



BE-LOK INSTRUMENT FITTING
INC

Needle Valves SB Series

100% Factory Tested For Both Crack & Reseal



Engineering Expertise

@ www.be-lok.com

Introduction

BE-LOK INSTRUMENT FITTINGS INC. A fast-growing manufacturing company spread across an area of 5500 m² (Meters Squared). We are having experience and expertise with advanced technology in design, development and production of high-quality fittings and valves for Instrumentation, Hydraulic, Chemical Injection and Oil & Gas Applications.

We are having state of the art manufacturing facility. We use the Latest manufacturing technologies for highest precision and lowest tolerance. Our well-equipped Manufacturing and Testing facilities is most comprehensive, technically advanced and system oriented.

We manufacture all our products in our own manufacturing facilities under strict quality assurance procedure.

Our products are in line with international specification requirements in quality, safety, consistency and reliability apart from the competitive price. We ensure that our products are quality checked before being shipped to our clients' location.

We are recognised by International Quality Management Systems & Certified by ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, PED 2014/68/EU, ASTM F1387-19, Interchangeability Test Report, MSS-SP-99-2016a etc.

As we are having 20% Market in Domestic Areas and have a 80% hold in international market.

Contents

● Description.....	1
● Characteristics	1
● Features and Benefits	1
● Testing	1
● Material of Construction.....	2
● Sealing Material Characteristics.....	3
● Pressure and Temperatures	3

Dimensions - Hard Seat Needle Valves SB Series

● Hard Seat Block & Bleed Valve (Male x Male)	4
● Hard Seat Needle Valve (Male x Male)	4
● Hard Seat Needle Valve- BE-LOK Tube Fitting (Metric)	4
● Hard Seat Needle Valve- BE-LOK Tube Fitting (inch)	4
● Hard Seat Block & Bleed (Male x Female)	5
● Hard Seat Block & Bleed (Female x Female).....	5
● Hard Seat Needle Valve (Male x Female).....	5
● Hard Seat Needle Valve (Female x Female).....	5
● Soft Seat Block & Bleed (Male x Male)	6
● Soft Seat Needle Valve (Female x Female)	6
● Soft Seat Needle Valve (Male x Male)	6
● Soft Seat Block & Bleed (Female x Female).....	6
● Soft Seat Block & BLEed (Male x Female).....	7
● Soft Seat Needle Valve (Male x Female).....	7
● Ordering Information	8
● Safety	8

Description

BE-LOK Needle Valves HB Series are designed for connecting the gauges (pressure Gauges, etc) to process lines in hazardous and corrosion media under pressure of 10000 psi (689 bar). They are designed for easy block, bleed of pressure during maintenance and calibration of pressure transmitters or gauges. They are ruggedly manufactured and precision machined to the most exacting dimensional tolerance to ensure perfect installation and application. Needle Valves HB Series are available in SS 316, CS, Monel 400, Hastelloy C276, Inconel 625, Inconel 825, Duplex and Super Duplex. Valve Manifolds have high durability, maximum efficiency in operation, high quality and affordability.

BE-LOK offers Needle Valves SB series with a variety of end connection including NPT Tapered, ISO Tapered (BSPT), ISO Parallel (BSPP), Metric Thread. NACE-MR-01-75 Complied Needle Valve are also available (For Sour gas).

Characteristics

- Stainless body material- Stainless Steel SS 316
- Thread Type- NPT tapered threads, ISO tapered threads (BSPT), ISO parallel threads (BSPP), metric thread, metric thread with union nut.
- Connection option : **BE-LOK** Tube Connection- metric or fractional, female thread, male thread, male / female thread, male thread.
- Connection sizes : 1/8" to 1" & 6mm to 25mm & M20 x 1.5
- Working temperature : from -40°C to 648°C (-40°F to +1198°F) with Grafoil stem packing
- Working temperature : from -60°C to +149°C (-76°F to +300°F) with PCTFE stem packing
- Working temperature : from -54°C to 232°C (-65°F to 450°F) with PTFE stem packing
- PTFE / PCTFE / Grafoil valve stem packing (PTFE as standard stem packing)
- Maximum Working Pressure 10000 psi (689 bar) with modified PTFE stem packing
- Other types of valve stem seals for other temperature ranges possible upon request

Features and Benefits

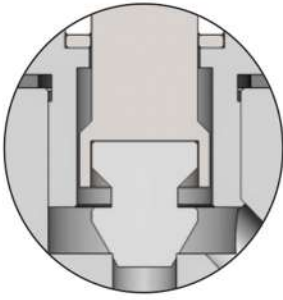
- Non Rotating Vee / Ball Tip Design- Which forms a bearing joint with the stem, eliminates rotation between plug & seat at closure. This prevents scoring and galling up the valve seat and ensure long life in repetitive shut off service.
- Safety Bonnet Lock- Prevents accidental disassembly.
- Stem Thread Rolled & Hard Plated- Provides additional strength & maximum service life.
- Mirror Finish Stem, Furnished to a 16RMS- Extends Packing life and smooth stem operation.
- Adjustment 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- Prevent contaminants and lubricant washout of bonnet assembly.
- Heat Code Traceability.

Testing

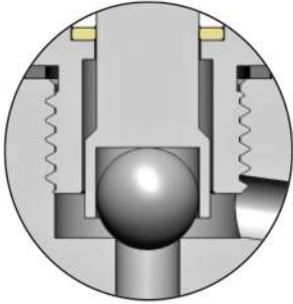
Each Valve is hydrostatically tested in accordance with MSS-SP-99. This procedure includes testing of the body cavity and spindle leaks. Other tests like vibration, Temperature, Helium are available upon request.

Hydrostatic test is performed with pure water or other liquids of similar or lower viscosity at 1.5 times and seat leakage test at 1.1 times of the maximum working pressure. Each valve is also tested with Nitrogen Gas at 6.9 MPa (1000 psi) for seat, seal, and shell leakage.

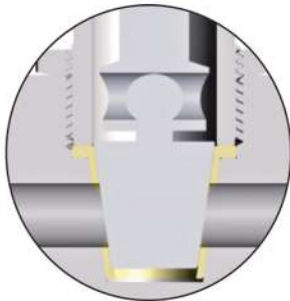
Material of Construction



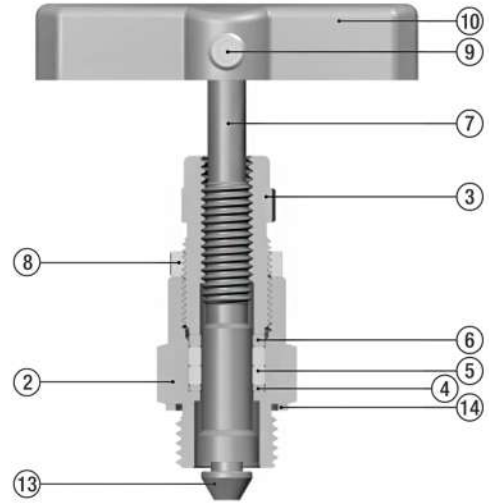
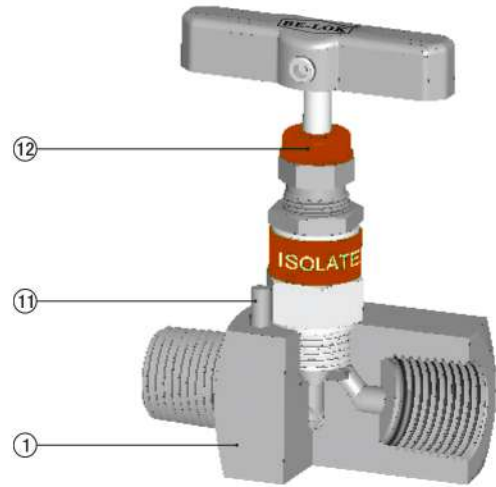
Non-Rotating V Tip



Non-Rotating Ball Tip



Soft Seat- Large Bore



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 / PVTFE / Grafoil
6.	Packing Washing	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	A276-316 / A-105
11.	Lock Pin	1	A479-316 / A-105
12.	Dust Cap	1	Nylon
13.	Non Rotating Tip	1	A564- 630
14.	Gasket Washer	1	A276-316 / A-105

Sealing Material Characteristics

PTFE (Polytetrafluorethylene)

PTFE is an excellent material for applications in clean environments.

- It is highly resistant to the chemical effects of many organic and inorganic reagents & solvents.
- It has a low coefficient of deformation, increased strength and abrasion resistance, and a low friction coefficient

PCTFE (Polychlorotetrafluoroethylene)

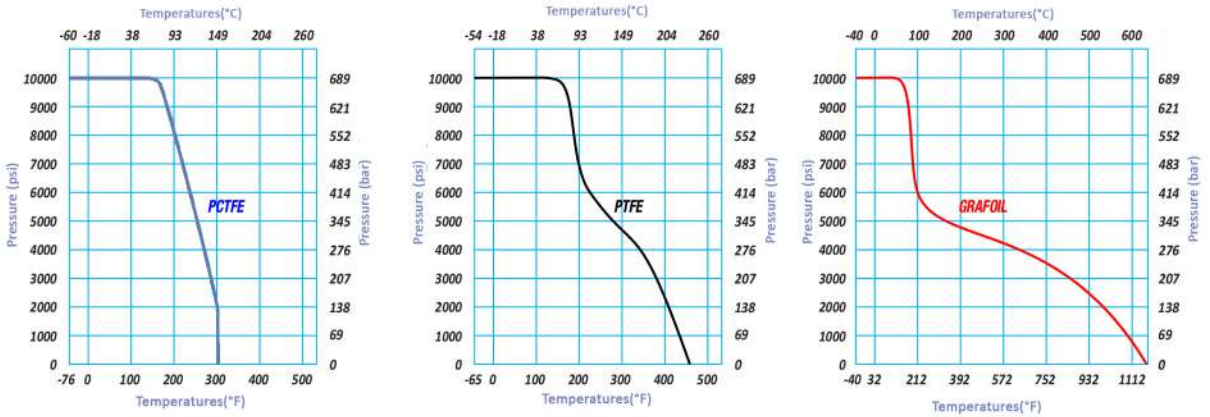
- High resistance to chemical attack & low temperatures
- Very low moisture absorption, resistance to hydrolysis and hot steam, ability to maintain strength & flexibility at low temperature (operating temperature range -16°C to + 149°C (-76°F to + 300°F))

Grafoil

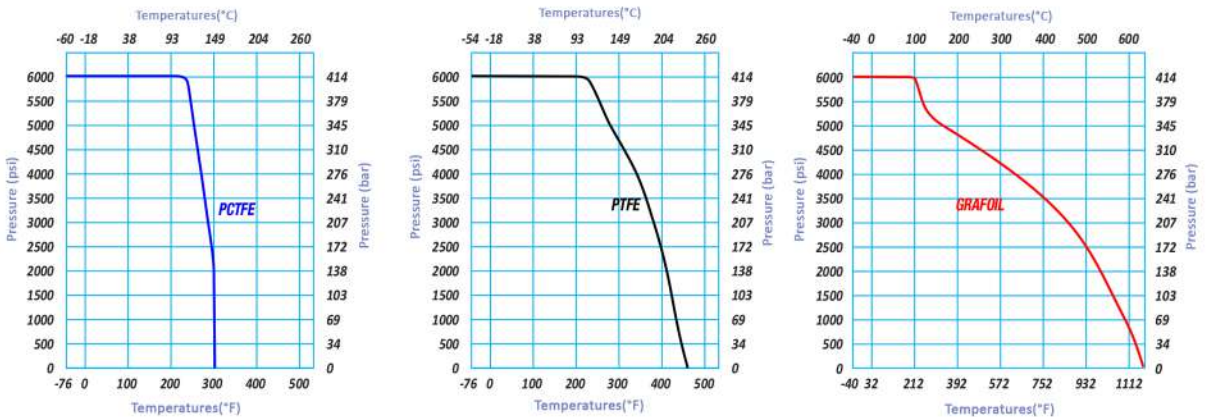
- Grafoil (thermally expanded graphite) is a material with resistance to high temperature & chemical impacts.
- Due to its unique features, this material is used in high temperatures & corrosive environments
- Thermally expanded graphite is one of the safest materials for sealings systems in liquid environments. Seals from the thermally expanded graphite is used in application of highly volatile liquids and at extremely high temperatures

Pressure and temperatures

Needle Valves SB Series - 10000 (689 bar) Material SS 316



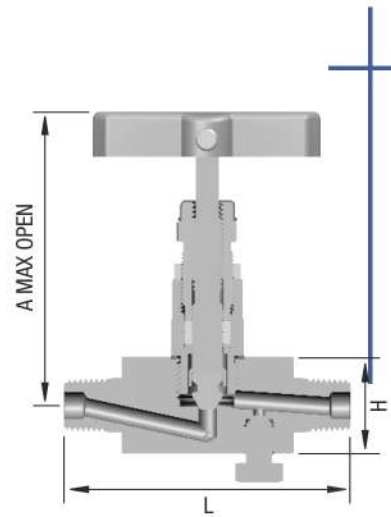
Needle Valves SB Series - 6000 psi (414 bar) Material SS 316



Dimension

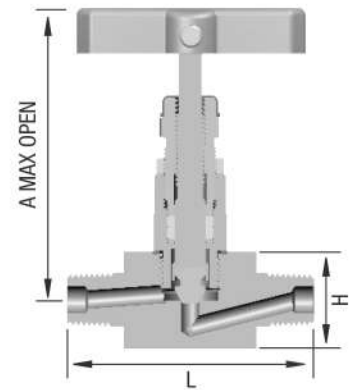
Hard Seat Block & Bleed (Male x Male)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BBB-SB-H-S-02-MM	1/8"	1/8"	3.2	60.0	25.0	82.0
BBB-SB-H-S-04-MM	1/4"	1/4"	4.8	70.0	25.0	82.0
BBB-SB-H-S-06-MM	3/8"	3/8"	4.8	70.0	25.0	82.0
BBB-SB-H-S-08-MM	1/2"	1/2"	4.8	75.0	32.0	85.0
BBB-SB-H-S-20M-MM	M20x1.5	M20x1.5	4.8	75.0	32.0	85.0
BBB-SB-H-S-12-MM	3/4"	3/4"	6.0	85.0	36.0	87.0
BBB-SB-H-S-16-MM	1"	1"	9.0	105.0	46.0	109.0



Hard Seat Needle Valve (Male x Male)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-MM	1/8"	1/8"	3.2	60.0	25.0	82.0
BNV-SB-H-S-04-MM	1/4"	1/4"	4.8	65.0	25.0	82.0
BNV-SB-H-S-06-MM	3/8"	3/8"	4.8	65.0	25.0	82.0
BNV-SB-H-S-08-MM	1/2"	1/2"	4.8	70.0	32.0	85.0
BNV-SB-H-S-20M-MM	M20x1.5	M20x1.5	4.8	70.0	32.0	85.0
BNV-SB-H-S-12-MM	3/4"	3/4"	6.0	80.0	36.0	87.0
BNV-SB-H-S-16-MM	1"	1"	9.0	100.0	46.0	109.0

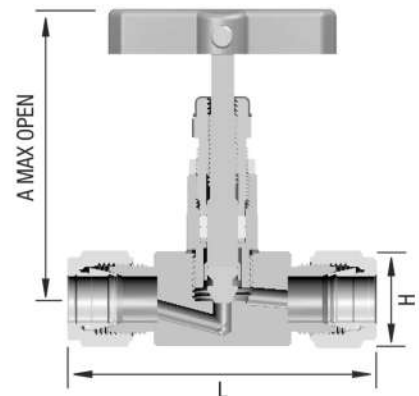


Hard Seat Needle Valve - BE-LOK Tube Fitting

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BBB-SB-H-S-M06-0D	6mm	6mm	4.0	70.0	25.0	82.0
BBB-SB-H-S-M08-0D	8mm	8mm	4.8	70.0	25.0	82.0
BBB-SB-H-S-M10-0D	10mm	10mm	4.8	70.0	25.0	82.0
BBB-SB-H-S-M12-0D	12mm	12mm	4.8	81.0	25.0	82.0
BBB-SB-H-S-M14-0D	14mm	14mm	6.0	90.0	36.0	87.0
BBB-SB-H-S-M16-0D	16mm	16mm	6.0	90.0	36.0	87.0
BBB-SB-H-S-M18-0D	18mm	18mm	6.0	90.0	36.0	87.0
BBB-SB-H-S-M20-0D	20mm	20mm	9.0	96.0	40.0	105.0
BBB-SB-H-S-M22-0D	22mm	22mm	9.0	96.0	40.0	105.0
BBB-SB-H-S-M25-0D	25mm	25mm	9.0	101.0	40.0	105.0

Hard Seat Needle Valve - BE-LOK Tube Fitting (inch)

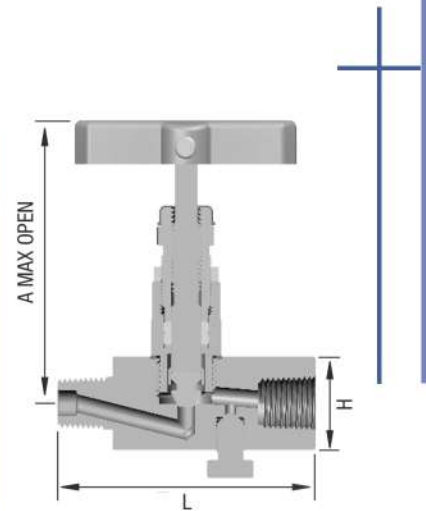
Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-0D	1/8"	1/8"	2.5	66.5	25.0	25.0
BNV-SB-H-S-04-0D	1/4"	1/4"	4.0	70.0	25.0	25.0
BNV-SB-H-S-06-0D	3/8"	3/8"	4.8	70.0	25.0	25.0
BNV-SB-H-S-08-0D	1/2"	1/2"	4.8	81.0	25.0	25.0
BNV-SB-H-S-12-0D	3/4"	3/4"	6.0	91.0	36.0	36.0
BNV-SB-H-S-16-0D	1"	1"	9.0	101.0	46.0	40.0



Dimension

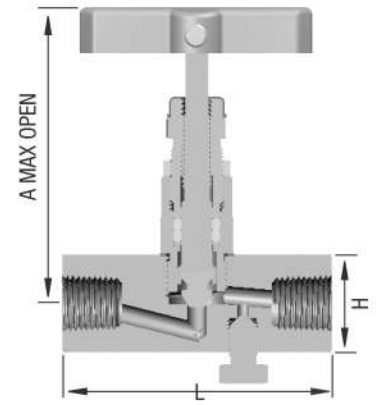
Hard Seat Block & Bleed (Male x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-MF	1/8"	1/8"	3.2	60.0	25.0	82.0
BNV-SB-H-S-04-MF	1/4"	1/4"	4.8	65.0	25.0	82.0
BNV-SB-H-S-06-MF	3/8"	3/8"	4.8	65.0	25.0	82.0
BNV-SB-H-S-08-MF	1/2"	1/2"	4.8	75.0	32.0	85.0
BNV-SB-H-S-20M-MF	M20x1.5	M20x1.5	4.8	75.0	32.0	85.0
BNV-SB-H-S-128-MF	3/4"	1/2"	4.8	75.0	32.0	85.0
BNV-SB-H-S-12-MF	3/4"	3/4"	6.0	85.0	36.0	87.0
BNV-SB-H-S-16-MF	1"	1"	9.0	100.0	46.0	109.0



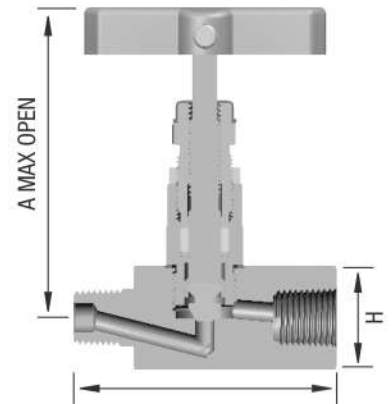
Hard Seat Block & Bleed (Female x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-FF	1/8"	1/8"	3.2	60.0	25.0	82.0
BNV-SB-H-S-04-FF	1/4"	1/4"	4.8	65.0	25.0	82.0
BNV-SB-H-S-06-FF	3/8"	3/8"	4.8	65.0	25.0	82.0
BNV-SB-H-S-08-FF	1/2"	1/2"	4.8	75.0	32.0	85.0
BNV-SB-H-S-20M-FF	M20x1.5	M20x1.5	4.8	75.0	32.0	85.0
BNV-SB-H-S-12-FF	3/4"	3/4"	6.0	80.0	36.0	87.0
BNV-SB-H-S-16-FF	1"	1"	9.0	95.0	46.0	109.0



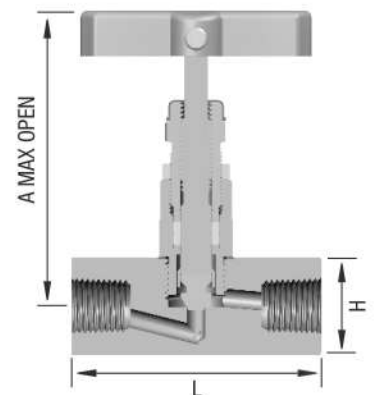
Hard Seat Needle Valve (Male x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-MF	1/8"	1/8"	3.2	55.0	25.0	82.0
BNV-SB-H-S-04-MF	1/4"	1/4"	4.8	60.0	25.0	82.0
BNV-SB-H-S-06-MF	3/8"	3/8"	4.8	60.0	25.0	82.0
BNV-SB-H-S-08-MF	1/2"	1/2"	4.8	70.0	32.0	85.0
BNV-SB-H-S-20M-MF	M20x1.5	M20x1.5	4.8	70.0	32.0	85.0
BNV-SB-H-S-128-MF	3/4"	1/2"	4.8	70.0	32.0	85.0
BNV-SB-H-S-12-MF	3/4"	3/4"	6.0	80.0	36.0	87.0
BNV-SB-H-S-16-MF	1"	1"	9.0	100.0	46.0	109.0



Hard Seat Needle Valve (Female x Female)

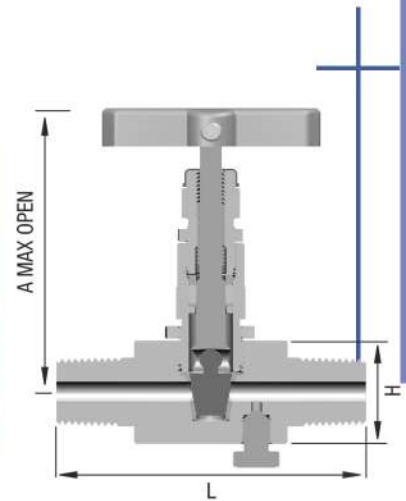
Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-H-S-02-FF	1/8"	1/8"	3.2	55.0	25.0	82.0
BNV-SB-H-S-04-FF	1/4"	1/4"	4.8	60.0	25.0	82.0
BNV-SB-H-S-06-FF	3/8"	3/8"	4.8	60.0	25.0	82.0
BNV-SB-H-S-08-FF	1/2"	1/2"	4.8	70.0	32.0	85.0
BNV-SB-H-S-20M-FF	M20x1.5	M20x1.5	4.8	70.0	32.0	85.0
BNV-SB-H-S-12-FF	3/4"	3/4"	6.0	75.0	36.0	87.0
BNV-SB-H-S-16-FF	1"	1"	9.0	90.0	46.0	109.0



Dimension

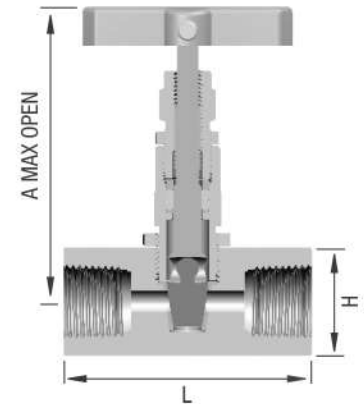
Soft Seat Block & Bleed (Male x Male)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BBB-SB-S-S-04-MM	1/4"	1/4"	4.8	70.0	30.0	92.0
BBB-SB-S-S-06-MM	3/8"	3/8"	4.8	70.0	30.0	92.0
BBB-SB-S-S-08-MM	1/2"	1/2"	6.4	85.0	32.0	98.0
BBB-SB-S-S-20M-MM	M20x1.5	M20x1.5	6.4	85.0	32.0	98.0
BBB-SB-S-S-12-MM	3/4"	3/4"	9.5	95.0	40.0	103.0
BBB-SB-S-S-16-MM	1"	1"	11.0	110.0	45.0	103.0



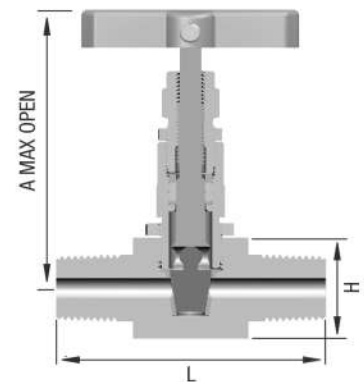
Soft Seat Needle Valve (Female x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-S-S-04-FF	1/4"	1/4"	4.8	55.0	30.0	92.0
BNV-SB-S-S-06-FF	3/8"	3/8"	4.8	55.0	30.0	92.0
BNV-SB-S-S-08-FF	1/2"	1/2"	6.4	70.0	32.0	98.0
BNV-SB-S-S-20M-FF	M20x1.5	M20x1.5	6.4	70.0	32.0	98.0
BNV-SB-S-S-12-FF	3/4"	3/4"	9.5	80.0	40.0	103.0
BNV-SB-S-S-16-FF	1"	1"	11.0	100.0	45.0	103.0



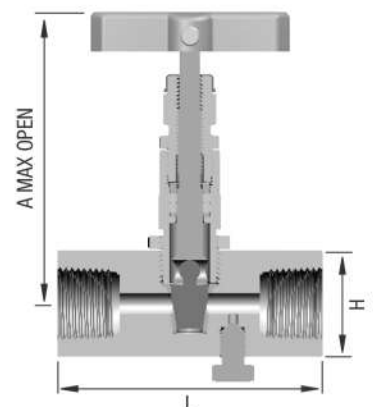
Soft Seat Needle Valve (Male x Male)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-S-S-04-MM	1/4"	1/4"	4.8	65.0	30.0	92.0
BNV-SB-S-S-06-MM	3/8"	3/8"	4.8	65.0	30.0	92.0
BNV-SB-S-S-08-MM	1/2"	1/2"	6.4	80.0	32.0	98.0
BNV-SB-S-S-20M-MM	M20x1.5	M20x1.5	6.4	80.0	32.0	92.0
BNV-SB-S-S-12-MM	3/4"	3/4"	9.5	90.0	40.0	130.0
BNV-SB-S-S-16-MM	1"	1"	11.0	100.0	45.0	130.0



Soft Seat Block & Bleed (Female x Female)

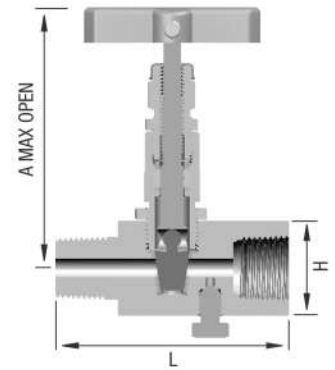
Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BBB-SB-S-S-04-FF	1/4"	1/4"	4.8	60.0	30.0	92.0
BBB-SB-S-S-06-FF	3/8"	3/8"	4.8	60.0	30.0	92.0
BBB-SB-S-S-08-FF	1/2"	1/2"	6.4	75.0	32.0	98.0
BBB-SB-S-S-20M-FF	M20x1.5	M20x1.5	6.4	75.0	32.0	98.0
BBB-SB-S-S-12-FF	3/4"	3/4"	9.5	85.0	40.0	130.0
BBB-SB-S-S-16-FF	1"	1"	11.0	110.0	45.0	130.0



Dimension

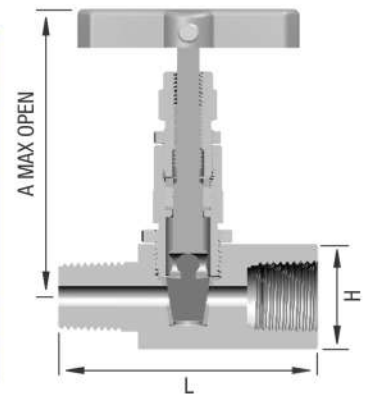
Soft Seat Block & Bleed (Male x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BBB-SB-S-S-04-MF	1/4"	1/4"	4.8	60.0	30.0	92.0
BBB-SB-S-S-06-MF	3/8"	3/8"	4.8	60.0	30.0	92.0
BBB-SB-S-S-08-MF	1/2"	1/2"	6.4	85.0	32.0	98.0
BBB-SB-S-S-20M-MF	M20x1.5	M20x1.5	6.4	85.0	32.0	98.0
BBB-SB-S-S-128-MF	3/4"	1/2"	6.4	85.0	32.0	98.0
BBB-SB-S-S-12-MF	3/4"	3/4"	9.5	90.0	40.0	103.0
BBB-SB-S-S-16-MF	1"	1"	11.0	110.0	45.0	103.0



Soft Seat Needle Valve (Male x Female)

Part Number	End Connection		Orifice E	Dimension		
	Inlet	Outlet		L	H	A
BNV-SB-S-S-04-MF	1/4"	1/4"	4.8	60.0	30.0	92.0
BNV-SB-S-S-06-MF	3/8"	3/8"	4.8	60.0	30.0	92.0
BNV-SB-S-S-08-MF	1/2"	1/2"	6.4	80.0	32.0	98.0
BNV-SB-S-S-20M-MF	M20x1.5	M20x1.5	6.4	80.0	32.0	98.0
BNV-SB-S-S-128-MF	3/4"	1/2"	6.4	80.0	32.0	98.0
BNV-SB-S-S-12-MF	3/4"	3/4"	9.5	85.0	40.0	103.0
BNV-SB-S-S-16-MF	1"	1"	11.0	100.0	45.0	103.0



Safety

Pressure & Temperature rating are selected from ANSI B16.34 for standard class valves based on ANSI B16-Class 2500. Option SG- for sour gas service, in accordance with NACE STD MR-01-75. For Safe operation of **BE-LOK** Needle Valve SB series shall be adequately selected.

When choosing materials operating conditions, compatibility of materials, purpose and product specifications shall be considered. Installation and maintenance of products shall be carried out by qualified personnel. wrong Selection, poor installation or incorrect operation and maintenance may result in accident, causing personal injury & result in material damage. **BE-LOK** provides a guarantee for their products, but is not responsible for the wrong selection, installation, operation and maintenance of the supplied products.

Ordering Information Needle Valve SB Series

BE-LOK

EX: **BNV-SB-H-S-08G-FF-SG-10K**

Valve

- BNV - Needle Valve
- BBB - Block & Bleed Valve

Series

- SB - Square Body

Seat

- H - Hard Seat
- S - Soft seat- Delrin (Standard)
- ST 1- Soft Tip- PTFE
- S1 - Soft Seat- PCTFE
- S2 - Soft Seat- PEEK
- ST 2- Soft Tip- PCTFE

Material

- S - SS 316
- CS - Carbon Steel (ASTM A105N)
- M0 - Monel 400
- HC- Hastelloy C276
- F51- Duplex- UNS S31803
- F53 - Super Duplex- UNS S32750
- F55- Super Duplex- UNS S32760
- 6M0- UNS S31254
- INC625- Inconel 625
- INC825 - Inconel 825

Connection Size

- | | | | | |
|----------|------------------|--------------|---------------|--------------|
| 02- 1/8" | 12- 3/4" | M06- OD 6mm | M14 - OD 14mm | M25- OD 25mm |
| 04- 1/4" | 16 - 1" | M08- OD 8mm | M16- OD 16mm | |
| 06- 3/8" | 128 - 3/4 x 1/2" | M10- OD 10mm | M20 - OD 20mm | |
| 08- 1/2" | 20M- M20 x 1.5 | M12- OD 12mm | M22- OD 22mm | |

Connection Type

- MM- Male x Male
- FF- Female x Female
- OD - **BE-LOK** Tube Fitting
- MF- Male x Female
- FM- Female x Male
- PSW- Pipe Socket Weld
- TSW- Tube Socket Weld

Options

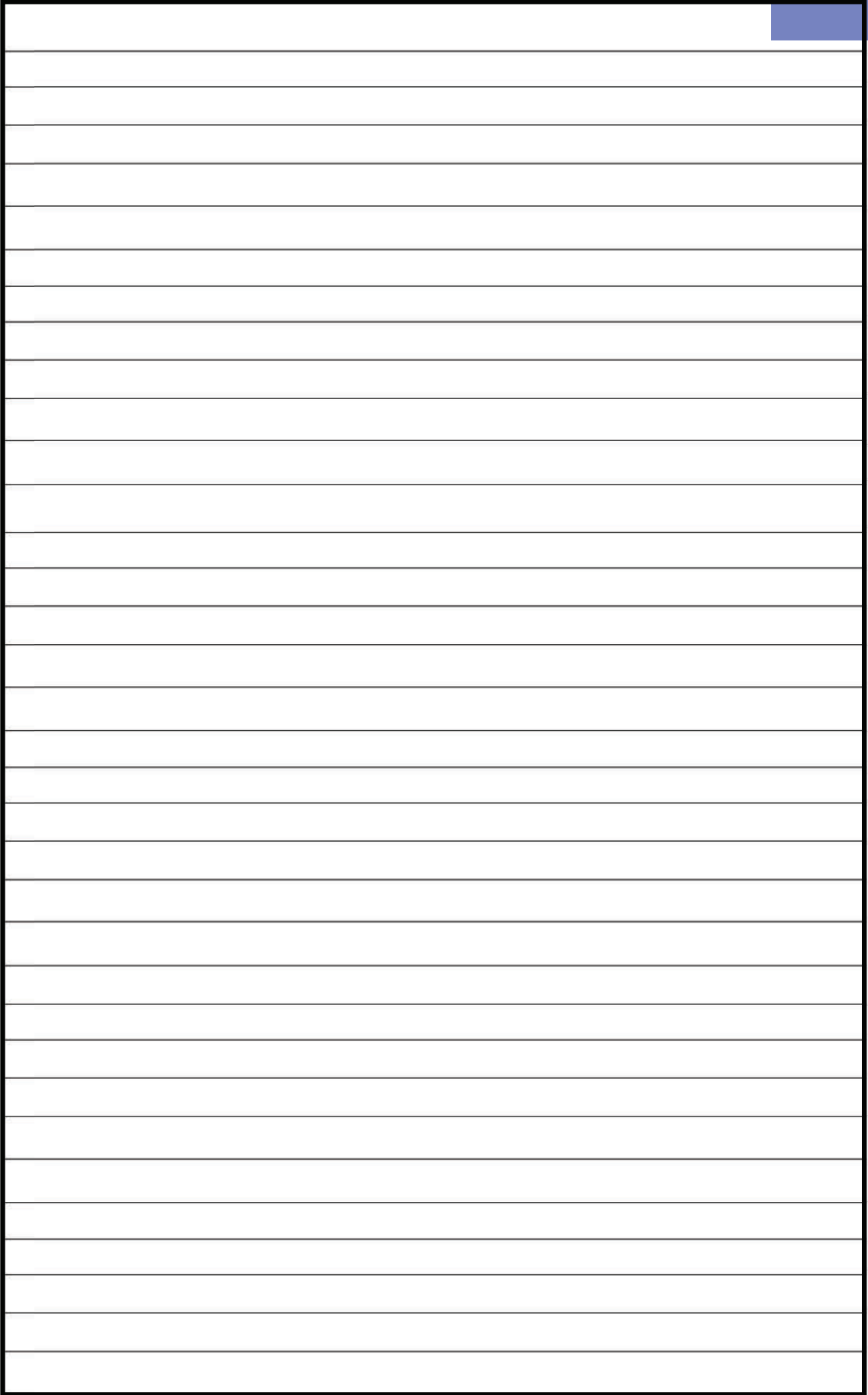
- LH- Locking Arrangement
- SG- Nace MR0175
- ATK- Anti-Temper Key
- BT- Ball Tip
- XLT- Low Temperature Application
- HT- Grafoil Seal for High Temperature (Hard Seat Only)
- RS- Regulating Stem
- OXY- Oxygen Cleaning

Working Pressure

- - Working pressure- 6000 psi (414 bar)
- 10K- Working Pressure- 10000 psi (689 bar)

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Notes



Products



Flange Adapter



Pipe Fitting



Flare Fitting



Valve Manifold



Thermowells



Check Valve



Tube Fitting



Needle Valve



Weld Fitting



Swivel Adapter



High Pressure



Gauge Root



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