

## HB Series - Needle Valves

Sync-Lok HB Series Needle Valves are specially designed and ruggedly manufactured for use in corrosive & hazardous conditions. Our valves are precision machined for maximum durability & efficiency to provide a high quality, low cost alternative in fluid & gaseous control systems to meet the demands of our customers. All valves are available in high-grade stainless steel, carbon steel, brass & monel. End connections are available in M/F threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered ends.

## Features / Benefits

**Non-Rotating Vee / Ball Tip Design** - forms a bearing joint with the stem which eliminates rotation between plug & seat @ closure. This prevents scoring and galling up the valvseat and ensures long life in repetitive shut-off service.

**Safety Bonnet Lock** - prevents accidental disassembly.

**Stem Thread Rolled & Hard Platted** - provides additional strength & maximum service life.

**Mirror Finish Stem (Burnished to a 16 RMS)** - extends packing life and smooth stem operation.

**Adjustable Packing Below Stem Threads** - prevents stem lubrication washout and isolate threads from process contamination.

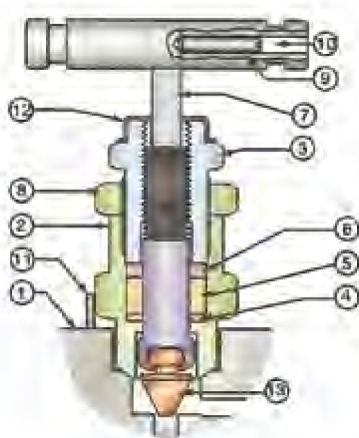
**Safety Back Seating** - provides secondary stem seal in full open position, prevents stem blow-out.

**Stainless Steel Handle** - for proper actuation.

**Body-to-Bonnet Seal** - metal to metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.

**Dust Cap** - prevents contaminants and lubricant washout of bonnet assembly.

## Materials of Construction



Non Rotating Vee Tip



Non Rotating Ball Tip

SR No	Part	Qty	Material
1	Body	1	A479-316 / A-105
2	Gland Body	1	A479-316 / A-105
3	Gland Retainer	1	A479-316 / A-105
4	Washer	1	A479-316 / A-105
5	Packing	1	PTFE / Graphoil
6	Packing Washer	1	A276-316 / A-105
7	Spindle	1	A276-316
8	Lock Nut	1	A479-316 / A-105
9	Grub Screw	1	Steel
10	Handle	1	A276-304 / A-105
11	Lock Pin	1	A479-316 / A-105
12	Dust Cap	1	Plastic LD
13	Vee Tip / Ball Tip	1	A 564-630

## Pressure / Temperature Ratings

Valve Size	Orifice	Cv	Max Working Pressure	Temp	Pressure @ Max. Temp
1/4"	3.5mm	0.31	6,000 psi (41,300 kpa)	PTFE -20 to 250 F -29 to 121 C	PTFE 4000 psi @ 260 C
3/8"					
1/2"	4.8mm	0.52		Graphoil -29 to 600 F -29 to 315 C	Graphoil 1500 psi @ 538 C
3/4"	6.4mm	1.40			

## Testing

Each valve is hydrostatically tested in accordance with MSS-SP-99. This procedure includes testing of the body cavity. The hydrostatic test is performed with pure water or other liquids of similar or lower viscosity @ 1.5 times the seat leakage and 1.1 times the maximum working pressure.

*Each valve is also tested with Nitrogen Gas @ 1,000 PSI for seat, seal and shell leakage.*

*Other tests like vibration, temperature and helium are available upon request.*