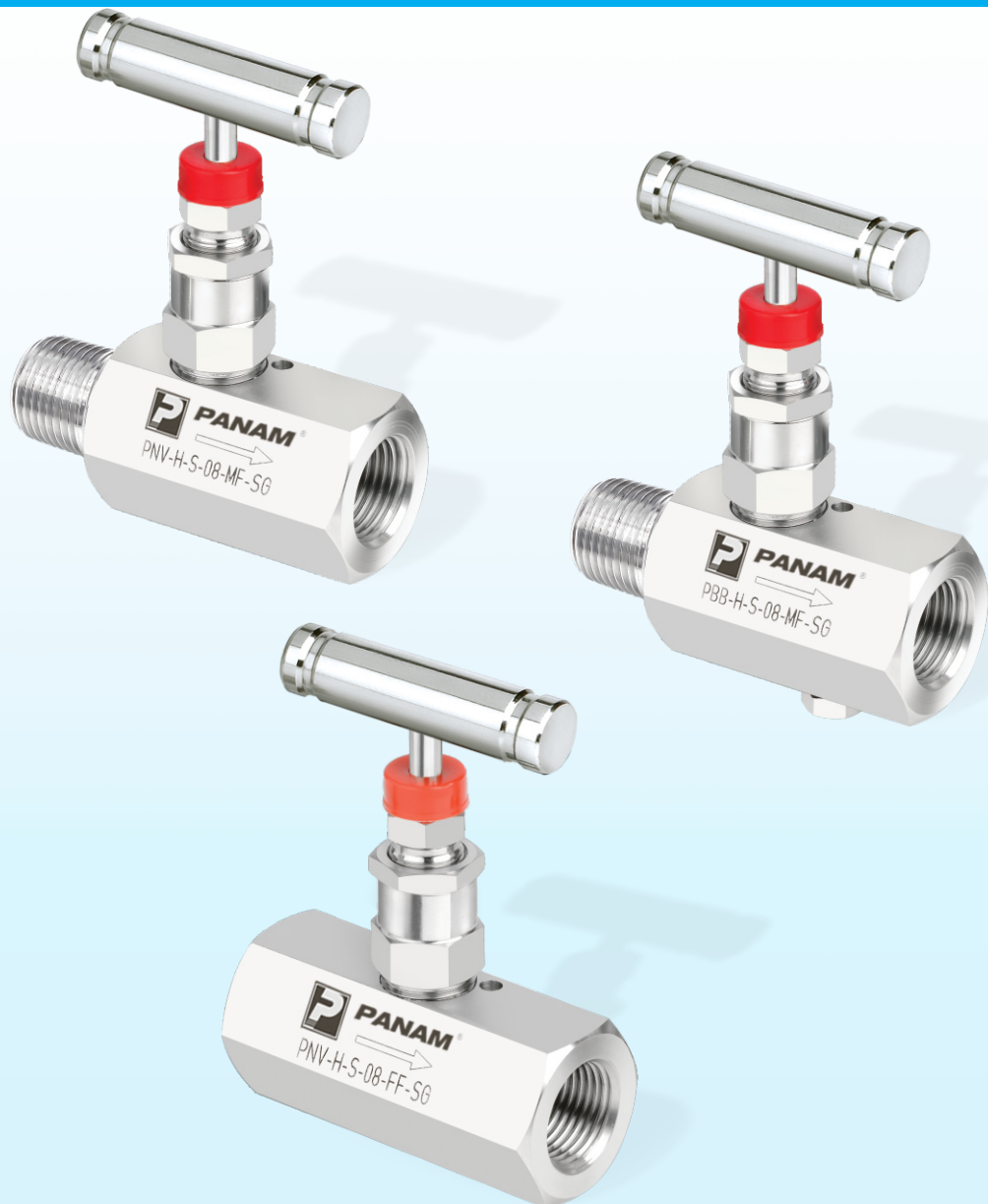


# Needle Valve (HB Series)



[www.panamengineers.com](http://www.panamengineers.com)

## Introduction

**PANAM** “HB” Series Needle Valves are specially designed and manufactured for use in rugged, corrosive & hazardous environments. Valves are used in process control, instrumentation and flow control applications. Valves are precision machined, designed for durability and maximum efficiency and provide high quality, low cost alternatives used in a wide variety of fluid and gaseous control systems.

**PANAM** strives to exceed the exacting standards of our growing and demanding customers.

**PANAM** “HB” series needle valves are available in high grade stainless steel, carbon steel, brass and monel materials in variety of end connections includes male / female threaded NPT, BSP, BSPT, ISO, DIN and JIS tapered pipe ends.

Valves can be supplied to meet current revision of NACE MR01 - 75 (Sour Gas Service)

All Valves are 100% factory tested and complete traceability is available upon request.

- API ISO 9001:2008 Certified
- API ISO TS 29001 Certified
- API Spec Q1 Certified
- API 6A Certified
- API 6D Certified
- API 600 Certified
- API 602 Certified
- MFG. Facility Approved by ABS Ind.
- ASTM F1387-99
- Leak Test Approved by TUV
- CE Marking



## Contents

■ Features & Benefits	
■ Material of Construction .....	1
■ Pressure Vs Temperature Ratings	
■ Testing	
■ Ordering Information.....	2
<b>■ Hard Seat</b>	
Needle Valve (Male x Female)	
Needle Valve (Female x Female)	
Block & Bleed Valve (Male x Female)	
Block & Bleed Valve (Female x Female) .....	3
<b>■ Soft Seat</b>	
Needle Valve (Male x Female)	
Needle Valve (Female x Female)	
Block & Bleed Valve (Male x Female)	
Block & Bleed Valve (Female x Female) .....	4

## Features & 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.

**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.

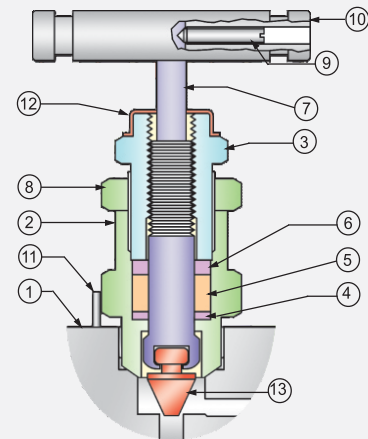
**Body to Bonnet Seal:-** Metal to Metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.

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

## Material of Construction

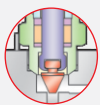
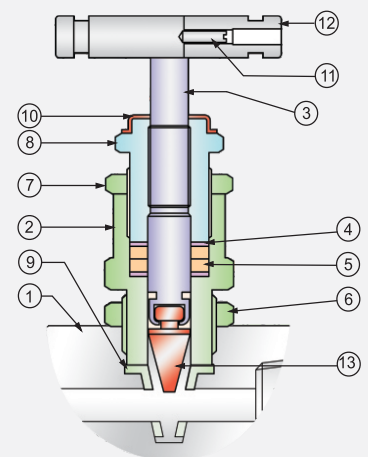
### Hard Seat

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.	Tip	1	A564 - 630

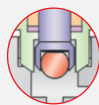


### Soft Seat

Sr. No.	Part	Qty.	Material
1.	Body	1	A479-316
2.	Bonnet	1	A479-316
3.	Stem	1	A276-316
4.	Spacer	2	A276-316
5.	Gland Packing	2	Teflon
6.	Lock Nut	1	A276-316
7.	Gland Lock Nut	1	A276-316
8.	Gland Retainer	1	A479-316
9.	Rising Plug Seat	1	Derlin / Peek
10.	Dust Cap	1	Pastic
11.	Grub Screw	1	Steel Plated
12.	Handle	1	A276-316
13.	Tip	1	A564 - 630



Non Rotating Vee Tip



Non Rotating Ball Tip



Non Rotating Vee Tip (Soft Seat)

## Pressure & Temperature Ratings

**PANAM** Valves comply with ASME standard B16.34-2004 for valves with threaded and welding ends. These tables must be used in accordance with ASME standards, The user is advised that a valve must be used under jurisdiction of the ASME boiler and pressure vessel code, ASME code for pressure piping, and Canadian governmental regulations and is subject to any limitations of that code or regulation. At temperatures over 1000°F. Material shall have a minimum carbon content of .04% or higher to the maximum allowed for ASTM grade A479-316

Service Temp. Degrees F	Working Pressure PSIG		Service Temp. Degrees F	Working Pressure PSIG	
	316 SS	A105 CS		316 SS	A105 CS
-20 to 100	6000	6170	800	3520	3430
200	5160	5625	850	3480	2230
300	4660	5470	900	3460	1430
400	4280	5280	950	3220	860
500	3980	4990	1000	3030	430
600	3760	4560	1050	3000	-
650	3680	4475	1100	2545	-
700	3620	4440	1150	1970	-
750	3560	4200	1200	1545	-

## Testing

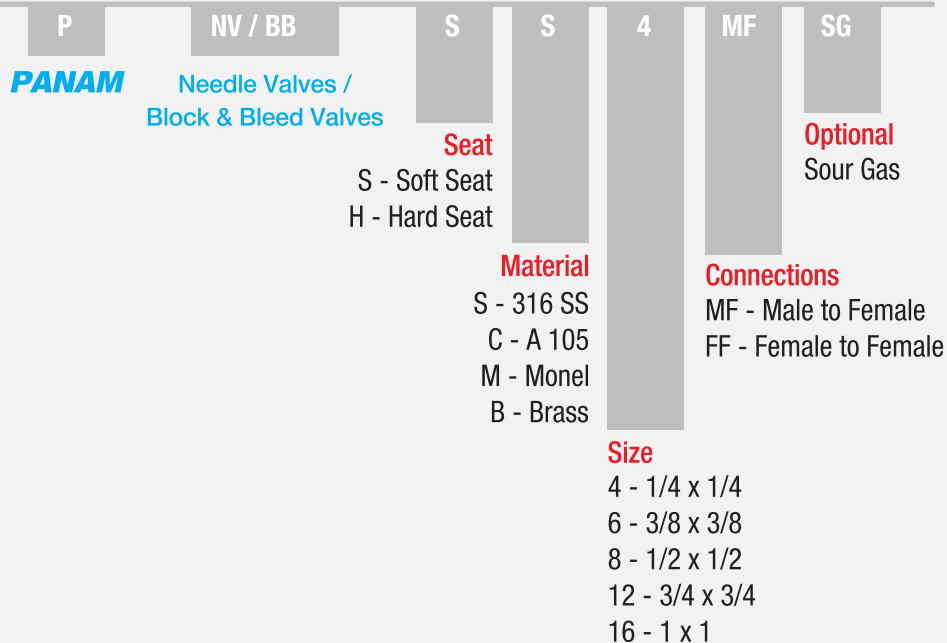
Each valve is hydrostatically tested in accordance with MSS-SP-99. This procedure includes testing of the body cavity. Hydrostatic test is performed with pure water or other liquids of similar or lower viscosity at 1.5 times and seat leakage test at 1.1 times of the maximum working pressure.

Each valve is also tested with Nitrogen Gas at 1000 psi for seat, seal and shell leakage.

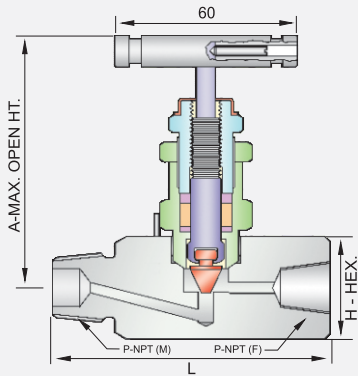
Other tests like Vibration, Temperature, Helium are available upon request.

## Ordering Information

### PNV-S-S-4-MF

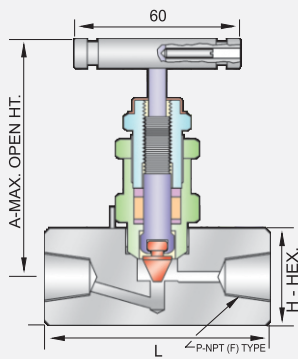


### Hard Seat Needle Valve (Male x Female)



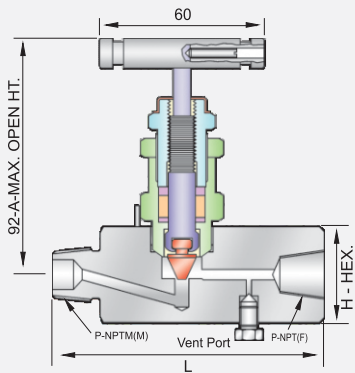
PART NO.	P-NPT (M/F)	L	H-HEX	A-OP
PNV-H-S-04-MF	1/4"	60	25	78.0
PNV-H-S-06-MF	3/8"	60	25	78.0
PNV-H-S-08-MF	1/2"	80	32	87.0
PNV-H-S-12-MF	3/4"	80	36	88.0
PNV-H-S-16-MF	1"	100	46	110.0

### Hard Seat Needle Valve (Female x Female)



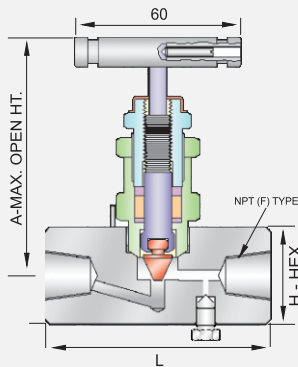
PART NO.	P-NPT (F/F)	L	H-HEX	A-OP
PNV-H-S-04-FF	1/4"	55	25	80.5
PNV-H-S-06-FF	3/8"	55	25	80.5
PNV-H-S-08-FF	1/2"	75	32	88.0
PNV-H-S-12-FF	3/4"	75	36	88.0
PNV-H-S-16-FF	1"	95	46	111.0

### Hard Seat Block & Bleed Valve (Male x Female)



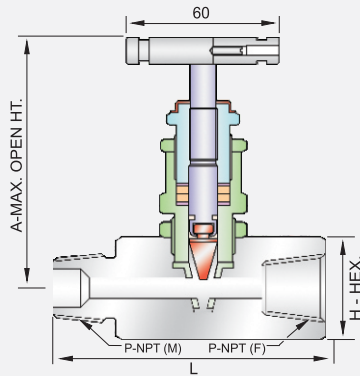
PART NO.	P-NPT (M)	P-NPT (F)	L	H-HEX	A-OP
PBB-H-S-04-MF	1/4"	1/4"	70	27	81.0
PBB-H-S-06-MF	3/8"	3/8"	70	27	81.0
PBB-H-S-08-MF	1/2"	1/2"	85	32	87.0
PBB-H-S-128-MF	3/4"	1/2"	85	32	87.0
PBB-H-S-12-MF	3/4"	3/4"	85	36	88.0
PBB-H-S-16-MF	1"	1"	105	46	110.0

### Hard Seat Block & Bleed Valve (Female x Female)



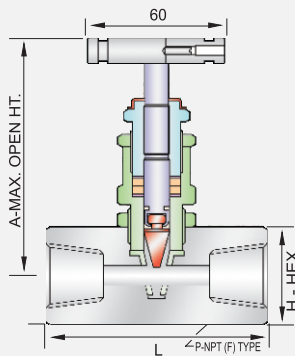
PART NO.	P-NPT (F/F)	L	H-HEX	A-OP
PBB-H-S-04-FF	1/4"	65	25	80.0
PBB-H-S-06-FF	3/8"	65	25	80.0
PBB-H-S-08-FF	1/2"	80	32	89.0
PBB-H-S-12-FF	3/4"	80	36	89.0
PBB-H-S-16-FF	1"	100	46	110.0

## Soft Seat Needle Valve (Male x Female)



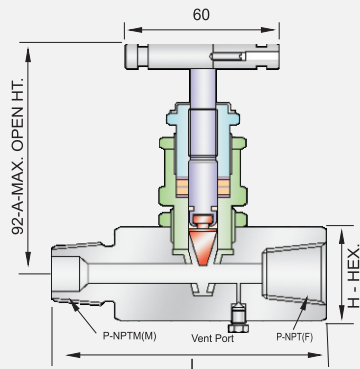
PART NO.	P-NPT (M/F)	L	H-HEX	A-OP
PNV-S-S-04-MF	1/4"	60	27	93.5
PNV-S-S-06-MF	3/8"	60	27	93.5
PNV-S-S-08-MF	1/2"	80	32	96.5
PNV-S-S-12-MF	3/4"	95	42	117.0
PNV-S-S-16-MF	1"	100	45	118.0

## Soft Seat Needle Valve (Female x Female)



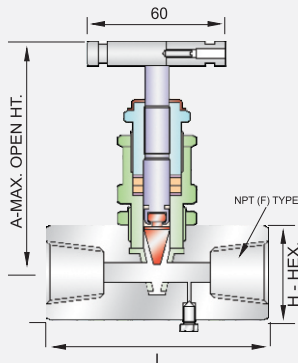
PART NO.	P-NPT (F/F)	L	H-HEX	A-OP
PNV-S-S-04-FF	1/4"	55	27	93.5
PNV-S-S-06-FF	3/8"	55	27	93.5
PNV-S-S-08-FF	1/2"	75	32	96.5
PNV-S-S-12-FF	3/4"	80	42	117.0
PNV-S-S-16-FF	1"	95	45	119.00

## Soft Seat Block & Bleed Valve (Male x Female)



PART NO.	P-NPT (M)	P-NPT (F)	L	H-HEX	A-OP
PBB-S-S-04-MF	1/4"	1/4"	70	27	93.5
PBB-S-S-06-MF	3/8"	3/8"	70	27	93.5
PBB-S-S-08-MF	1/2"	1/2"	85	32	96.5
PBB-S-S-128-MF	3/4"	1/2"	85	32	96.5
PBB-S-S-12-MF	3/4"	3/4"	100	42	117.0
PBB-S-S-16-MF	1"	1"	110	45	119.0

## Soft Seat Block & Bleed Valve (Female x Female)



PART NO.	P-NPT (F/F)	L	H-HEX	A-OP
PBB-S-S-04-FF	1/4"	65	27	93.5
PBB-S-S-06-FF	3/8"	65	27	93.5
PBB-S-S-08-FF	1/2"	80	32	96.5
PBB-S-S-12-FF	3/4"	90	42	117.0
PBB-S-S-16-FF	1"	100	45	118.0

**WARNING:** Inadequate care improper utilization of the product can cause intense and excessive damage to life and property. PANAM's products are at your liable use and at the behest of the user's responsibility to check and analyses the product in which it is going to be further inserted in to, so that the same functions properly and the relevant product is also very important for all safe guard and also precautions to be taken before the user puts the product in to service. All dimensions are in millimeters unless otherwise specified. dimensions are for reference only, Subject to change with out prior notice.



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