

## METRIC REFERENCE GUIDE

Terms	
Pressure Nominal (PN)	A rating designator followed by a designation number indicating the approximate pressure rating in bars.
German National Standards Institute (DIN 2501)	A flange class designator used on conjunction with PN. Note: DIN flanges do not mate to ANSI flanges.
Nominal Pipe Size (NPS)	North American standard sizes of pipe diameters measured in inches. NB (nominal bore) is also used.
Diameter Nominal (DN)	European equivalent to NPS measured in millimeters.

Formulas		
Newton Meter (Nm)	Unit of torque	1 Nm = 8.85 in/lbs
Bar	Unit of pressure	1 Bar = 14.5 psi
Liters per Minute (LPM)	Measurement of flow	1 LPM = .2642 GPM
Celsius (°C)	Measurement of temperature	°F = (°C x 9/5) +32
Kilopascal (kPa)	Unit of pressure	1 kPa = .1450377 psi
ATM	Atmospheric pressure	1 ATM = 14.69595
Torr	Unit of pressure	1 Torr = 1.93678 x 10 <sup>-2</sup>
Millimeter (mm)	Unit of length	1 mm = .03937 inches

Flange Dimension Comparison						
NPS	ANSI CLASS 150			PN10/16		
	O.D. in.	No. of Bolts	BCD in.	O.D. in.(mm)	No. of Bolts	BCD in.(mm)
1/2	3-1/2	4	2-1/4	3.74 (95)	4	2.56 (65)
3/4	3-7/8	4	2-3/8	4.13 (105)	4	2.95 (75)
1	4-1/4	4	2-3/4	4.53 (115)	4	3.35 (85)
1-1/4	4-5/8	4	3-1/8	5.51 (140)	4	3.94 (100)
1-1/2	5	4	3-7/8	5.91 (150)	4	4.33 (110)
2	6	4	4-3/4	6.97 (165)	4	4.92 (125)
2-1/2	7	4	5-1/2	7.28 (185)	4	5.71 (145)
3	7-1/2	4	6	7.87 (200)	8	6.30 (160)
4	9	8	7-1/2	8.66 (220)	8	7.09 (180)
6	11	8	9-1/2	11.22 (285)	8	9.45 (240)

Pipe Size	
DN (mm)	NPS (inches)
8	1/4
10	3/8
15	1/2
20	3/4
25	1
32	1-1/4
40	1-1/2
50	2
65	2-1/2
80	3
100	4
150	6
200	8
250	10
300	12

Flange Classes	
DIN (2501)	ANSI
PN6	125#
PN10	150#
PN16	150#
PN25	300#
PN40	600#

