.5
SQMNV-SS-S-6MF	3/8"	58	25	46	70.5
SQMNV-SS-S-8MF	1/2"	65	28	50	73.5
SQMNV-SS-S-12MF	3/4"	65	35	50	80.5

DS-LOK Square type Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

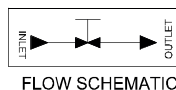
**Materials** : Stainless Steel (316L, 316, 304, 304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

**Connection** : Screwed / Welded

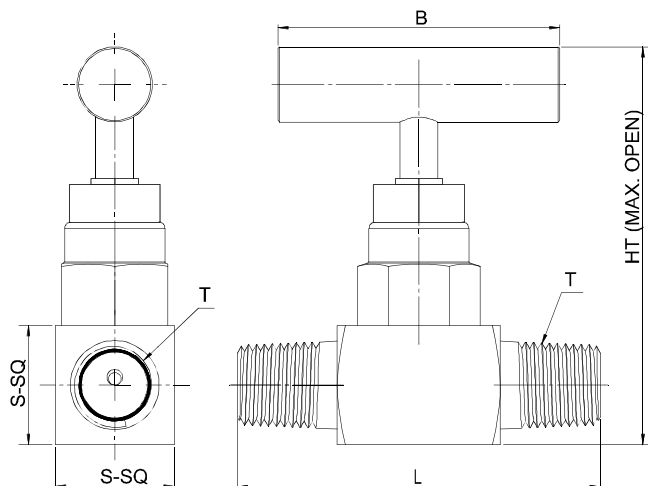
**Handle** : Removable



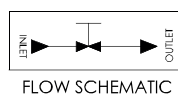
## Note :-

Other combination sizes available on request. Please contact factory for more details.

## MALE x MALE



DS-LOK Square type Mini Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines in small diameter piping systems. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" tp 3/4".



PART NUMBER	T (MALE x MALE)	LENGTH	SQUARE	HTOPEN	HANDLE
		L	S	A	B
SQMNV-SS-S-4MM	1/4"	55	19	64.5	46
SQMNV-SS-S-6MM	3/8"	55	25	70.5	46
SQMNV-SS-S-8MM	1/2"	60	28	73.5	50
SQMNV-SS-S-12MM	3/4"	60	35	80.5	50

## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

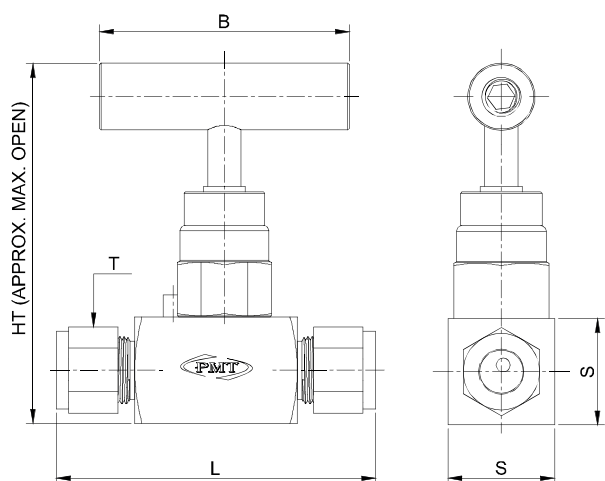
**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

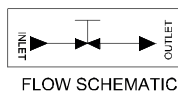
**Connection** : Screwed / Welded

**Handle** : Removable

## TUBE END



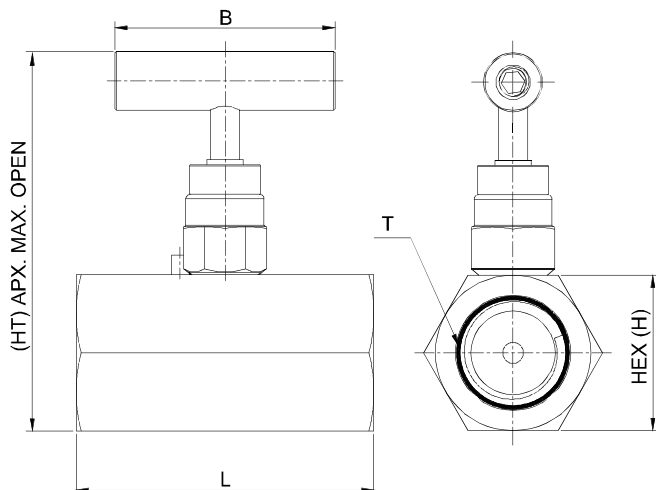
PART NUMBER	T (TUBE END)	LENGTH	SQUARE	HTOPEN	HANDLE
		L	S	A	B
SQMNV-SS-S-4TE	1/4"	58	19	64.5	46
SQMNV-SS-S-6TE	3/8"	58	25	70.5	46
SQMNV-SS-S-8TE	1/2"	65	28	73.5	50
SQMNV-SS-S-12TE	3/4"	65	35	80.5	50



## Note :-

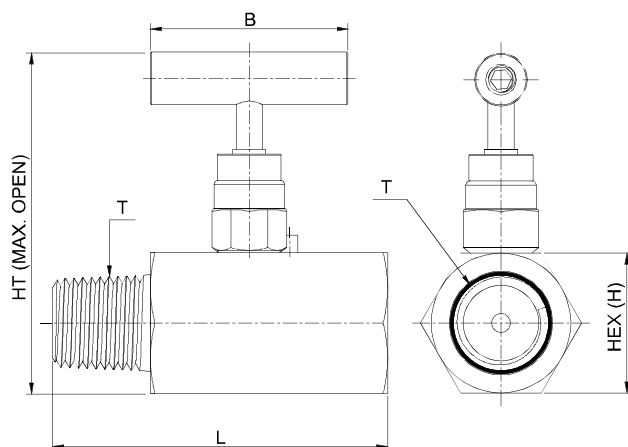
• Other combination sizes available on request. Please contact factory for more details.

## FEMALE x FEMALE



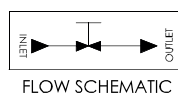
PART NUMBER	T (FEMALE x FEMALE)	LENGTH L	HEX H	HT OPEN A	HANDLE B
HXMNV-SS-S-4FF	1/4"	53	25	79.5	46
HXMNV-SS-S-6FF	3/8"	53	25	79.5	46
HXMNV-SS-S-8FF	1/2"	75	32	82.7	50
HXMNV-SS-S-12FF	3/4"	75	36	84.7	50

## MALE x FEMALE



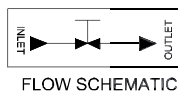
PART NUMBER	T (MALE x FEMALE)	LENGTH L	HEX H	HT OPEN A	HANDLE B
HXMNV-SS-S-4MF	1/4"	60	25	79.5	46
HXMNV-SS-S-6MF	3/8"	60	25	79.5	46
HXMNV-SS-S-8MF	1/2"	80	32	82.7	50
HXMNV-SS-S-12MF	3/4"	80	36	84.7	50

DS-LOK Hex type Mini Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines in small diameter piping systems. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" tp 3/4".



### Specifications :-

<b>Max. Pressure</b>	: 6,000 psi (413 bar) @100°F (38°C) 10,000 psi (789 bar) @77°F (25°C)
<b>Seat Type</b>	: Soft Seat /Hard Seat
<b>Gland packing</b>	: <b>PTFE</b> : For temp. -73°C (-99.4°F) to 210°C(410°C) <b>Graphoil</b> : For temp. (180°C 356°F) to 540°C (1001°F)
<b>Materials</b>	: Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)
<b>Service Medium</b>	: Liquid Gas or Vapor Service
<b>Steam</b>	: Needle (Standard) Ball tip (optional)
<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable

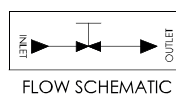
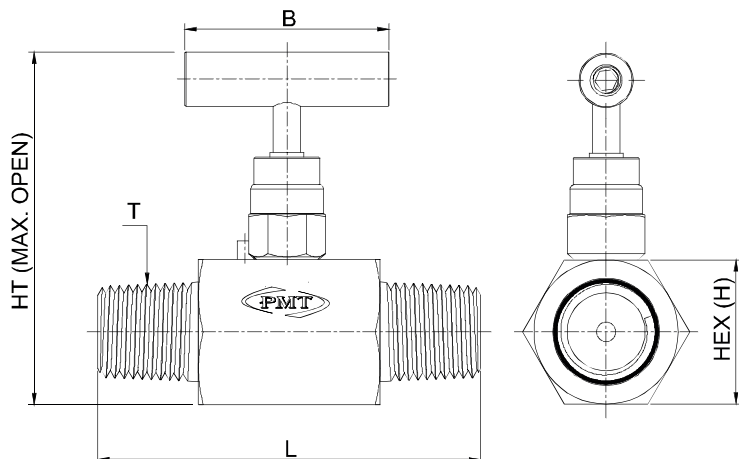


### Note :-

• Other combination sizes available on request. Please contact factory for more details.



## MALE x MALE



DS-LOK Hex type Mini Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines in small diameter piping systems. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" tp 3/4".

PART NUMBER	T (MALE x MALE)	LENGTH L	HEX H	HT OPEN A	HANDLE B
HXMNV-SS-S-4MM	1/4"	53	25	70.5	46
HXMNV-SS-S-6MM	3/8"	53	25	70.5	46
HXMNV-SS-S-8MM	1/2"	75	32	77.5	50
HXMNV-SS-S-12MM	3/4"	75	36	81.5	50

## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

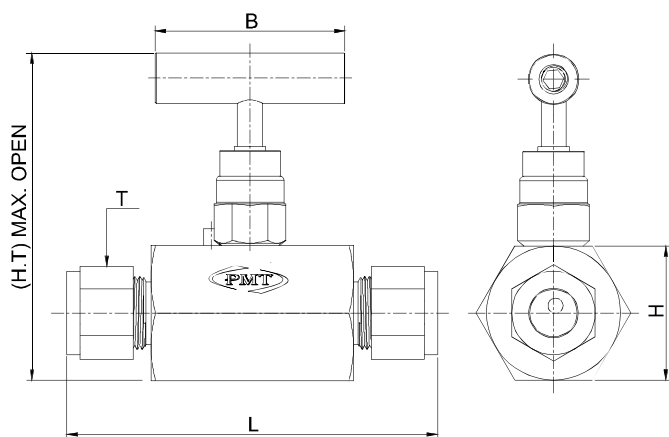
**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

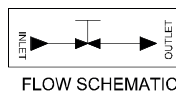
**Connection** : Screwed / Welded

**Handle** : Removable

## TUBE END



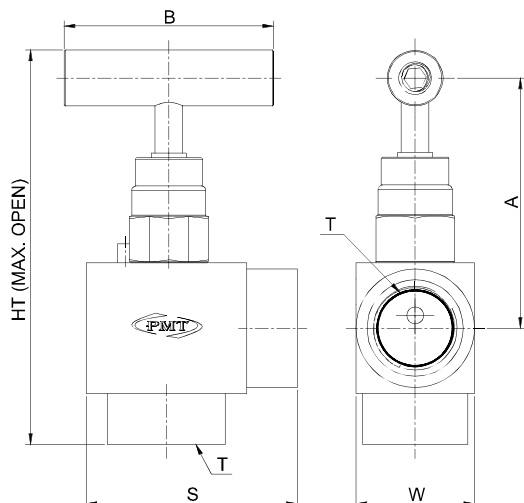
PART NUMBER	T (TUBE END)	LENGTH L	HEX H	HT OPEN A	HANDLE B
HXMNV-SS-S-4TE	1/4"	60	25	70.5	46
HXMNV-SS-S-6TE	3/8"	60	25	70.5	46
HXMNV-SS-S-8TE	1/2"	80	32	77.5	50
HMMNV-SS-S-12TE	3/4"	80	36	81.5	50



## Note :-

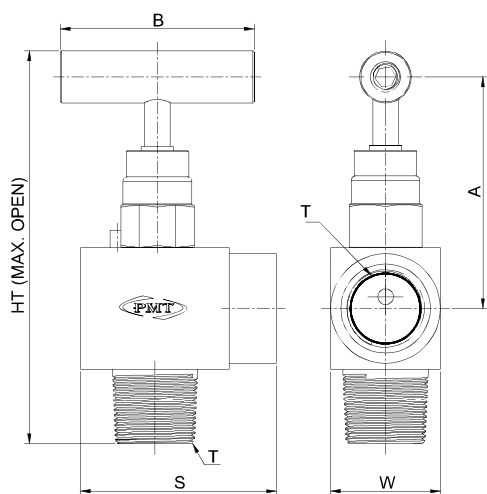
• Other combination sizes available on request. Please contact factory for more details.

## FEMALE x FEMALE



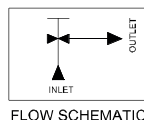
PART NUMBER	T (FEMALE x FEMALE)	S	W	B	A	HT-OPEN
ANMNV-SS-A-4FF	1/4"	38	25	50	69.3	88.3
ANMNV-SS-A-6FF	3/8"	38	25	50	69.3	88.3
ANMNV-SS-A-8FF	1/2"	50	28	50	75.3	100.3

## MALE x FEMALE



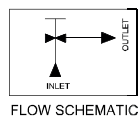
PART NUMBER	T (MALE x FEMALE)	S	W	B	A	HT-OPEN
ANMNV-SS-A-4MF	1/4"	38	25	50	69.3	88.3
ANMNV-SS-A-6MF	3/8"	38	25	50	69.3	88.3
ANMNV-SS-A-8MF	1/2"	50	28	50	75.3	100.3

DS-LOK Angle type Mini Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines in small diameter piping systems. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" tp 3/4".



### Specifications :-

<b>Max. Pressure</b>	: 6,000 psi (413 bar) @100°F (38°C) 10,000 psi (789 bar) @77°F (25°C)
<b>Seat Type</b>	: Soft Seat /Hard Seat
<b>Gland packing</b>	: <b>PTFE</b> : For temp. -73°C (-99.4°F) to 210°C(410°C) <b>Graphoil</b> : For temp. (180°C 356°F) to 540°C (1001°F)
<b>Materials</b>	: Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)
<b>Service Medium</b>	: Liquid Gas or Vapor Service
<b>Steam</b>	: Needle (Standard) Ball tip (optional)
<b>Connection</b>	: Screwed / Welded
<b>Handle</b>	: Removable

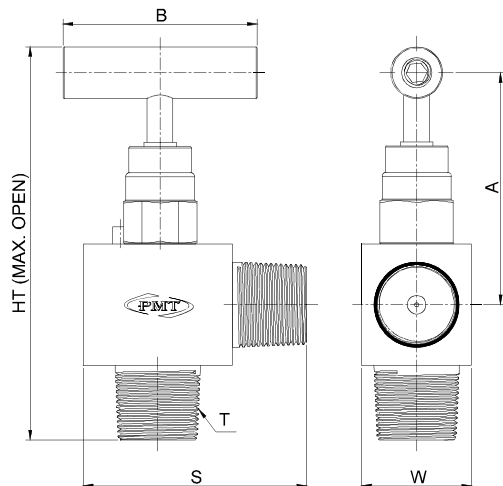


### Note :-

• Other combination sizes available on request. Please contact factory for more details.

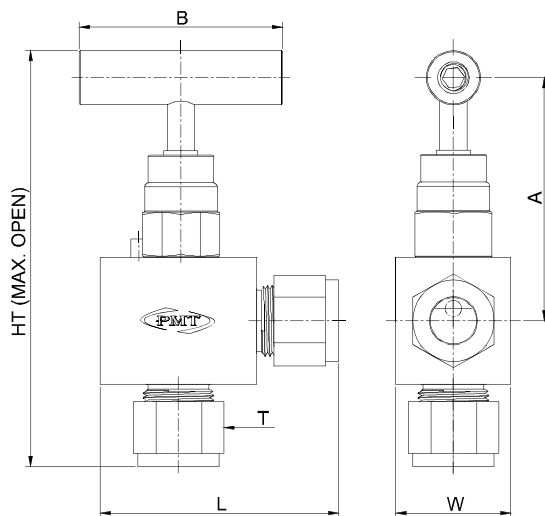


## MALE x MALE



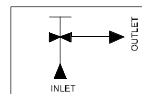
PART NUMBER	T (MALE x MALE)	S	W	B	A	HT-OPEN
ANMNV-SS-A-4MM	1/4"	38	25	50	69.3	88.3
ANMNV-SS-A-6MM	3/8"	38	25	50	69.3	88.3
ANMNV-SS-A-8MM	1/2"	50	28	50	75.3	100.3

## TUBE END



PART NUMBER	T (TUBE END)	L	W	B	A	HT-OPEN
ANMNV-SS-A-4TE	1/4"	53	25	50	76.5	103
ANMNV-SS-A-6TE	3/8"	55	25	50	77.5	105
ANMNV-SS-A-8TE	1/2"	60	28	50	80	110

DS-LOK Angle type Mini Needle valve with hard seat and soft seat are designed for use on applications requiring complete isolate or throttling of the media and for high pressure instrument lines in small diameter piping systems. Ideal for use on gas service and some liquid applications. Available with end connections in size 1/4" to 3/4".



FLOW SCHEMATIC

## Specifications :-

**Max. Pressure** : 6,000 psi (413 bar)  
@100°F (38°C)  
10,000 psi (789 bar)  
@77°F (25°C)

**Seat Type** : Soft Seat /Hard Seat

**Gland packing** : **PTFE** : For temp. -73°C (-99.4°F) to 210°C(410°C)  
**Graphoil** : For temp. (180°C 356°F) to 540°C (1001°F)

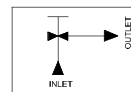
**Materials** : Stainless Steel (316L,316, 304,304L), Monel K400, Monel K500, Inconel-718, carbon Steel, NACE MR-01-75 & NACE MR-01-03 (For Sour gas Service)

**Service Medium** : Liquid Gas or Vapor Service

**Steam** : Needle (Standard)  
Ball tip (optional)

**Connection** : Screwed / Welded

**Handle** : Removable



FLOW SCHEMATIC

## Note :-

• Other combination sizes available on request. Please contact factory for more details.

## HOW TO ORDER

**HXV — SS — S — 4 — M X F — —**

### SERIES TYPE

**HXV** = Hex type needle valve  
**SQV** = Square type needle valve  
**ANV** = Angle type needle valve  
**HPV** = High pressure needle valve  
**HXMNV** = Mini needle valve Hex type  
**SQMNV** = Mini needle valve Square type  
**ANMNV** = Mini needle valve Angle type

### BODY MATERIAL

**CS** = Carbon Steel  
**SS** = 316 Stainless Steel  
**BR** = Brass  
**MN** = Monel

### BODY PATTERN

**S** = Straight  
**A** = Angle

### CONNECTION SIZE

**4** = 1/4" NPT  
**6** = 3/8" NPT  
**8** = 1/2" NPT  
**12** = 3/4" NPT

### SPECIAL CONSTRUCTION OPTIONS

**SN** = Nace MR0175  
**SG** = Gaseous oxygen cleaned  
**SA** = Alternate Connection Size  
**ST** = Tube end connection  
**SC** = Other Special requirements  
 consult factory

### SEAT/PRESSURE RATING

**SF** = Soft Seat/6,000 psi  
**HS** = Hard Seat/10,000 psi

### OUTLET CONNECTION

**F** = Female  
**M** = Male

### INLET CONNECTION

**F** = Female  
**M** = Male

### EXAMPLE: "HXV-SS-S-4MF"

**HXV** = Hex type needle valve  
**SS** = 316 Stainless Steel  
**S** = Straight  
**4** = 1/4" NPT  
**M** = Male Inlet  
**F** = Female Outlet  
**SF\*** = Soft Seat/6,000 psi  
**SN\*** = Nace MR0175



# **DS-LOK**

**INSTRUMENTATION VALVES AND FITTINGS**

By: **PMT**

## **Valves**

- Needle Valves
- Manifold Valves
- In Line Check Valve
- Proportional Relief Valves
- Instrument Ball Valves
- Mono Flange Valves
- Integral Block & Bleed Valves
- Bleed & Purge Valves
- Thermowells
- Pressure gauge Accessories

## **Fittings**

- Tube Fittings
- Pipe Fittings
- High Pressure- Pipe Fittings
- Hydraulic Fittings  
(DIN 2353, JIC Fittings, ORFS Fittings)

## **Forged Steel Valves**

- Forged Steel Globe Valves (Cryogenic Available)
- Forged Steel Gate Valves (Cryogenic Available)
- Forged Steel Lift check Valves
- Forged Steel Ball Valves (Cryogenic Available)