

# Needle Valves - SC Series

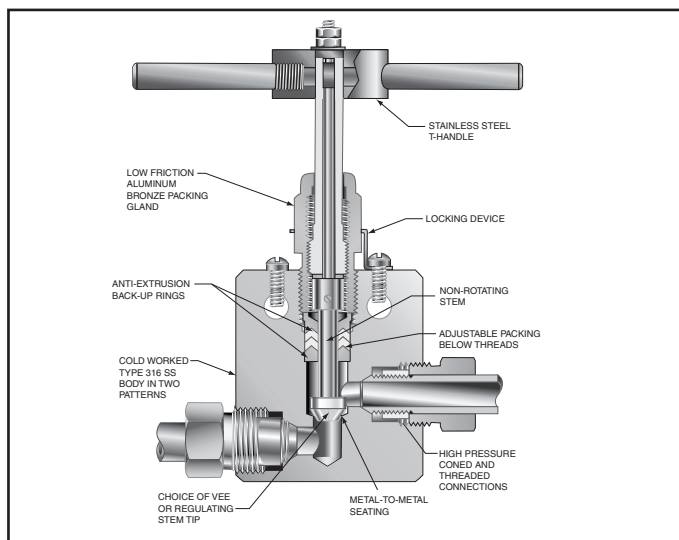
Pressures to 43,000 psi (2965 bar)

Tube Outside Diameter Size Inches	Connection Type	Orifice Size Inches (mm)	Rated $C_v$ *	Pressure Rating psi (bar) @ Room Temperature**
Series 30SC 1	F1000C43	.438 (11.12)	2.6	30,000 (2068)
Series 43SC 1	F1000C43	.438 (11.12)	2.6	43,000 (2965)

## Notes:

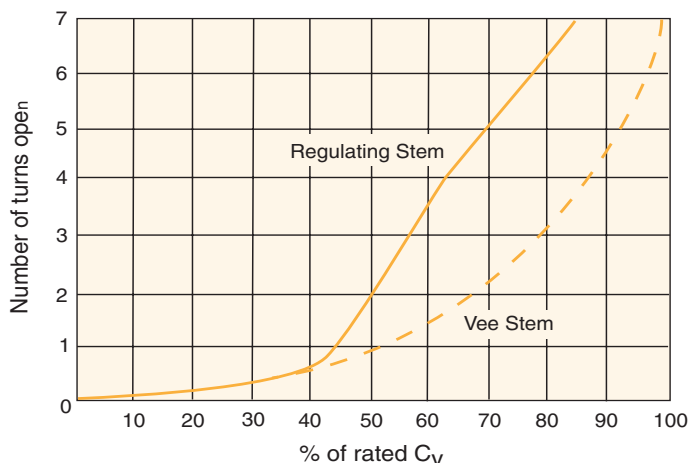
\*  $C_v$  values shown are for 2-way straight valve pattern. For 2-way angle patterns, increase  $C_v$  value 50%.

\*\* For complete temperature ratings see pressure/temperature rating guide in Technical Information section.



To ensure proper fit use Autoclave tubing

Generalized Flow Coefficient Curves ( $C_v$ )



## Ordering Procedure

For complete information on available stem types, optional connections and additional valve options, see Needle Valve Options section or contact your Sales Representative. The 30SC Series valves are furnished complete with connection components, unless otherwise specified.

Typical catalog number: **30SC16071**

30SC	16	07	1	XX
Valve Series	Outside Diameter Tube Size	Stem/Seat Type	Body Pattern	Options
30SC 43SC	16-1"	07 - non-rotating Vee stem (on-off service) 08 - non-rotating regulating stem (tapered tip for regulating and shutoff) 87 - Vee stem with replaceable seat 88 - Regulating stem with replaceable seat	1 - two-way straight 2 - two-way angle	For extreme temperature and other options, see Valve Options.

## Valve Options

### Extreme Temperatures

Standard Autoclave valves with Teflon packing may be operated from 0°F (-17.8°C) to 450°F (232°C). High temperature packing is available for service from -423°F (-252°C) to 1200°F (649°C) by adding the following suffixes to catalog order number.

**TG** - standard valve with Teflon glass packing to 600°F (316°C).

**GY** - standard valve with graphite braided yarn packing to 800°F (427°C).  
8,000 psi (569 bar) max.

**HT** - extended stuffing box valve with graphite braided yarn packing to 1200°F (649°C).

**B** - standard valve with cryogenic trim material and Teflon packing to -100°F (-73°C).

**LT** - extended stuffing box valve with Teflon packing & Cryogenic trim materials to -423°F (-252°C).

**K** - anti-vibration collet and gland assembly.

## Valve Maintenance

**Repair Kits:** add "R" to the front of valve catalog number for proper repair kit.  
(Example: **R30SC16071**)

**Valve Bodies:** Valve bodies are available. Order using the eight (8) digit part number found in the valve drawing or contact your Sales Representative for information.

Consult your Autoclave representative for pricing on repair kits and valve bodies. Refer to the Tools, Installation, Operation and Maintenance section for proper maintenance procedures.

Catalog Number	Stem Type	Outside Diameter Tube	Orifice Diameter	Dimensions - inches (mm)											Block Thickness	Valve Pattern
				A	B	C	D	D <sub>1</sub>	E	F	G	G <sub>1</sub>	H*	M	N	

### 2-Way Straight

30SC16071	VEE	1"	0.438	4.13	2.06	0.72	3.50	2.75	4.44	10.25	1.62	0.56	8.42	1.25	1.12	1.75	See Figure 1
30SC16081	REG	(25.40)	(11.12)	(104.90)	(52.32)	(18.28)	(88.90)	(69.85)	(112.77)	(260.35)	(41.14)	(14.22)	(213.86)	(31.75)	(28.44)	(44.45)	
43SC16071	VEE	1"	0.438	4.88	2.44	0.72	3.50	2.75	4.44	10.25	1.62	0.56	8.42	1.25	1.12	2.25	
43SC16081	REG	(25.40)	(11.12)	(123.96)	(61.96)	(18.28)	(88.90)	(69.85)	(112.77)	(260.35)	(41.14)	(14.22)	(213.86)	(31.75)	(28.44)	(57.15)	

### 2-Way Angle

30SC16072	VEE	1"	0.438	4.13	2.06	0.72	2.75		5.12	10.25	1.62	0.56	9.35	1.25	1.12	1.75	See Figure 2
30SC16082	REG	(25.40)	(11.12)	(104.90)	(52.32)	(18.28)	(69.85)		(130.04)	(260.35)	(41.14)	(14.22)	(237.49)	(31.75)	(28.44)	(44.45)	
43SC16072	VEE	1"	0.438	4.88	2.44	0.72	2.75		5.12	10.25	1.62	0.56	9.35	1.25	1.12	2.25	
43SC16082	REG	(25.40)	(11.12)	(123.96)	(61.96)	(18.28)	(69.85)		(130.04)	(260.35)	(41.14)	(14.22)	(237.49)	(31.75)	(28.44)	(57.15)	

### 2-Way Angle/Replaceable Seat

30SC16872	VEE	1"	0.438	4.13	2.06	0.72	2.75	4.31	5.24	10.25	1.62	0.56	10.56	1.25	1.12	1.75	See Figure 3
30SC16882	REG	(25.40)	(11.12)	(104.90)	(52.32)	(18.28)	(71.37)	(109.47)	(133.35)	(260.35)	(41.14)	(14.22)	(268.22)	(31.75)	(28.44)	(44.45)	
43SC16872	VEE	1"	0.438	4.88	2.44	0.72	2.75	4.31	5.24	10.25	1.62	0.56	10.56	1.25	1.12	2.25	
43SC16882	REG	(25.40)	(11.12)	(123.96)	(61.96)	(18.28)	(71.37)	(109.47)	(133.35)	(260.35)	(41.14)	(14.22)	(268.22)	(31.75)	(28.44)	(57.15)	

G - Packing gland mounting hole drill size

G<sub>1</sub> - Bracket mounting hole size

Panel mounting drill size: 0.22" all valves.

All dimensions for reference only and subject to change.

\*H Dimension is with stem in closed position

For prompt service, Autoclave stocks select products. Consult factory.

