



Needle Valves are available in a wide range of materials, sizes, connections and configurations.



FTS offers needle valves for positive leak-tight shut-off and regulation of liquids and gases, in a variety of stem types, in both in-line and angle patterns. Several designs are provided for oil and gas processing facilities, along with a PFA product for use in aggressive chemical and gas applications.

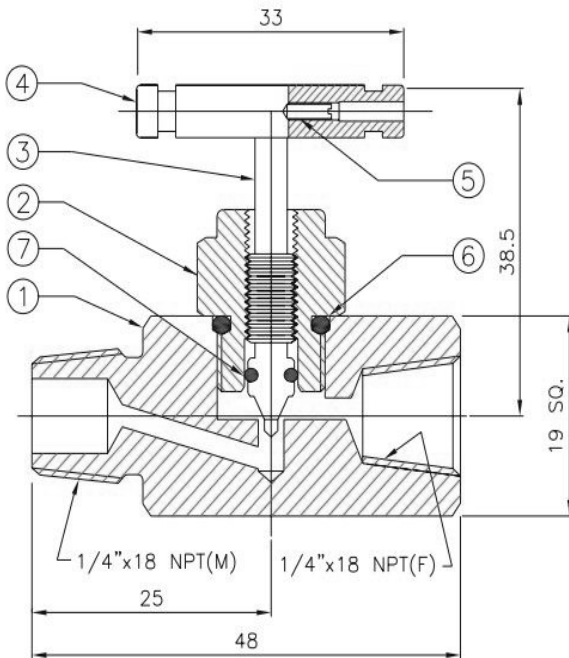


Male x Female - Viton Pkg



FEATURE:

- **Vee tip design** - Controls accurate flow.
- **Stem threads Rolled & Hard Plated** - Provides additional strength & maximum service life.
- **Mirror Finish Stem, burnished to a 16RMS** - Extends packing life and smooth stem operation
- **Fully Supported Packing** - Reduces need for adjustment.
- **Packing Nut** - Easy and fast to move external adjustment.
- **Stainless Steel Handle** - For proper actuation.
- **Dust Cap** - Prevents contaminants and lubricant washout of bonnet assembly.
- **Maximum Working Pressure** : 4000 PSI (280 bar) at 200 o C. .
- **100% Factory tested.**



SR. NO.	PART NAME	QTY	MATERIAL
1	BODY	1	A479-316/A-105
2	GLAND BODY	1	A479-316/A-105
3	SPINDLE	1	A479-316/A-105
4	HANDLE	1	STAINLESS STEEL
5	GRUB SCREW	1	STEEL PLATED
6	BONNET O-RING	1	VITON
7	SPINDLE O-RING	1	VITON

SS316 PART NO: MS-16-MF-V

TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
3.5 mm.	0.31	3000 PSI (20700 kpa)	-20 to 250° F (-29° to 121°C)

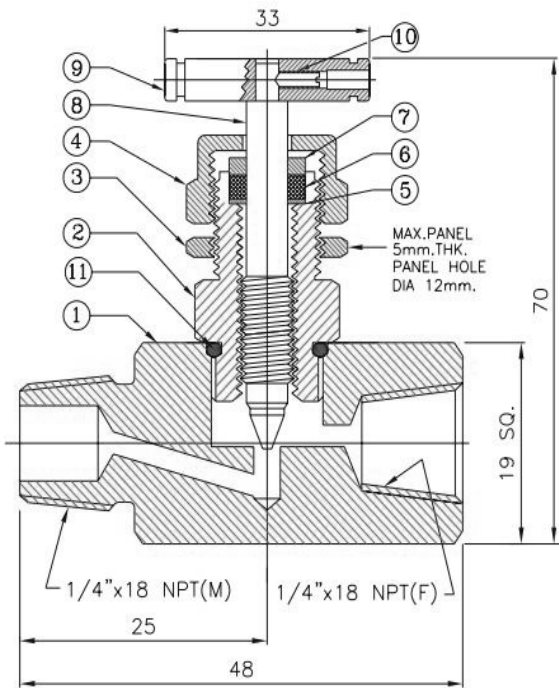


Male x Female - PTFE Pkg



FEATURE:

- **Vee tip design** - Controls accurate flow.
- **Stem threads Rolled & Hard Plated** - Provides additional strength & maximum service life.
- **Mirror Finish Stem, burnished to a 16RMS** - Extends packing life and smooth stem operation
- **Fully Supported Packing** - Reduces need for adjustment.
- **Packing Nut** - Easy and fast to move external adjustment.
- **Stainless Steel Handle** - For proper actuation.
- **Dust Cap** - Prevents contaminants and lubricant washout of bonnet assembly.
- **Maximum Working Pressure : 4000 PSI (280 bar) at 200 o C. .**
- **100% Factory tested.**



SR. NO.	PART NAME	QTY	MATERIAL
1	BODY	1	A479-316
2	GLAND BODY	1	A479-316
3	PANEL NUT	1	A479-316
4	GLAND NUT	1	A479-316
5	WASHER	1	A479-316
6	PACKING	1	PTFE/GRAPHOIL
7	PACKING WASHER	1	A479-316
8	SPINDLE	1	17-4PH/TITANIUM
9	HANDLE	1	STAINLESS STEEL
10	GRUB SCREW	1	STEEL PLATED
11	O-RING	1	VITON

TECHNICAL DATA				
ORIFICE	Cv	Pr. Rat.		Temp.Rat.
		SS	BRASS	
3.5 mm.	0.31	4000 PSI (27600 kpa)	3000 PSI (20700 kpa)	-20 to 250° F (-29° to 121°C)

SS316 PART NO: MS-16-MF-P

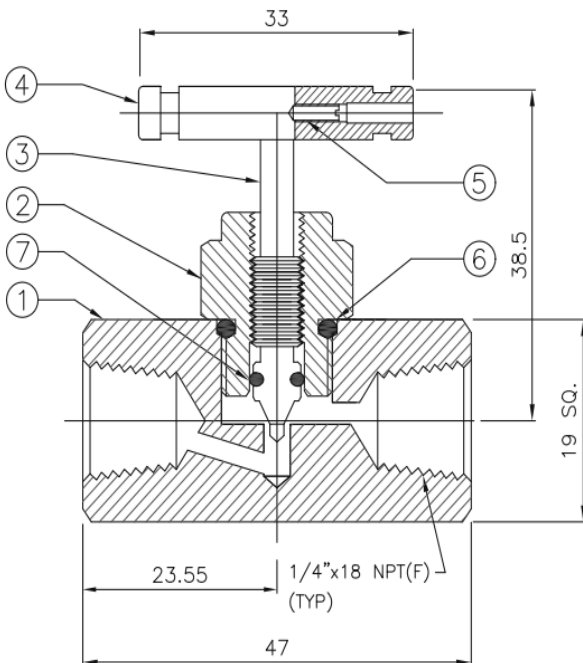


Female x Female - Viton Pkg



FEATURE:

- **Vee tip design** - Controls accurate flow.
- **Stem threads Rolled & Hard Plated** - Provides additional strength & maximum service life.
- **Mirror Finish Stem, burnished to a 16RMS** - Extends packing life and smooth stem operation
- **Fully Supported Packing** - Reduces need for adjustment.
- **Packing Nut** - Easy and fast to move external adjustment.
- **Stainless Steel Handle** - For proper actuation.
- **Dust Cap** - Prevents contaminants and lubricant washout of bonnet assembly.
- **Maximum Working Pressure** : 4000 PSI (280 bar) at 200 o C. .
- **100% Factory tested.**



SR. NO.	PART NAME	QTY	MATERIAL
1	BODY	1	A479-316/A-105
2	GLAND BODY	1	A479-316/A-105
3	SPINDLE	1	A479-316/A-105
4	HANDLE	1	STAINLESS STEEL
5	GRUB SCREW	1	STEEL PLATED
6	BONNET O-RING	1	VITON
7	SPINDLE O-RING	1	VITON

SS316 PART NO: MS-16-FF-V

TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
3.5 mm.	0.31	3000 PSI (20700 kpa)	-20 to 250° F (-29° to 121°C)

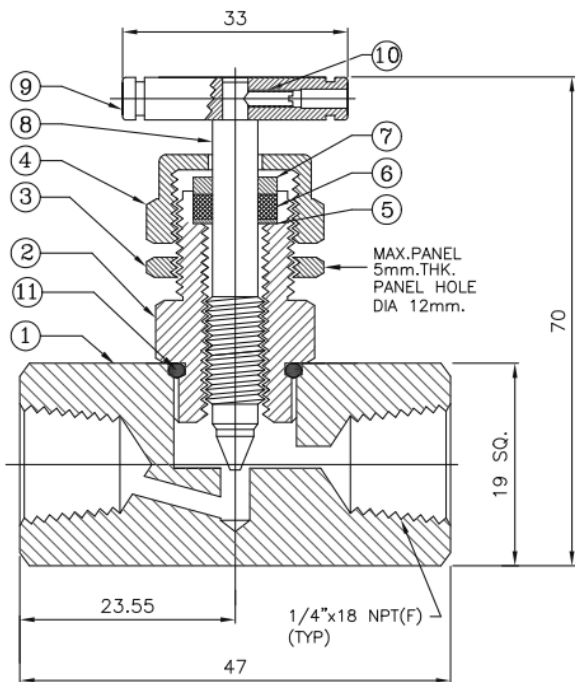


Female x Female - PTFE Pkg



FEATURE:

- **Vee tip design** - Controls accurate flow.
- **Stem threads Rolled & Hard Plated** - Provides additional strength & maximum service life.
- **Mirror Finish Stem, burnished to a 16RMS** - Extends packing life and smooth stem operation
- **Fully Supported Packing** - Reduces need for adjustment.
- **Packing Nut** - Easy and fast to move external adjustment.
- **Stainless Steel Handle** - For proper actuation.
- **Dust Cap** - Prevents contaminants and lubricant washout of bonnet assembly.
- **Maximum Working Pressure : 4000 PSI (280 bar) at 200 o C. .**
- **100% Factory tested.**



SR. NO.	PART NAME	QTY	MATERIAL
1	BODY	1	A479-316
2	GLAND BODY	1	A479-316
3	PANEL NUT	1	A479-316
4	GLAND NUT	1	A479-316
5	WASHER	1	A479-316
6	PACKING	1	PTFE/GRAPHOIL
7	PACKING WASHER	1	A479-316
8	SPINDLE	1	17-4PH/TITANIUM
9	HANDLE	1	STAINLESS STEEL
10	GRUB SCREW	1	STEEL PLATED
11	O-RING	1	VITON

SS316 PART NO: MS-16-FF-P

TECHNICAL DATA				
ORIFICE	Cv	Pr. Rat.		Temp.Rat.
		SS	BRASS	
3.5 mm.	0.31	4000 PSI (27600 kpa)	3000 PSI (20700 kpa)	-20 to 250° F (-29° to 121°C)

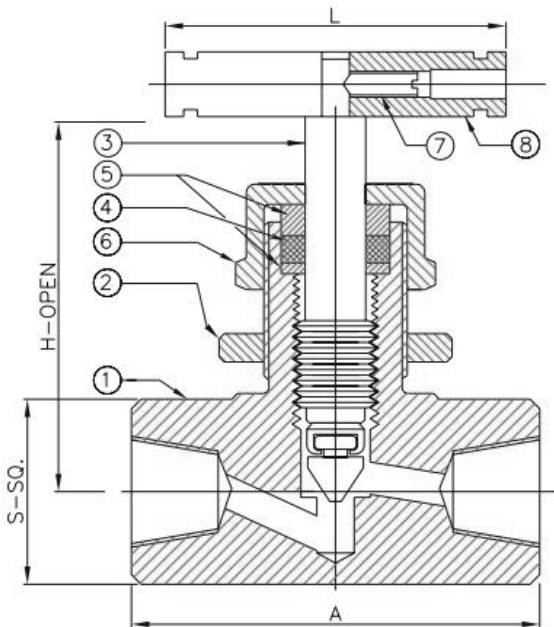


Straight Pattern Female x Female



FEATURES:

- Bar stock Body construction.
- Straight with Panel Mounting optional.
- Metal to Metal or Stellite seats. Stem threads Rolled and hard plated and tie stellite (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure : 6000 PSI (400 bar) at 200 o C. 10000 PSI (700 bar) at 120 o C.**
- **100% Factory tested.**



TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6mm	2	(41300 kpa)	(-29° to 121°C)

TABLE OF DIMENSIONS:

SIZE	A	S-SQ	H-OPEN	L	ORIFICE	SS 316 PART NO.
1/4"	50	22	69	50	5mm	IB-S-16-FF-1
3/8"	50	25	69	50	5mm	IB-S-16-FF-2
1/2"	68	30	83	60	6mm	IB-S-16-FF-3
3/4"	70	36	89	70	8mm	IB-S-16-FF-4
1"	80	45	102	70	9.5mm	IB-S-16-FF-5

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316/CS
2	PANNEL NUT	1	A 479-316/CS
3	STEM	1	A 479-316 + 17-4PH
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316/CS
6	GLAND NUT	1	A 479-316/CS
7	GRUB SCREW	1	STEEL PLATED
8	HANDLE	1	SS/CS

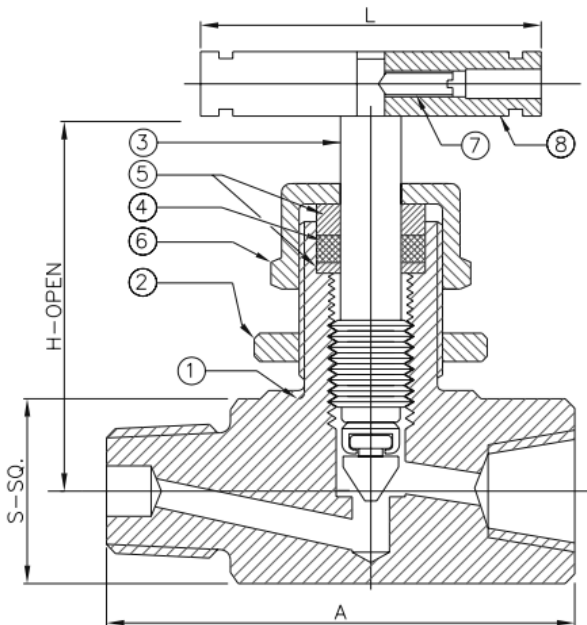


Straight Pattern Male x Female



FEATURES:

- Bar stock Body construction.
- Straight with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stelled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure :** 6000 PSI (400 bar) at 200 o C.
10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**



TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6.5mm.	2	(41300 kpa)	(-29° to 121°C)

TABLE OF DIMENSIONS:

SIZE	A	S-SQ	H-OPEN	L	SS 316 PART NO.
1/4"	55	22	69	50	IB-S-16-MF-1
3/8"	55	25	69	50	IB-S-16-MF-2
1/2"	73	30	83	60	IB-S-16-MF-3
3/4"	80	36	89	70	IB-S-16-MF-4
1"	88	45	102	70	IB-S-16-MF-5

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316/CS
2	PANNEL NUT	1	A 479-316/CS
3	STEM	1	A 479-316 + 17-4PH
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316/CS
6	GLAND NUT	1	A 479-316/CS
7	GRUB SCREW	1	STEEL PLATED
8	HANDLE	1	SS/CS

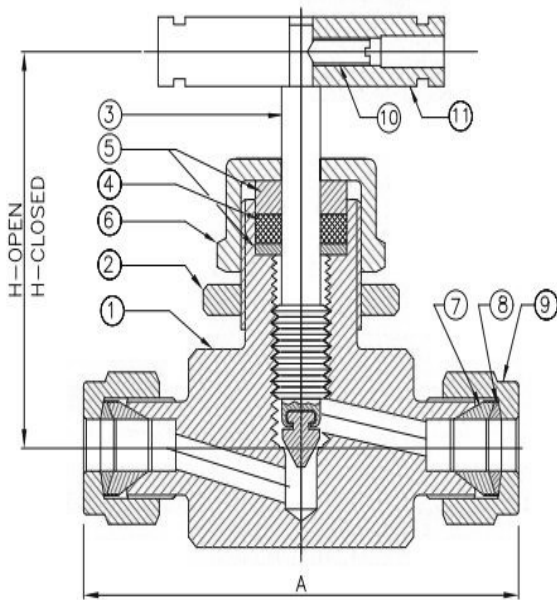


Straight Pattern Compression Tube Ends



FEATURES:

- Bar stock Body construction.
- Straight with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure :** 6000 PSI (400 bar) at 200 o C.
10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**



TECHNICAL DATA			
ORITICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6.5mm.	2	(41300 kpa)	(-29° to 121°C)

TABLE OF DIMENSIONS:					
SIZE	A	S-SQ	H-OPEN	L	SS 316 PART NO.
1/4"	50	22	-	-	IB-S-16-OD-1
3/8"	50	25	84	75	IB-S-16-OD-2
1/2"	68	30	108	96	IB-S-16-OD-3
3/4"	70	36	115	105	IB-S-16-OD-4
1"	80	45	120	110	IB-S-16-OD-5

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316
2	PANNEL NUT	1	A 479-316
3	STEM	1	A 479-316
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316
6	GLAND NUT	1	A 479-316
7	INNER FERRULE	2	A 479-316
8	OUTER FERRULE	2	A 479-316
9	NUT	2	A 479-316
10	GRUB SCREW	1	STEEL PLATED
11	HANDLE	1	STAINLESS STEEL

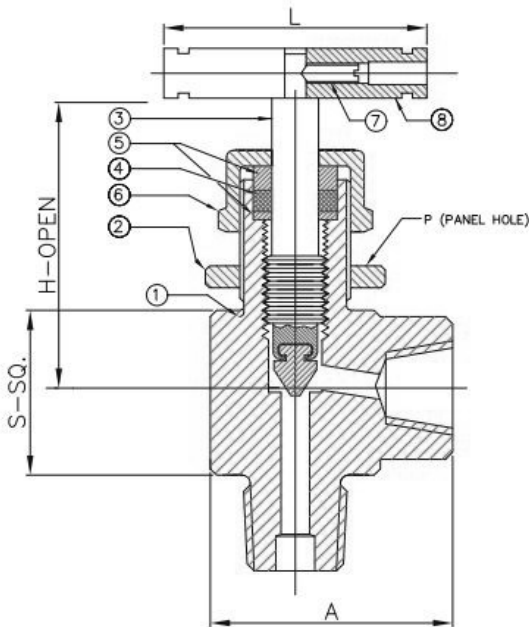


Angle Pattern Male x Female



FEATURES:

- Bar stock Body construction.
- Angle with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure** : 6000 PSI (400 bar) at 200 o C.
10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**



TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6.5mm.	2	(41300 kpa)	(-29° to 121°C)

TABLE OF DIMENSIONS:

SIZE	A	S-SQ	H-OPEN	L	P	SS 316 PART NO.
1/4"	55	22	69	50	18	IB-A-16-MF-1
3/8"	55	25	69	50	18	IB-A-16-MF-2
1/2"	73	30	83	60	20	IB-A-16-MF-3
3/4"	80	36	89	70	22	IB-A-16-MF-4
1"	88	45	102	70	26	IB-A-16-MF-5

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316
2	PANNEL NUT	1	A 479-316
3	STEM	1	A 479-316
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316
6	GLAND NUT	1	A 479-316
7	GRUB SCREW	1	STEEL PLATED
8	HANDLE	1	STAINLESS STEEL



Angle Pattern Female x Female



FEATURES:

- Bar stock Body construction.
- Angle with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure : 6000 PSI (400 bar) at 200 o C. 10000 PSI (700 bar) at 120 o C.**
- **100% Factory tested.**

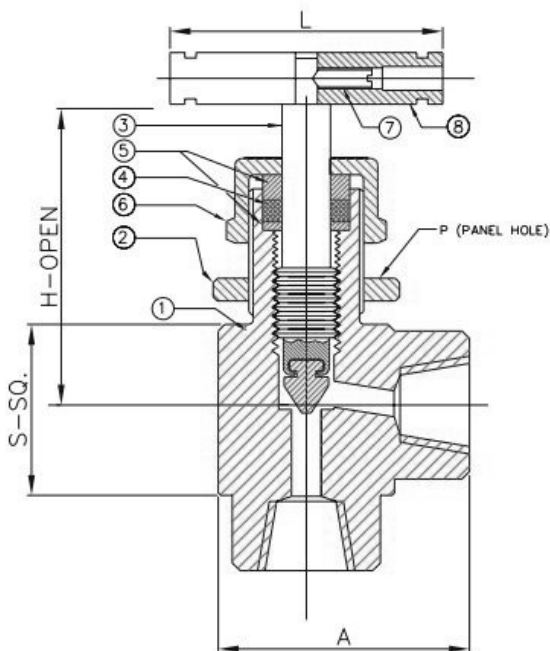


TABLE OF DIMENSIONS:

SIZE	A	S-SQ	H-OPEN	L	P	SS 316 PART NO.
1/4"	55	22	69	50	18	IB-A-16-FF-1
3/8"	55	25	69	50	18	IB-A-16-FF-2
1/2"	73	30	83	60	20	IB-A-16-FF-3
3/4"	80	36	89	70	22	IB-A-16-FF-4
1"	88	45	102	70	26	IB-A-16-FF-5

TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6.5mm.	2	(41300 kpa)	(-29° to 121°C)

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316
2	PANNEL NUT	1	A 479-316
3	STEM	1	A 479-316
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316
6	GLAND NUT	1	A 479-316
7	GRUB SCREW	1	STEEL PLATED
8	HANDLE	1	STAINLESS STEEL



Angle Pattern Compression Tube Ends



FEATURES:

- Bar stock Body construction.
- Angle with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure** : 6000 PSI (400 bar) at 200 o C.
10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**

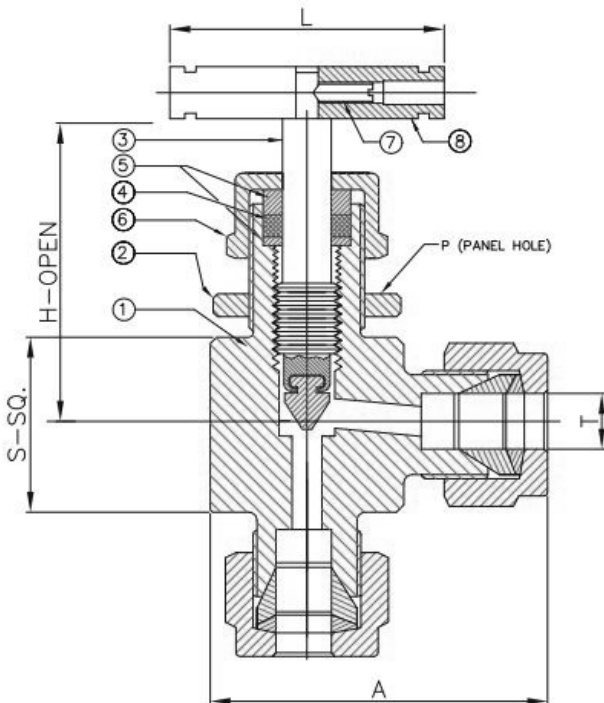


TABLE OF DIMENSIONS:

SIZE	A	S-SQ	H-OPEN	L	P	SS 316 PART NO.
1/4"	55	22	69	50	18	IB-A-16-OD-1
3/8"	55	25	69	50	18	IB-A-16-OD-2
1/2"	73	30	83	60	20	IB-A-16-OD-3
3/4"	80	36	89	70	22	IB-A-16-OD-4
1"	88	45	102	70	26	IB-A-16-OD-5

TECHNICAL DATA

ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.65	6000 PSI	-20 to 250° F
6.5mm.	2	(41300 kpa)	(-29° to 121°C)

SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316
2	PANNEL NUT	1	A 479-316
3	STEM	1	A 479-316
4	PACKING	1	TEFLON/GRAPHOIL
5	WASHER	2	A 479-316
6	GLAND NUT	1	A 479-316
7	GRUB SCREW	1	STEEL PLATED
8	HANDLE	1	STAINLESS STEEL



Male x Female



FEATURES:

- Hex Bar stock Body construction.
- Straight or Angle Pattern with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure** : 6000 PSI (400 bar) at 200 o C. 10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**

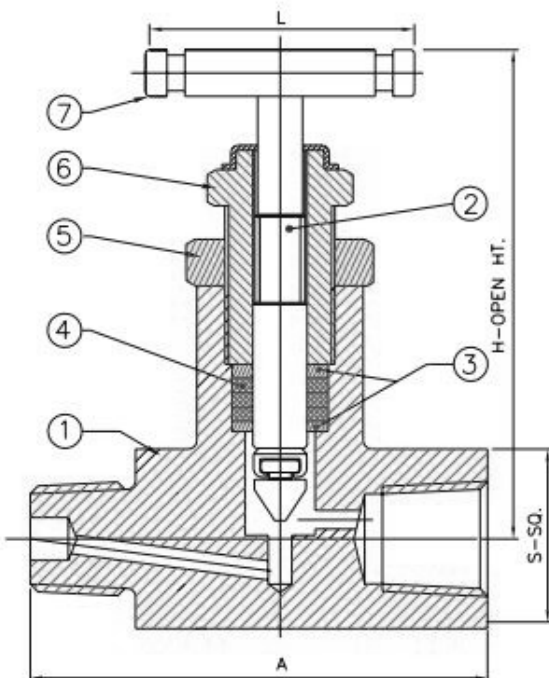


TABLE OF DIMENSIONS:					
SIZE	A	S-SQ	H-OPEN	L	SS 316 PART NO.
1/4"	60	25	86	60	HB-16-MF-1
3/8"	60	28	86	60	HB-16-MF-2
1/2"	82	34	98	70	HB-16-MF-3
3/4"	87	38	98	70	HB-16-MF-4

TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
5 mm.	0.22	10000 PSI (700 BAR)	-65 to 200° F (-50° to 93°C)

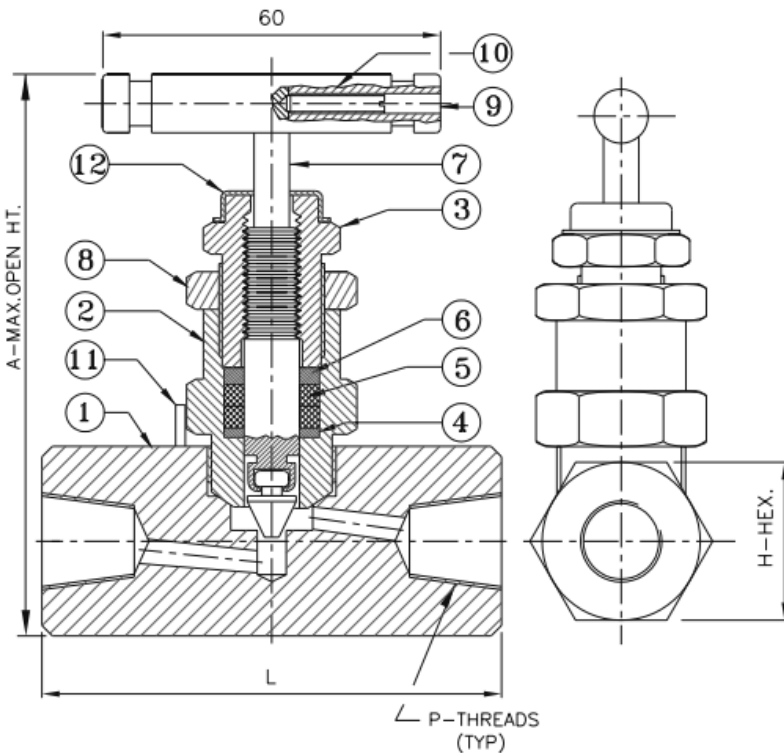
SR. NO.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316/CS
2	STEM	1	A 479-316
3	PACKING WASHER	1	A 479-316 /CS
4	GLAND PACKING	1	GLASS FILLED PTFE
5	LOCK NUT	2	A 479-316/CS
6	GLAND RETAINER	1	A 479-316/CS
7	HANDLE	1	STAINLESS STEEL/CS
8	DUST COVER	1	PLASTIC
9	VEE TIP	1	17-4PH

Female x Female



FEATURES:

- Hex Bar stock Body construction.
- Straight or Angle Pattern with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure** : 6000 PSI (400 bar) at 200 o C.
10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**



TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
4.8 mm	0.52	6000 PSI (41300 kpa)	-20 to 250° F (-29° to 121°C)
6.4 mm.	1.40		

TABLE OF DIMENSIONS:				
NPTF	L	H-HEX	A-OPEN	SS 316 PART NO.
1/4"	53	25	92	HB-16-FF-1
3/8"	53	25	92	HB-16-FF-2
1/2"	75	32	98	HB-16-FF-3
3/4"	75	36	114	HB-16-FF-4

SR.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316 /A-105
2	BONNET	1	A 479-316 /A-105
3	GLAND RETAINER	1	A 479-316 /A-105
4	WASHER	1	A276-316/A-105
5	PACKING	2	PTFE/GRAFOIL
6	PACKING WASHER	1	A276-316/A-105
7	SPINDLE	1	A276-316 STELLIT-
8	LOCK NUT	1	A276-316/A-105
9	GRUB SCREW	1	STEEL
10	HANDLE	1	A276-304/A-105
11	LOCK PIN	1	A276-316/A-105
12	DUST CAP	1	PLASTIC LD.

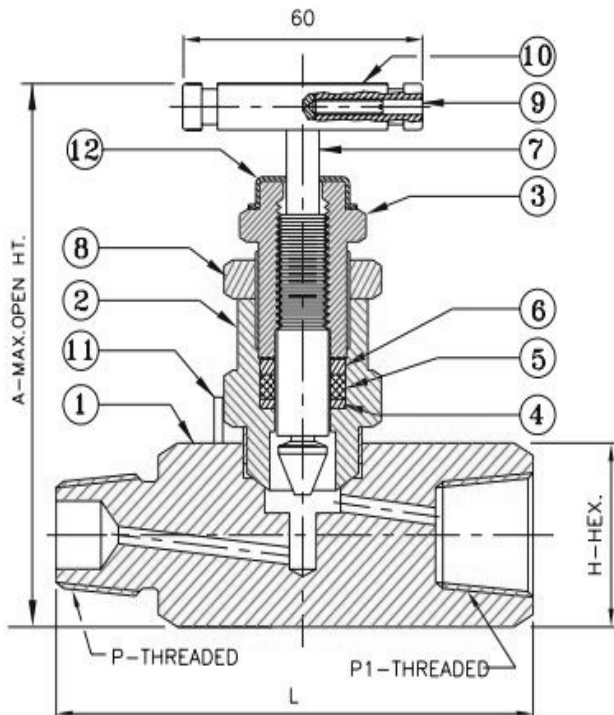


Male x Female with Vent



FEATURES:

- Hex Bar stock Body construction.
- Straight or Angle Pattern with Panel Mounting optional.
- Metal to Metal or Stellated seats. Stem threads Rolled and hard plated and tie stalled (Vee Regulating one piece or non-regulating) or non-rotating ball tip optional.
- 2 piece Chevron packed offers zero leak, sealing over conventional packing design.
- Variety of End connections include "FTS" single or twin ferrule tube fittings, Male or Female N. P. T. and I. S. O., DIN and JIS tapered pipe ends.
- **Maximum Working Pressure** : 6000 PSI (400 bar) at 200 o C. 10000 PSI (700 bar) at 120 o C.
- **100% Factory tested.**



TECHNICAL DATA			
ORIFICE	Cv	Pr. Rat.	Temp.Rat.
4.8 mm.	0.85	6000 PSI (41300 kpa)	-20 to 250° F (-29° to 121°C)
6.4 mm.	1.40		

TABLE OF DIMENSIONS:

NPTM	MPTF	L	H-HEX	A-OPEN	SS 316 PART NO.
1/4"	1/4"	60	25	92	HB-16-MFV-1
3/8"	3/8"	60	25	92	HB-16-MFV-2
1/2"	1/2"	80	32	98	HB-16-MFV-3
3/4"	3/4"	80	36	114	HB-16-MFV-4

SR.	DESCRIPTION	QTY	MATERIAL
1	BODY	1	A 479-316 /A-105
2	GLAND BODY	1	A 479-316 /A-105
3	GLAND RETAINER	1	A 479-316 /A-105
4	WASHER	1	A276-316/A-105
5	PACKING	2	PTFE/GRAFOIL
6	PACKING WASHER	1	A276-316/A-105
7	SPINDLE	1	A276-316 STELLITED
8	LOCK NUT	1	A276-316/A-105
9	GRUB SCREW	1	STEEL
10	HANDLE	1	A276-304/A-105
11	LOCK PIN	1	A276-316/A-105
12	DUST CAP	1	PLASTIC LD.



SOFT SEAT Male x Female



FEATURES:

- Standard pressure upto 6000 PSI, optional pressure upto 10000 PSI.
- Derline seat standard for easier replacement also available in PEEK, PTFE & KEL-F.
- 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 for additional strength & maximum service life.
- 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.
- Body to bonnet seal metal to metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.
- Panel Mounting Option Available.

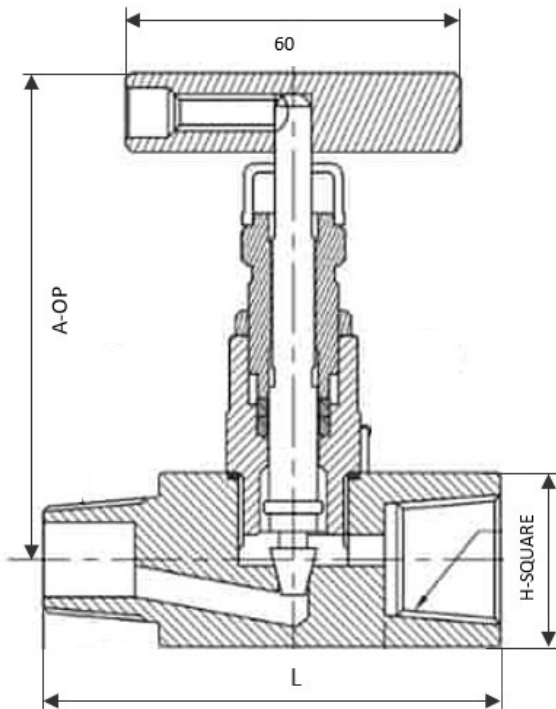


TABLE OF DIMENSION				
P(M/F)	L	H-SQUARE	A-OP	SS316 PART NO
1/4"	60	27	93.5	SB-MF-16-1
3/8"	60	27	93.5	SB-MF-16-2
1/2"	80	32	96.5	SB-MF-16-3
M20 X 1.5	80	32	96.5	SB-MF-16-4
3/4"	95	42	117	SB-MF-16-5
1"	100	45	118	SB-MF-16-6



SOFT SEAT Female x Female



FEATURES:

- Standard pressure upto 6000 PSI, optional pressure upto 10000 PSI.
- Derline seat standard for easier replacement also available in PEEK, PTFE & KEL-F.
- 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 for additional strength & maximum service life.
- 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.
- Body to bonnet seal metal to metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.
- Panel Mounting Option Available.

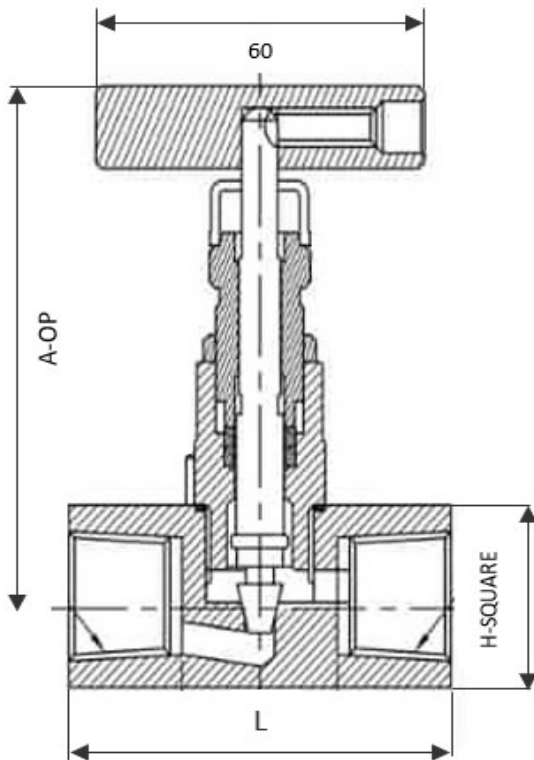


TABLE OF DIMENSION				
P(F/F)	L	H-SQUARE	A-OP	SS316 PART NO
1/4"	55	27	93.5	SB-16-FF-1
3/8"	55	27	93.5	SB-16-FF-2
1/2"	75	32	96.5	SB-16-FF-3
M20 X 1.5	75	32	96.5	SB-16-FF-4
3/4"	80	42	117	SB-16-FF-5
1"	95	45	118	SB-16-FF-6



SOFT SEAT BLOCK & BLEED VALVE
Male x Female



FEATURES:

- Standard pressure upto 6000 PSI, optional pressure upto 10000 PSI.
- Derline seat standard for easier replacement also available in PEEK, PTFE & KEL-F.
- 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 for additional strength & maximum service life.
- 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.
- Body to bonnet seal metal to metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.
- Panel Mounting Option Available.

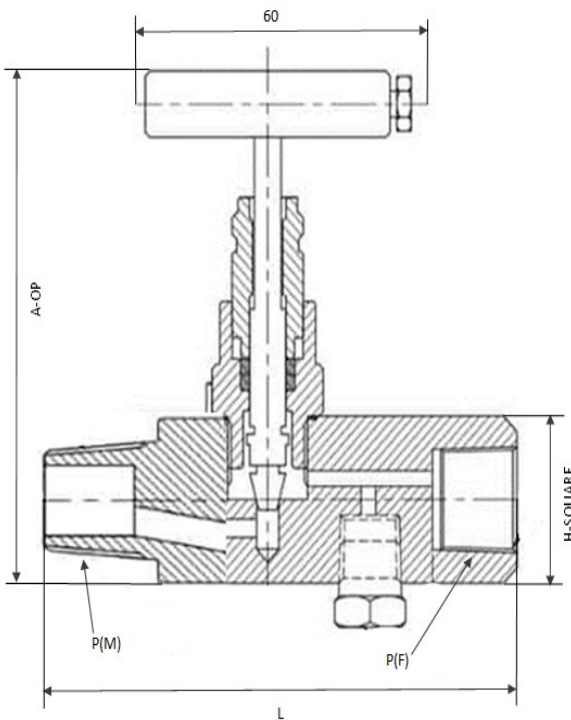


TABLE OF DIMENSION					
P(M)	P(F)	L	H-SQUARE	A-OP	SS316L PART NO
1/4"	1/4"	70	27	93.5	SB-16-MF-1
3/8"	3/8"	70	27	93.5	SB-16-MF-2
1/2"	1/2"	85	32	96.5	SB-16-MF-3
M20 X 1.5	M20 X 1.5	85	32	96.5	SB-16-MF-4
3/4"	1/2"	85	32	117	SB-16-MF-5
3/4"	3/4"	100	42	117	SB-16-MF-6
1"	1"	110	45	118	SB-16-MF-7



SOFT SEAT BLOCK & BLEED VALVE
Female x Female



FEATURES:

- Standard pressure up to 6000 PSI, optional pressure up to 10000 PSI.
- Derline seat standard for easier replacement also available in PEEK, PTFE & KEL-F.
- 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 for additional strength & maximum service life.
- 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.
- Body to bonnet seal metal to metal constant compression, isolate bonnet threads from system fluids and eliminates possible tensile.
- Panel Mounting Option Available.

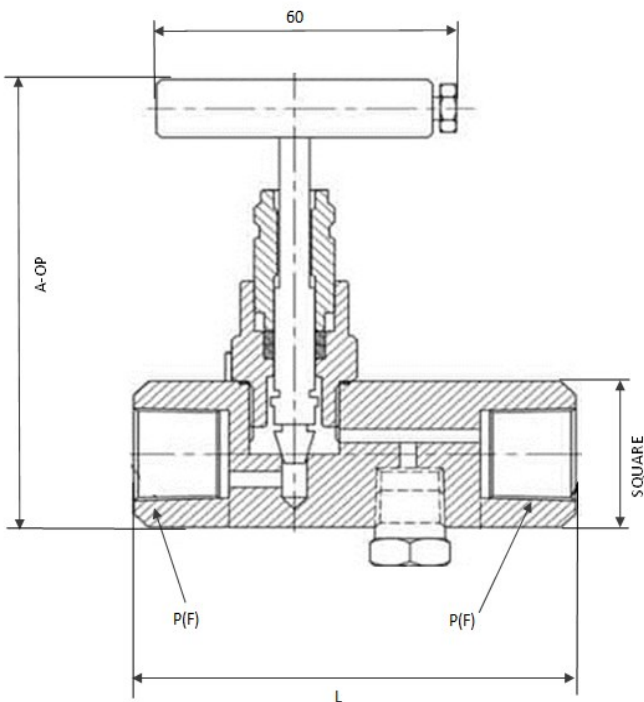


TABLE OF DIMENSION				
P(F/F)	L	SQUARE	A-OP	SS316 PART NO
1/4"	65	27	93.5	SB-BV-16-FF-1
3/8"	65	27	93.5	SB-BV-16-FF-2
1/2"	80	32	96.5	SB-BV-16-FF-3
M20 X 1.5	80	32	96.5	SB-BV-16-FF-4
3/4"	90	42	117	SB-BV-16-FF-5
1"	100	45	118	SB-BV-16-FF-6



FEATURES:

- **One piece body construction no welding** - For high strength and full safety.
- **Vee tip design** - Controls accurate flow.
- **Stem threads rolled & hard plated** - Provides additional strength & maximum service life.
- **Mirror finish stem, furnished to a 16 RMS** - Extends packing life and smooth stem operation.
- **Stainless steel handle** - For proper actuation.
- **Dust cap** - Prevents contaminants and lubricant washout of bonnet assembly.

TABLE OF DIMENSION						
SIZE	A(MF)	A(FF)	S-SQ	H	L	SS316 PART NO
1/4"	60	55	25	86	60	HP-16-1
3/8"	60	55	28	86	60	HP-16-2
1/2"	82	75	34	98	70	HP-16-3
3/4"	87	80	38	98	70	HP-16-4

