

# NV15 - 15,000 PSI

High Pressure Needle Valves



## Specifications

Max Working Pressure  
15,000 psi (1034 bar)

Temperature Ratings:  
0° to 800° F (-18° to 427° C)

## Typical Applications

- Hydrostatic Test Systems
- Waterblast Applications
- Hydraulic Control Panels
- Wire Line Applications
- Instrumentation

## Features and Benefits

- Tubing sizes available for 1/4", 3/8", 1/2"
- Non-rotating stem and bar stock body design
- Metal-to-metal seating achieves ideal shutoff, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles.
- PTFE is the standard packing material
- Body material is 316 SS
- Stem material is 17-4PH SS
- Options for VEE or Regulating stem tips
- The locking device of packing gland is reliable
- 2-Way Straight

## Other Options

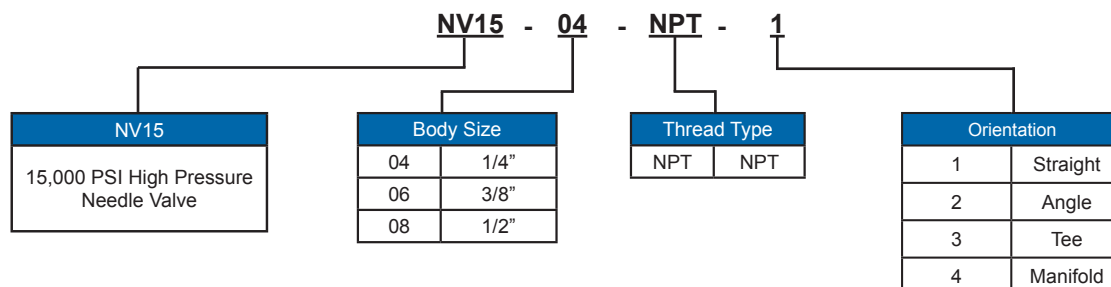
- Angle w/ replaceable seat, 3-way and 3-way manifold available upon request

### Notes:

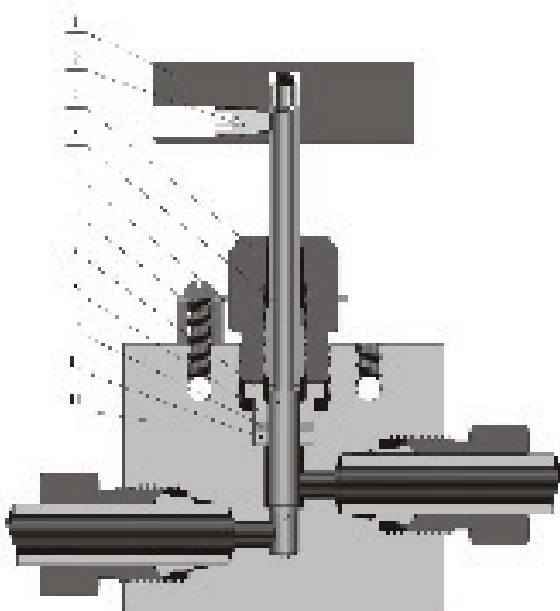
- The value of Cv shown are for 2-way straight valve pattern
- The value of Cv for 2-way angle pattern will be increase about 50% (Base on water)
- Extreme Temperatures
- PFTE is the standard packing material
- Normal Precise Metering valve with PFTE packing can be operated to 450°F (232°C)
- Normal Precise Metering valve with RPTFE glass packing can be operated to 600°F (316°C)
- Normal Precise Metering valve with Graphite packing can be operated to 800°F (427°C)

## ORDERING INFORMATION

DNP AMERICAS PART NUMBERING SYSTEM:

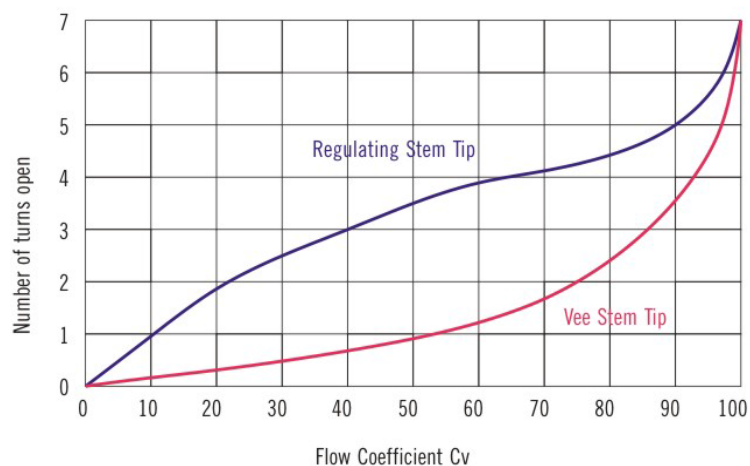


## Standard Materials of Construction

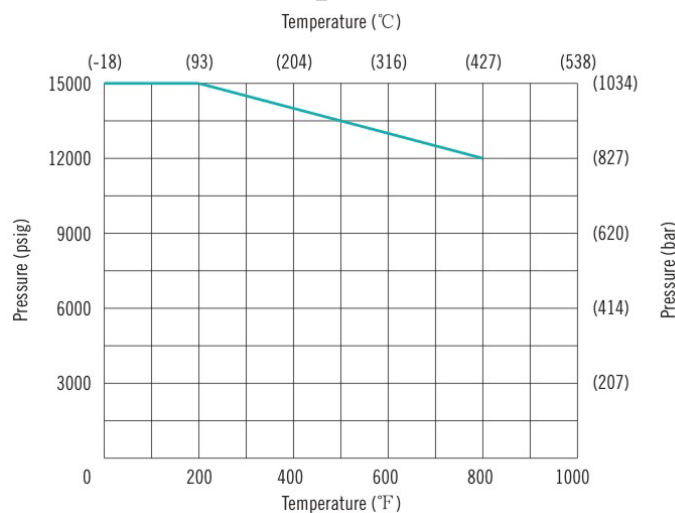


Item	Component	Material Grade/ASTM Specification
1	Handle	Stainless Steel
2	Handle Screw	Stainless Steel
3	Packing Gland	C63000/B150
4	Sleeve	316 SS/479
5	Locking Plate	304 SS/A240
6	Locking Screw	Stainless Steel
7	Stem	17-4PH/A564
8	Packing Ring	C63000/B150
9	Packing	PFTE/RPTFE/Graphite
10	Packing Washer	17-4PH/A564
11	Body	316 SS/A479
Lubricant		Molybdenum disulfide

## Flow Data at 100°F (38°C)



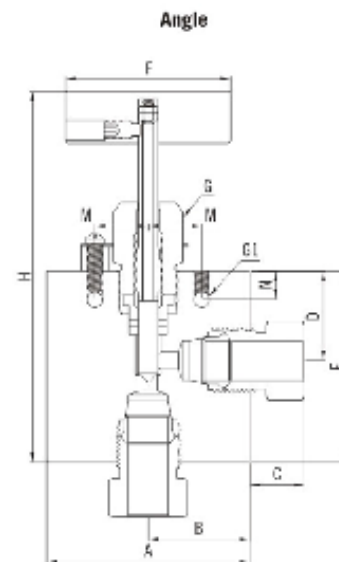
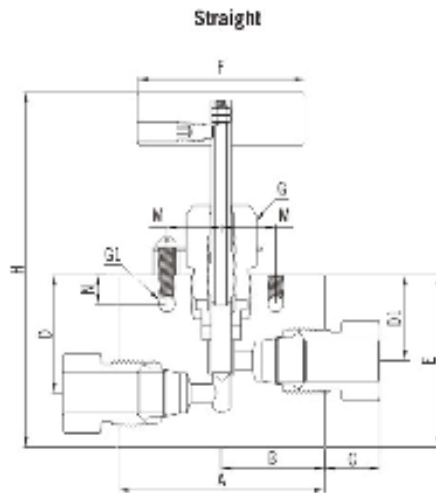
## Pressure and Temperature



## Technical Data

Tube O.D. in.	Orifice in. (mm)	Cv	Pressure @ Room Temperature psi (bar)
1/4	0.188 (4.77)	0.65	15,000 (1034)
3/8	0.250 (6.35)	0.95	15,000 (1034)
1/2	0.375 (9.53)	1.90	15,000 (1034)

## Dimensions Straight and Angle



**Dimensions (Straight)**

Tube OD in.	Drift in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.188 (4.77)	2.30 (58.8)	1.00 (25.4)	0.44 (11.2)	1.62 (41.15)	1.19 (30.23)	2.00 (50.8)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.50 (114.3)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
3/8	0.250 (6.35)	2.30 (58.8)	1.00 (25.4)	0.53 (13.5)	1.62 (41.15)	1.19 (30.23)	2.00 (50.8)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.50 (114.3)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
1/2	0.375 (9.52)	2.50 (63.5)	1.25 (31.75)	0.53 (13.5)	2.38 (60.45)	1.75 (44.45)	2.88 (73.15)	4.00 (101.6)	1.00 (25.4)	0.34 (8.64)	5.56 (141.4)	0.69 (17.53)	0.50 (12.7)	1.00 (25.4)

**Dimensions (Angle)**

Tube OD in.	Drift in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.188 (4.77)	2.30 (58.8)	1.00 (25.4)	0.44 (11.2)	1.19 (30.23)		2.19 (55.63)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	5.00 (127.0)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
3/8	0.250 (6.35)	2.30 (58.8)	1.00 (25.4)	0.53 (13.5)	1.19 (30.23)		2.19 (55.63)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	5.00 (127.0)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
1/2	0.375 (9.52)	2.50 (63.5)	1.25 (31.75)	0.53 (13.5)	1.75 (44.45)		3.38 (85.85)	4.00 (101.6)	1.00 (25.4)	0.34 (8.64)	6.45 (163.8)	0.69 (17.53)	0.50 (12.7)	1.00 (25.4)



## Specifications

Max Working Pressure  
20,000 psi (1379 bar)

Temperature Ratings:  
0° to 800° F (-18° to 427° C)

## Typical Applications

- Hydrostatic Test Systems
- Waterblast Applications
- Hydraulic Control Panels
- Wire Line Applications
- Instrumentation

## Features and Benefits

- Tubing sizes available for 1/4", 3/8", 9/16" and 3/4"
- Non-rotating stem and bar stock body design
- Metal-to-metal seating achieves ideal shutoff, longer stem/seal service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles.
- PTFE is the standard packing material
- Body material is 316 SS
- Stem material is 17-4PH SS
- Options for VEE or Regulating stem tips
- The locking device of packing gland is reliable

## Other Options

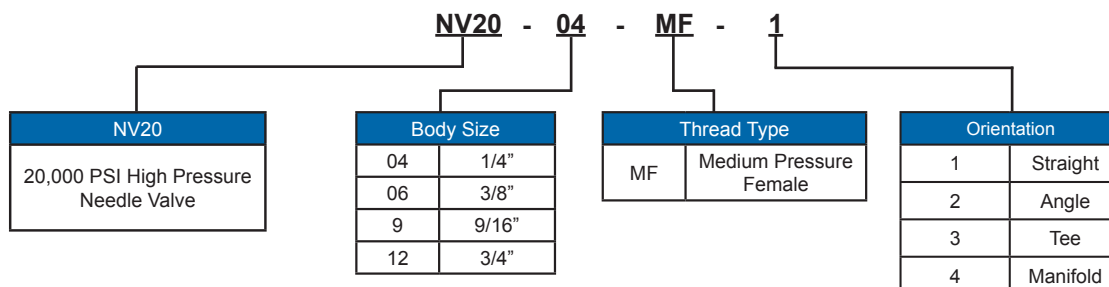
- Angle w/ replaceable seat, 3-way and 3-way manifold available upon request

### Notes:

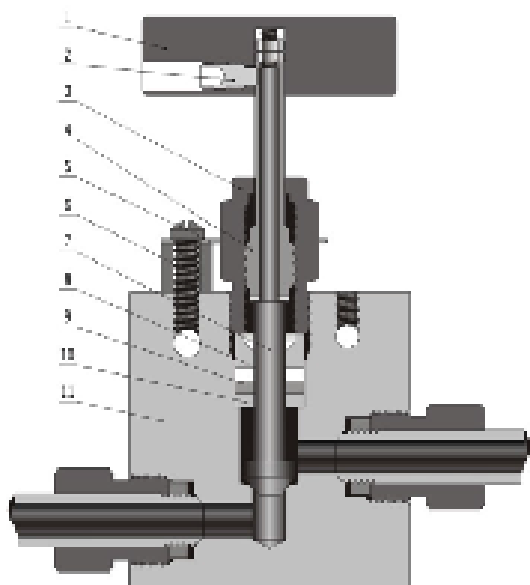
- The value of Cv shown are for 2-way straight valve pattern
- The value of Cv for 2-way angle pattern will be increase about 50% (Base on water)
- Extreme Temperatures
- PFTE is the standard packing material
- Normal Precise Metering valve with PFTE packing can be operated to 450°F (232°C)
- Normal Precise Metering valve with RPTFE glass packing can be operated to 600°F (316°C)
- Normal Precise Metering valve with Graphite packing can be operated to 800°F (427°C)

## ORDERING INFORMATION

DNP AMERICAS PART NUMBERING SYSTEM:

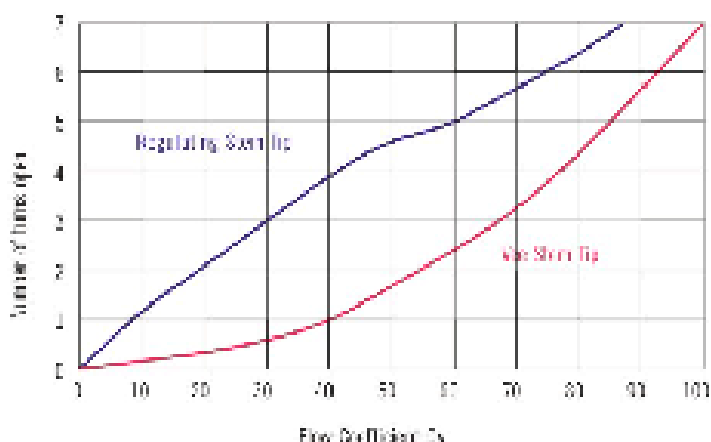


## Standard Materials of Construction

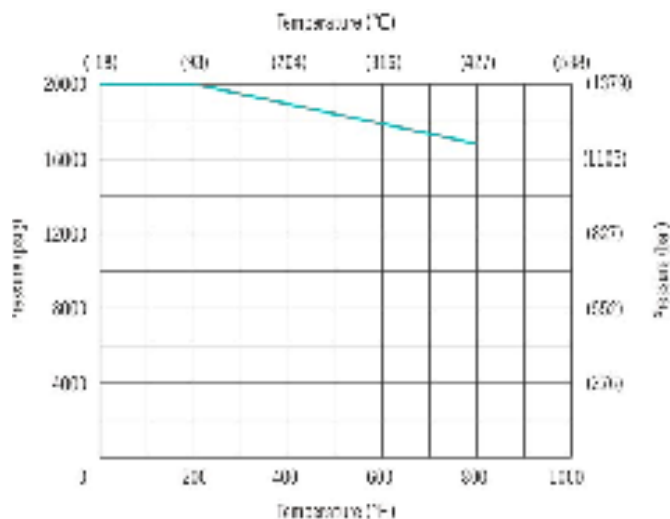


Item	Component	Material Grade/ASTM Specification
1	Handle	Stainless Steel
2	Handle Screw	Stainless Steel
3	Packing Gland	C63000/B150
4	Sleeve	316 SS/479
5	Locking Plate	304 SS/A240
6	Locking Screw	Stainless Steel
7	Stem	17-4PH/A564
8	Packing Ring	C63000/B150
9	Packing	PFTE/RPTFE/Extend stuffing box valve with of Graphite
10	Packing Washer	17-4PH/A564
11	Body	316 SS/A479
Lubricant		Molybdenum disulfide

## Flow Data at 100°F (38°C)



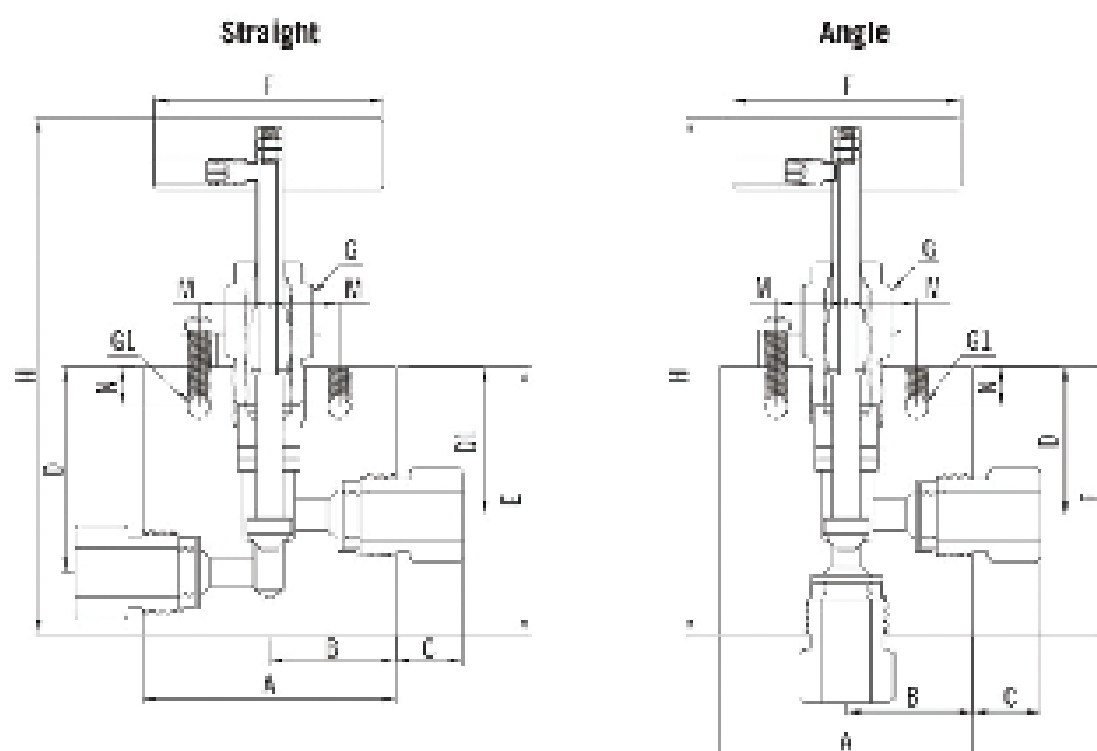
## Pressure and Temperature



## Technical Data

Tube O.D. in.	Orifice in. (mm)	Cv	Pressure @ Room Temperature psi (bar)
1/4"	0.125 (3.18)	0.31	20,000 (1.379)
3/8"	0.219 (5.56)	1.72	50,000 (3.379)
1/2"	0.312 (7.92)	3.00	50,000 (3.379)
3/4"	0.438 (11.13)	5.30	50,000 (3.379)
1"	0.562 (14.27)	8.40	20,000 (1.379)

## Dimensions Straight and Angle



Dimensions (Straight)

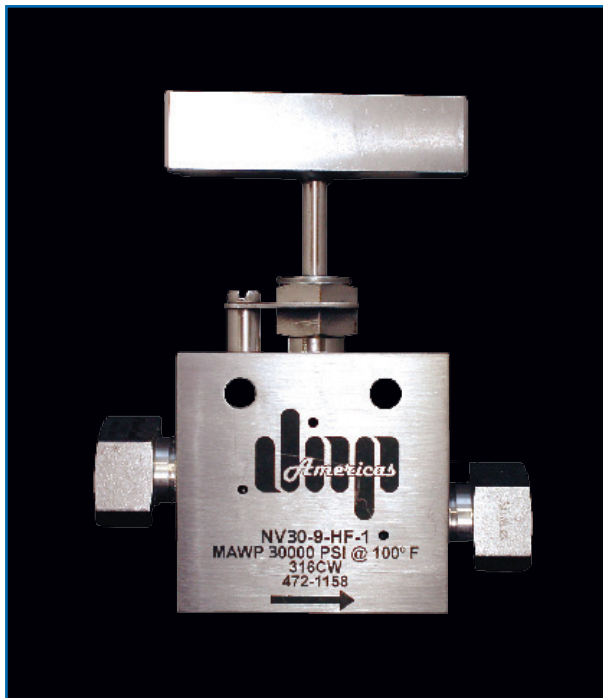
Outside Diameter Tube Size in.	Drill Size in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	1.30 (33.0)	1.62 (41.15)	1.19 (30.2)	2.44 (62.0)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.00 (101.6)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
3/8	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	1.47 (37.3)	1.62 (41.15)	1.19 (30.2)	2.44 (62.0)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.00 (101.6)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
1/2	0.312 (7.92)	2.00 (50.8)	1.25 (31.75)	1.63 (41.4)	2.34 (59.4)	1.75 (44.45)	2.44 (62.0)	4.00 (101.6)	1.00 (25.4)	0.34 (8.64)	5.00 (127.0)	0.68 (17.3)	0.50 (12.7)	1.00 (25.4)
3/4	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	1.62 (41.15)	3.00 (76.2)	2.25 (57.15)	3.75 (95.25)	10.25 (260.4)	1.12 (28.4)	0.44 (11.18)	7.50 (190.5)	0.88 (22.3)	0.62 (15.75)	1.38 (35.05)
1	0.562 (14.27)	4.12 (104.5)	2.00 (50.8)	1.63 (41.4)	3.75 (95.25)	2.81 (71.37)	4.63 (117.6)	10.25 (260.4)	1.62 (41.15)	0.56 (14.22)	9.00 (228.6)	1.25 (31.75)	1.13 (28.7)	1.75 (44.45)

Dimensions (Angle)

Outside Diameter Tube Size in.	Drill Size in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	1.35 (34.3)	1.19 (30.2)		2.44 (62.0)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.00 (101.6)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
3/8	0.219 (5.56)	2.00 (50.8)	1.00 (25.4)	1.47 (37.3)	1.19 (30.2)		2.44 (62.0)	3.00 (76.2)	0.75 (19.05)	0.22 (5.59)	4.00 (101.6)	0.62 (15.75)	0.38 (9.65)	0.75 (19.05)
1/2	0.312 (7.92)	2.00 (50.8)	1.25 (31.75)	1.63 (41.4)	1.75 (44.45)		2.44 (62.0)	4.00 (101.6)	1.00 (25.4)	0.34 (8.64)	5.00 (127.0)	0.68 (17.3)	0.50 (12.7)	1.00 (25.4)
3/4	0.438 (11.13)	3.00 (76.2)	1.50 (38.1)	1.62 (41.15)	2.25 (57.15)		4.25 (108.0)	10.25 (260.4)	1.12 (28.4)	0.44 (11.18)	7.50 (190.5)	0.88 (22.3)	0.62 (15.75)	1.38 (35.05)
1	0.562 (14.27)	4.12 (104.5)	2.00 (50.8)	1.63 (41.4)	2.81 (71.37)		5.13 (130.1)	10.25 (260.4)	1.62 (41.15)	0.56 (14.22)	9.00 (228.6)	1.25 (31.75)	1.13 (28.7)	1.75 (44.45)

# NV30 - 30,000 PSI

High Pressure Needle Valves



## Specifications

Max Working Pressure  
30,000 psi (2068 bar)

Temperature Ratings:  
0° to 800° F (-18° to 427° C)

## Typical Applications

- Hydrostatic Test Systems
- Waterblast Applications
- Hydraulic Control Panels
- Wire Line Applications
- Instrumentation

## Features and Benefits

- Tubing sizes available for 1/4" to 9/16"
- Non-rotating stem and bar stock body design
- Metal-to-metal seating achieves ideal shutoff, longer stem/seal service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles.
- PTFE is the standard packing material
- Body material is 316 SS
- Stem material is 17-4PH SS
- Options for VEE or Regulating stem tips
- The locking device of packing gland is reliable

## Other Options

- Angle w/ replaceable seat, 3-way and 3-way manifold available upon request

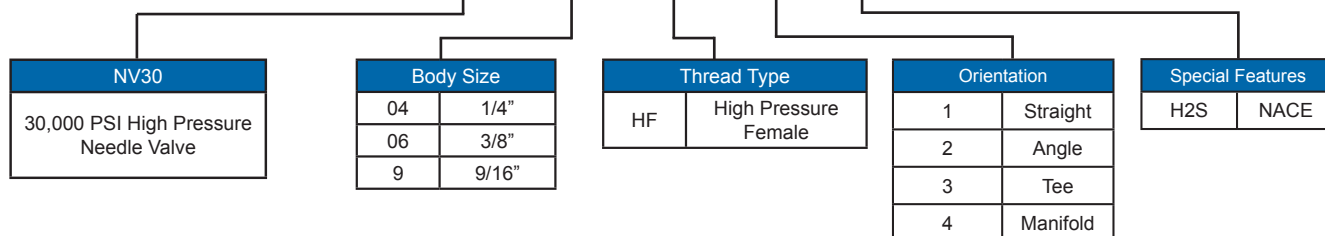
### Notes:

- The value of Cv shown are for 2-way straight valve pattern
- The value of Cv for 2-way angle pattern will be increase about 50% (Base on water)
- Extreme Temperatures
- PFTE is the standard packing material
- Normal Precise Metering valve with PFTE packing can be operated to 450°F (232°C)
- Normal Precise Metering valve with RPTFE glass packing can be operated to 600°F (316°C)
- Normal Precise Metering valve with Graphite packing can be operated to 800°F (427°C)

## ORDERING INFORMATION

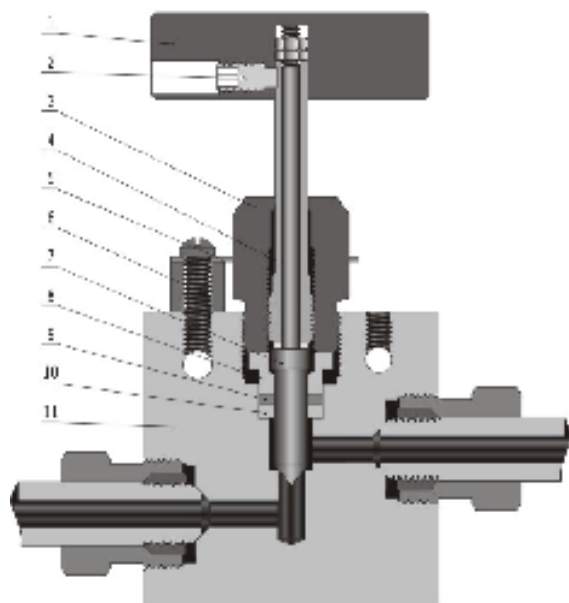
DNP AMERICAS PART NUMBERING SYSTEM:

**NV30 - 04 - HF - 1 - H2S**



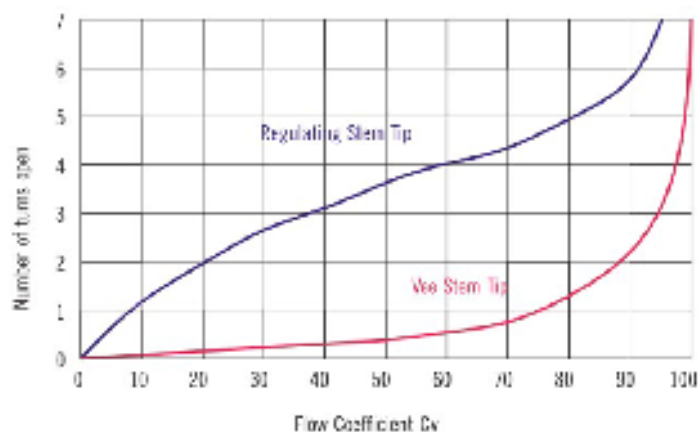


## Standard Materials of Construction

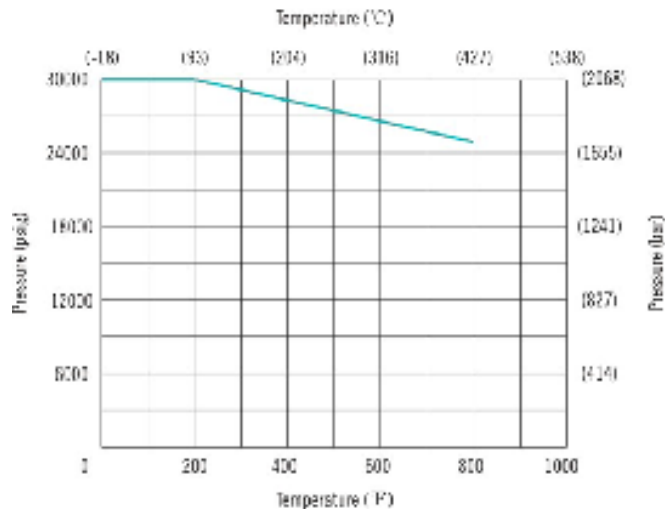


Item	Component	Material Grade/ASTM Specification
1	Handle	Stainless Steel
2	Handle Screw	Stainless Steel
3	Packing Gland	C63000/B150
4	Sleeve	316 SS/479
5	Locking Plate	304 SS/A240
6	Locking Screw	Stainless Steel
7	Stem	17-4PH/A564
8	Packing Ring	17-4PH/A564
9	Packing	PFTE/RPTFE/Extend stuffing box valve with of Graphite
10	Packing Washer	17-4PH/A564
11	Body	316 SS/A479
Lubricant		Molybdenum disulfide

## Flow Data at 100°F (38°C)



## Pressure and Temperature

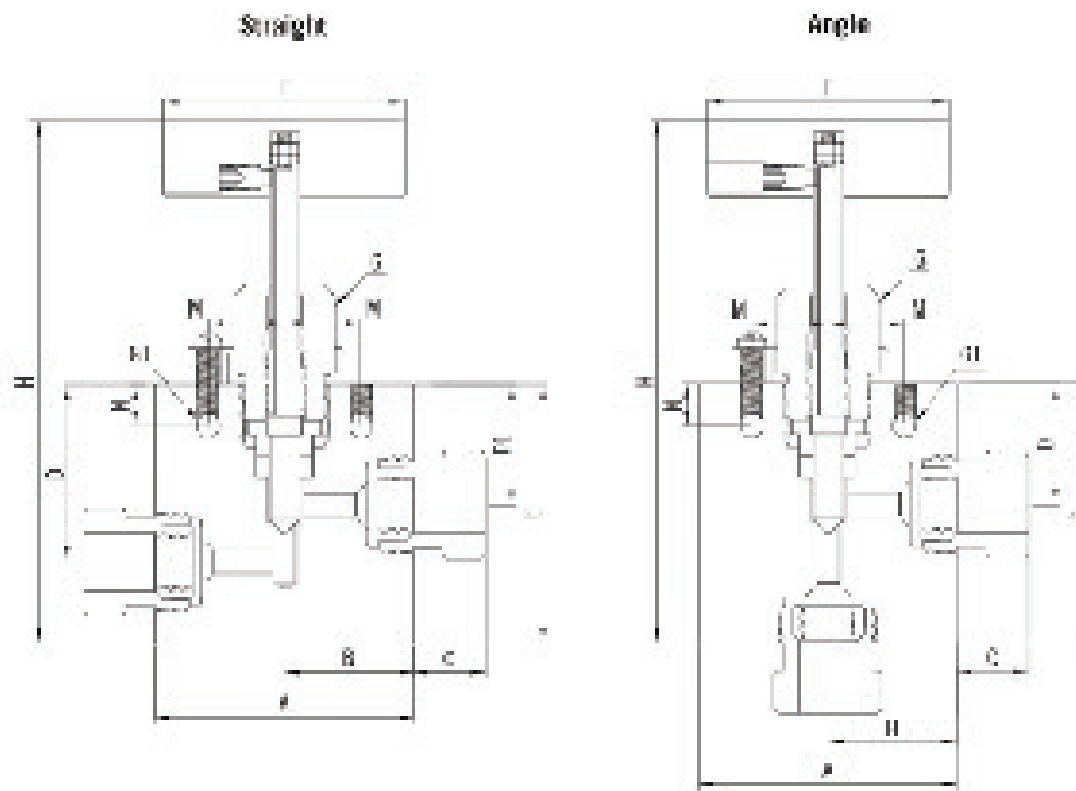


## Technical Data

Tube O.D. in.	Orifice in. (mm)	Rated Cv	Pressure @ Room Temperature psi (bar)
1/4	0.094 (2.39)	0.12	30,000 (2068)
3/8	0.125 (3.18)	0.23	30,000 (2068)
9/16	0.125 (3.18)	0.33	30,000 (2068)



## Dimensions Straight and Angle

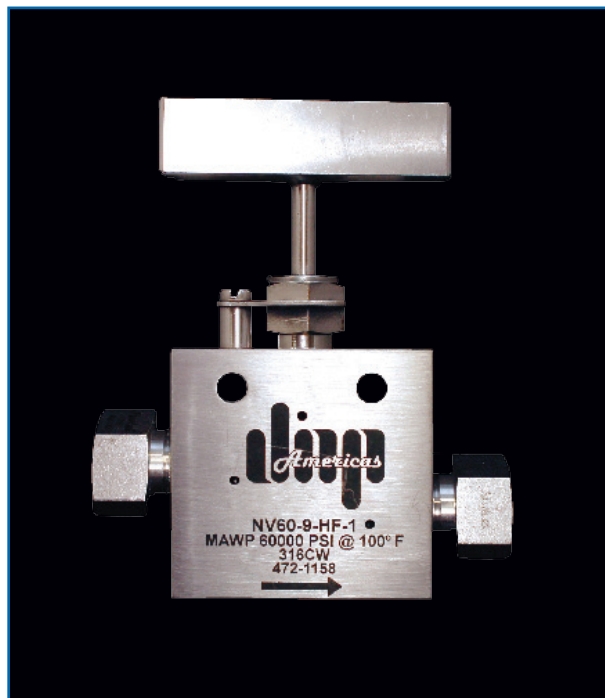


Dimensions (Straight)

Tube OD in.	Orifice in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.50 (12.7)	1.00 (25.4)	1.12 (28.4)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	1.22 (30.9)	4.52 (114.4)	0.60 (15.3)	0.33 (8.6)	1.00 (25.4)
3/8	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.50 (12.7)	1.00 (25.4)	1.12 (28.4)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	1.22 (30.9)	4.52 (114.4)	0.60 (15.3)	0.33 (8.6)	1.00 (25.4)
5/16	0.125 (3.18)	2.62 (66.5)	1.31 (33.2)	0.51 (12.9)	1.06 (26.9)	1.12 (28.4)	2.44 (61.9)	3.00 (76.2)	1.00 (25.4)	1.28 (32.5)	5.75 (146.1)	0.60 (15.3)	0.33 (8.6)	1.30 (33.0)

Dimensions (Angle)

Tube OD in.	Orifice in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4	0.094 (2.39)	2.00 (50.8)	1.00 (25.4)	0.50 (12.7)	1.12 (28.4)		2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	1.22 (30.9)	4.52 (114.4)	0.60 (15.3)	0.33 (8.6)	1.00 (25.4)
3/8	0.125 (3.18)	2.00 (50.8)	1.00 (25.4)	0.50 (12.7)	1.12 (28.4)		2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	1.22 (30.9)	4.52 (114.4)	0.60 (15.3)	0.33 (8.6)	1.00 (25.4)
5/16	0.125 (3.18)	2.62 (66.5)	1.31 (33.2)	0.51 (12.9)	1.12 (28.4)		2.44 (61.9)	3.00 (76.2)	1.00 (25.4)	1.28 (32.5)	5.75 (146.1)	0.60 (15.3)	0.33 (8.6)	1.30 (33.0)



## Specifications

Max Working Pressure  
60,000 psi (4137 bar)

Temperature Ratings:  
0° to 800° F (-18° to 427° C)

## Typical Applications

- Hydrostatic Test Systems
- Waterblast Applications
- Hydraulic Control Panels
- Wire Line Applications
- Instrumentation

## Features and Benefits

- Tubing sizes available for 1/4" to 9/16"
- Non-rotating stem and bar stock body design
- Metal-to-metal seating achieves ideal shutoff, longer stem/seat service lifetime for abrasive flow, excellent corrosion resistance and greater durability for repeated on/off cycles.
- PTFE is the standard packing material
- Body material is 316 SS
- Stem material is 17-4PH SS
- Options for VEE or Regulating stem tips
- The locking device of packing gland is reliable

## Other Options

- Angle w/ replaceable seat, 3-way and 3-way manifold available upon request

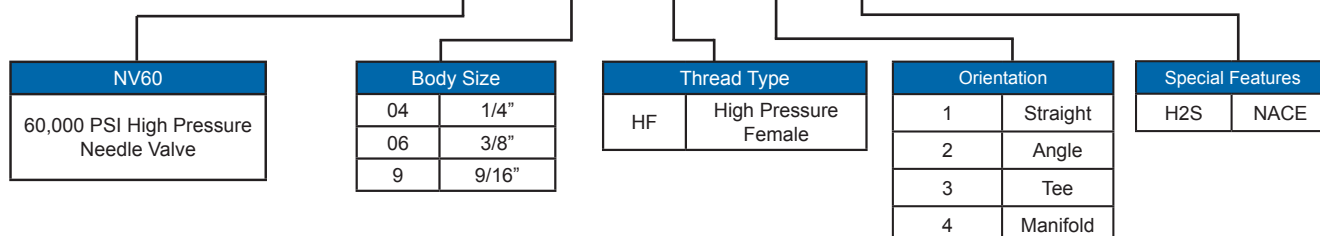
### Notes:

- The value of Cv shown are for 2-way straight valve pattern
- The value of Cv for 2-way angle pattern will be increase about 50 (Base on water)
- Extreme Temperatures
- PFTE is the standard packing material
- Normal Precise Metering valve with PFTE packing can be operated to 450°F (232°C)
- Normal Precise Metering valve with RPTFE glass packing can be operated to 600°F (316°C)
- Normal Precise Metering valve with Graphite packing can be operated to 800°F (427°C)

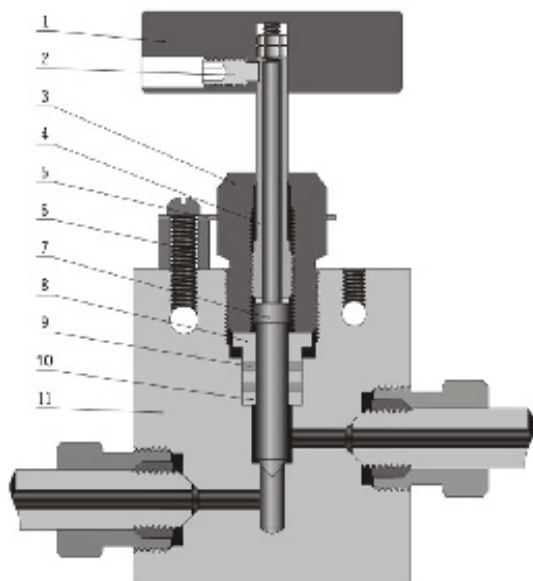
## ORDERING INFORMATION

DNP AMERICAS PART NUMBERING SYSTEM:

**NV60 - 04 - HF - 1 - H2S**

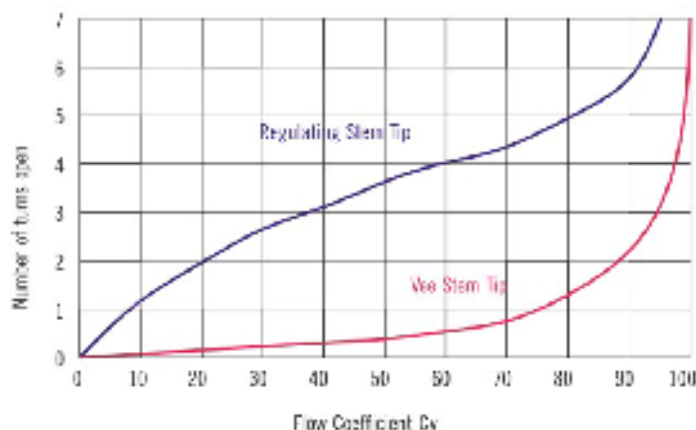


## Standard Materials of Construction

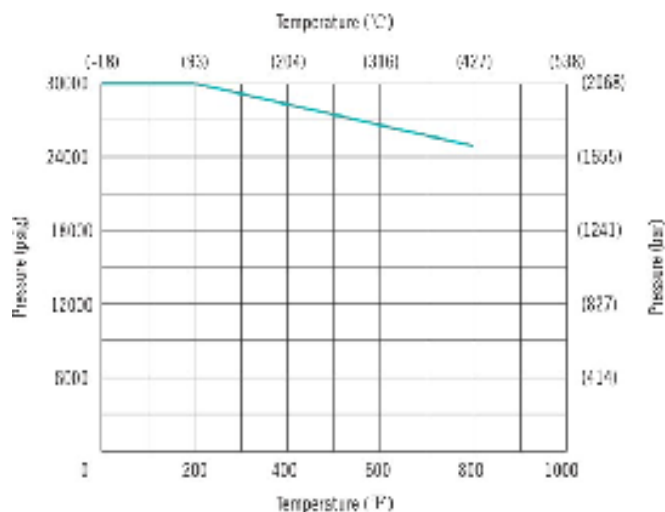


Item	Component	Material Grade/ASTM Specification
1	Handle	Stainless Steel
2	Handle Screw	Stainless Steel
3	Packing Gland	C63000/B150
4	Sleeve	316 SS/479
5	Locking Plate	304 SS/A240
6	Locking Screw	Stainless Steel
7	Stem	17-4PH/A564
8	Packing Ring	17-4PH/A564
9	Packing	PFTE/RPTFE/Extend stuffing box valve with of Graphite
10	Packing Washer	17-4PH/A564
11	Body	316 SS/A479
Lubricant		Molybdenum disulfide

## Flow Data at 100°F (38°C)



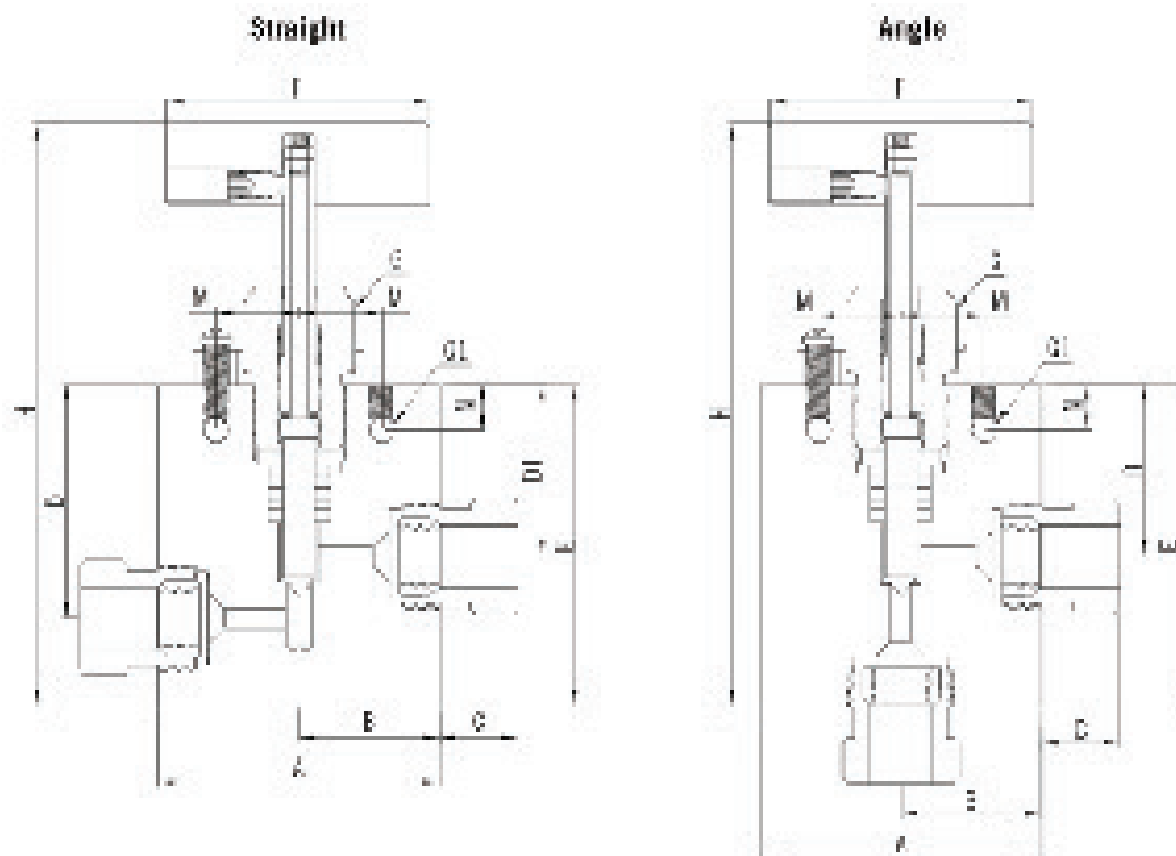
## Pressure and Temperature



## Technical Data

Tube O.D. in.	Orifice in. (mm)	Rated Cv	Pressure @ Room Temperature psi (bar)
1/4	0.062 (1.57)	0.08	60,000 (4137)
3/8	0.062 (1.57)	0.09	60,000 (4137)
9/16	0.078 (1.98)	0.14	60,000 (4137)

## Dimensions Straight and Angle



Dimensions (Straight)

Tube OD in.	Orifice in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4"	0.062 (1.57)	2.00 (50.8)	1.00 (25.4)	1.50 (38.1)	1.39 (35.3)	1.31 (33.3)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.59)	4.75 (120.7)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)
3/8"	0.062 (1.57)	2.00 (50.8)	1.00 (25.4)	1.50 (38.1)	1.39 (35.3)	1.31 (33.3)	2.00 (50.8)	3.00 (76.2)	1.00 (25.4)	0.22 (5.59)	4.75 (120.7)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)
1/2"	0.078 (1.98)	2.62 (66.5)	1.31 (33.3)	1.79 (45.4)	1.75 (44.4)	1.31 (33.3)	2.50 (63.5)	3.00 (76.2)	1.00 (25.4)	0.28 (7.11)	5.13 (130.3)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)

Dimensions (Angle)

Tube OD in.	Orifice in. (mm)	A	B	C	D	D1	E	F	G	G1	H	M	N	Thickness
		in. (mm)												
1/4"	0.062 (1.57)	2.00 (50.8)	1.00 (25.4)	1.50 (38.1)	1.31 (33.3)		2.38 (60.4)	3.00 (76.2)	1.00 (25.4)	0.22 (5.59)	5.75 (146.0)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)
3/8"	0.062 (1.57)	2.00 (50.8)	1.00 (25.4)	1.50 (38.1)	1.31 (33.3)		2.62 (66.5)	3.00 (76.2)	1.00 (25.4)	0.22 (5.59)	5.25 (133.0)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)
1/2"	0.078 (1.98)	2.62 (66.5)	1.31 (33.3)	1.79 (45.4)	1.31 (33.3)		2.81 (71.3)	3.00 (76.2)	1.00 (25.4)	0.28 (7.11)	5.41 (138.2)	0.65 (16.51)	0.38 (9.65)	1.00 (25.4)