

**General Description**

Series “N” needle valves are ideal as speed controls on hydraulic and pneumatic systems where a reverse flow check is not needed. They provide excellent control and a reliable shut-off in a very small envelope.

**Operation**

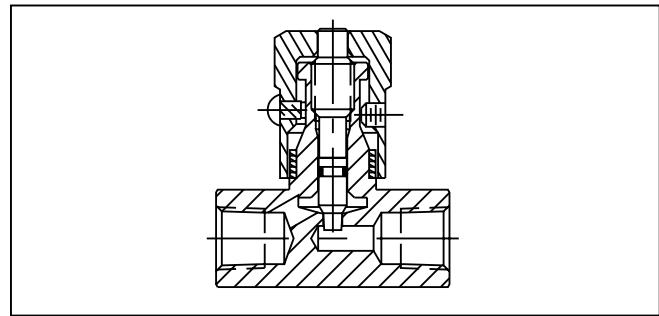
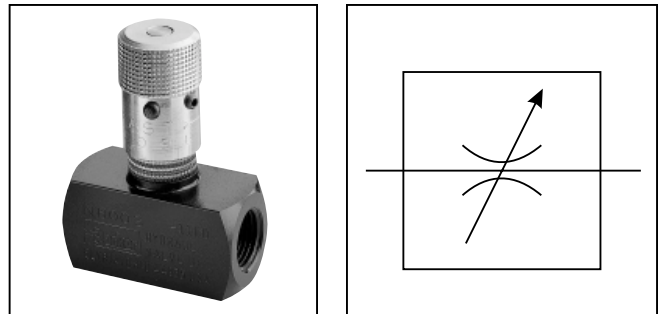
A two-step needle allows fine adjustment at low flow by using the first three turns of the adjusting knob. The next three turns open the valve to full flow, and also provide standard throttling adjustments.

**Features**

- The exclusive “Colorflow” color-band reference scale on the valve stem is a great convenience and time-saver in setting the valve originally and in returning it to any previous setting.
- A simple set screw locks the valve on any desired setting.
- A tamperproof option (T) feature is also available to prevent accidental or intentional adjustment of flow setting.

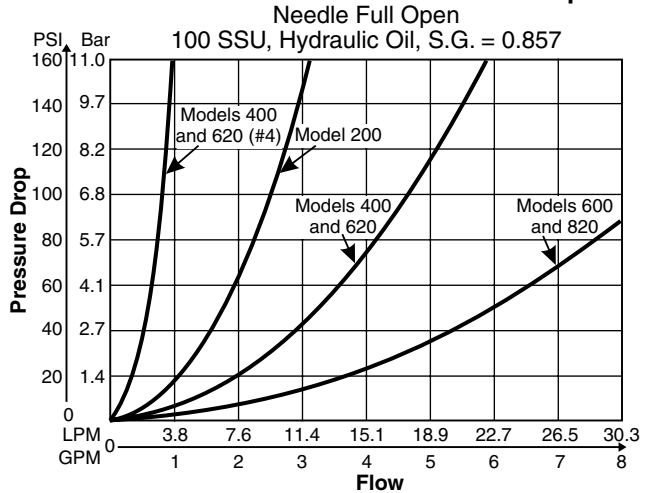
**Specifications**

<b>Maximum Operating Pressure</b>	Brass:	140 Bar (2000 PSI); except for N1600 brass which is 35 Bar (500 PSI)
	Steel & Stainless Steel:	345 Bar (5000 PSI) for 200 thru 1220; 207 Bar (3000 PSI) for all other sizes
<b>Operating Temperature</b>	-40°C to +121°C (-40°F to +250°F)	

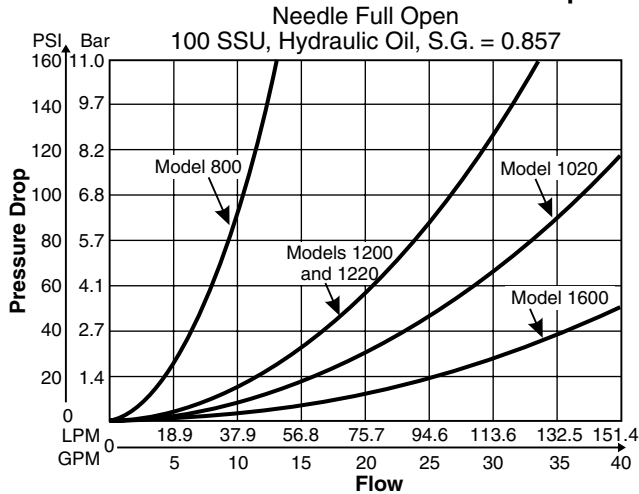


**Performance Curves**

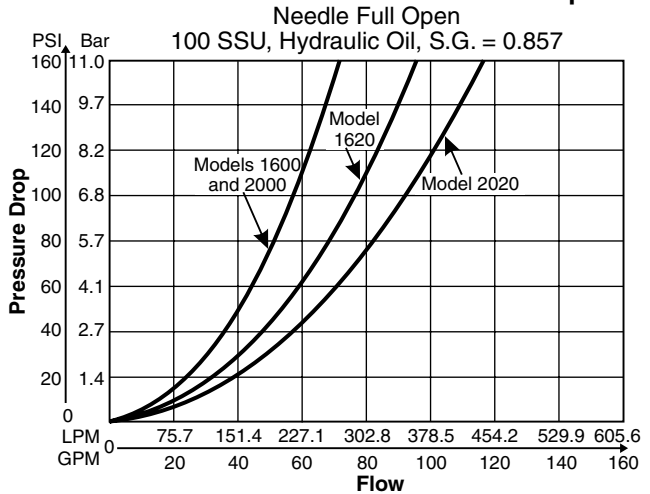
**Controlled Flow vs. Pressure Drop**



**Controlled Flow vs. Pressure Drop**

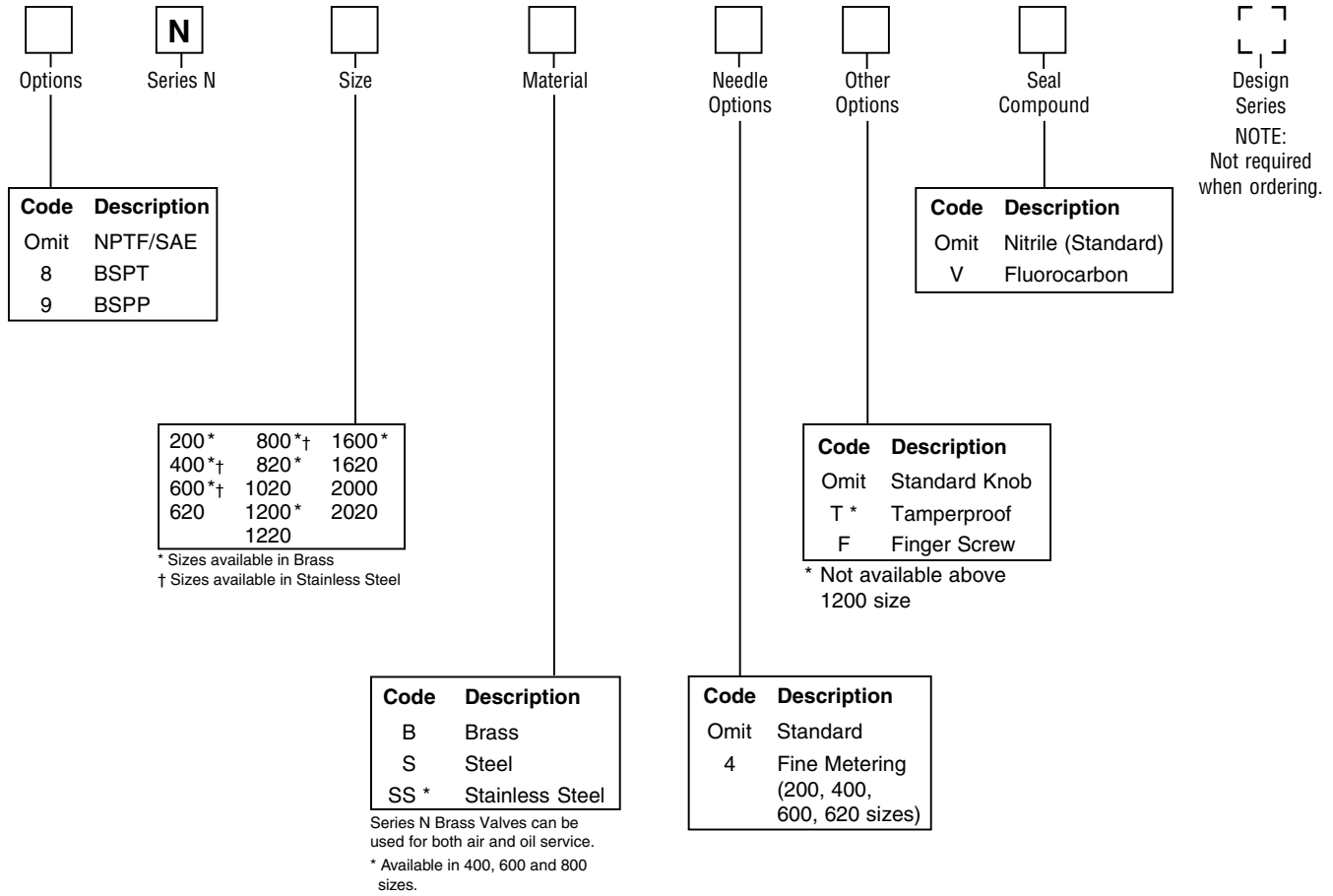


**Controlled Flow vs. Pressure Drop**



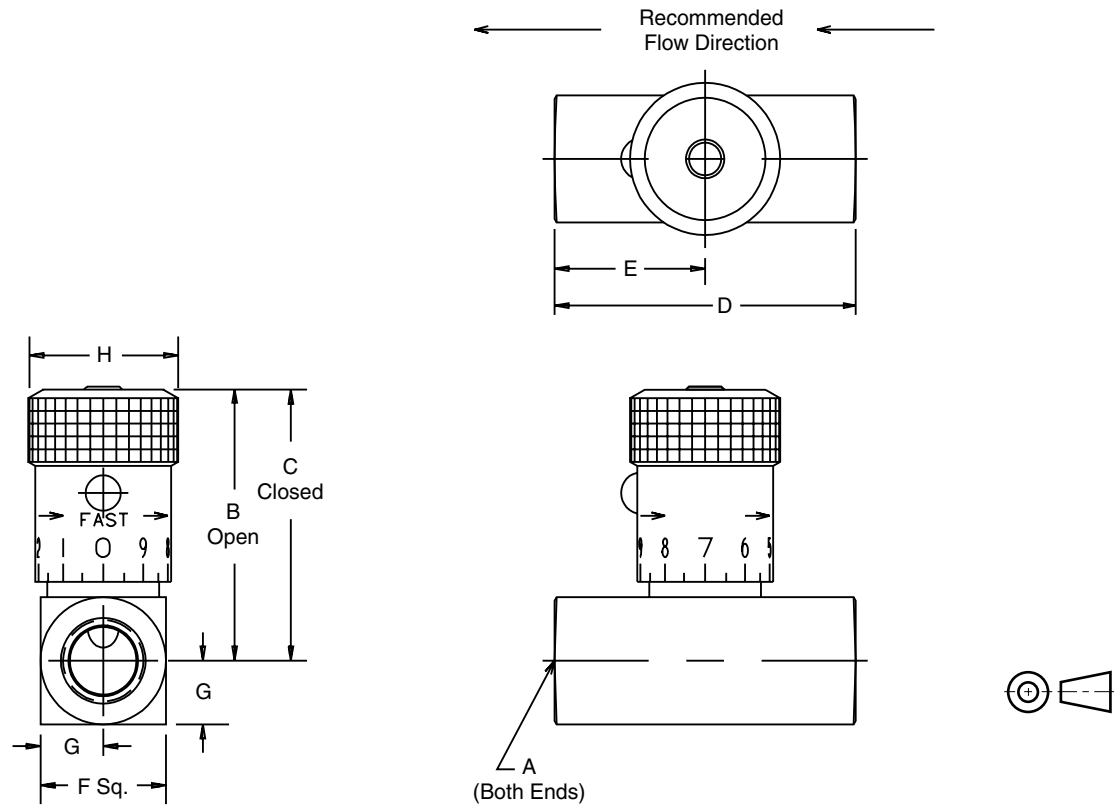
**Dimensions**

**Needle Valves  
Series N**



Model Number	Weight kg (lbs.)	Model Number	Weight kg (lbs.)
N200	0.1 (0.3)	N1200	1.0 (2.3)
N400	0.2 (0.5)	N1220	1.0 (2.3)
N600	0.4 (0.9)	N1600	2.1 (4.7)
N620	0.2 (0.5)	N1620	2.1 (4.7)
N800	0.6 (1.4)	N2000	2.9 (6.4)
N820	0.4 (0.9)	N2020	2.9 (6.4)
N1020	0.6 (1.3)		

Inch equivalents for millimeter dimensions are shown in (\*\*)



Model Number	Max. Flow LPM (GPM)	A	B	C	D	E	F	G	H
N200	11 (3)	1/8-27 NPTF	39.1 (1.54)	35.3 (1.39)	38.1 (1.50)	19.1 (0.75)	15.7 (0.62)	7.9 (0.31)	19.1 (0.75)
N400	19 (5)	1/4-18 NPTF	45.5 (1.79)	40.4 (1.59)	50.8 (2.00)	25.4 (1.00)	20.6 (0.81)	10.4 (0.41)	20.6 (0.81)
N420	11 (3)	7/16-20 UNF #4 SAE	41.4 (1.63)	37.6 (1.48)	50.8 (2.00)	25.4 (1.00)	20.6 (0.81)	10.4 (0.41)	19.1 (0.75)
N600	30 (8)	3/8-18 NPTF	55.4 (2.18)	49.5 (1.95)	63.5 (2.50)	31.8 (1.25)	25.4 (1.00)	12.7 (0.50)	25.4 (1.00)
N620	19 (5)	9/16-18 UNF #6 SAE	47.8 (1.88)	42.7 (1.68)	60.5 (2.38)	30.2 (1.19)	25.4 (1.00)	12.7 (0.50)	20.6 (0.81)
N800	57 (15)	1/2-14 NPTF	68.6 (2.70)	61.5 (2.42)	66.5 (2.62)	33.3 (1.31)	31.8 (1.25)	15.7 (0.62)	30.2 (1.19)
N820	30 (8)	3/4-16 UNF #8 SAE	56.9 (2.24)	51.1 (2.01)	76.2 (3.00)	38.1 (1.50)	28.4 (1.12)	14.2 (0.56)	25.4 (1.00)
N1020	57 (15)	7/8-14 UNF #10 SAE	68.6 (2.70)	61.5 (2.42)	88.9 (3.50)	44.5 (1.75)	31.8 (1.25)	15.7 (0.62)	30.2 (1.19)
N1200	95 (25)	3/4-14 NPTF	85.9 (3.38)	71.4 (2.81)	82.6 (3.25)	41.1 (1.62)	38.1 (1.50)	19.1 (0.75)	35.1 (1.38)
N1220	95 (25)	1 1/6-12 UN #12 SAE	85.9 (3.38)	71.4 (2.81)	101.6 (4.00)	50.8 (2.00)	38.1 (1.50)	19.1 (0.75)	35.1 (1.38)
N1600	151 (40)	1-11 1/2 NPTF	123.7 (4.87)	106.9 (4.21)	108.0 (4.25)	53.8 (2.12)	44.5 (1.75)	22.4 (0.88)	47.8 *
N1620	151 (40)	1 5/16-12 UN #16 SAE	130.8 (5.15)	114.0 (4.49)	108.0 (4.25)	53.8 (2.12)	57.2 (2.25)	28.4 (1.12)	47.8 *
N2000	265 (70)	1 1/4-11 1/2 NPTF	130.0 (5.12)	113.3 (4.46)	108.0 (4.25)	53.8 (2.12)	57.2 (2.25)	28.4 (1.12)	47.8 *
N2020	265 (70)	1 5/8-12 UN #20 SAE	140.2 (5.52)	123.4 (4.86)	114.3 (4.50)	57.2 (2.25)	69.9 (2.75)	60.5 (2.38)	47.8 *

\* = Hex