

Appendix C Conversion to ASME Standard Units

	From	To convert to	Divide by
(1) Pressure/Stress	kilopascal	1 Pound/Square Inch	6.894757
	kilopascal	1 Atmosphere (STD)	101.325
	kilopascal	1 Foot of Water (39.2°F)	2.98898
	kilopascal	1 Inch of Water (60°F)	0.24884
	kilopascal	1 Inch of HG (32°F)	3.38638
(2) Force/Weight	newton	1 Pound - force	4.448222
	kilogram	1 Ton (Short)	907.1847
	kilogram	1 Tons (Long)	1016.047
(3) Heat/Energy/Power	joule	1 Btu	1055.056
	joule	1 Calorie	4.1868
	kilowatt-hour	1 Btu	0.0002930711
	kilowatt	1 Horsepower(U.K.)	0.7456999
	kilowatt-hour	1 Horsepower-Hour	0.7456999
	kilowatt	1 Btu/Min	0.0175843
	joule/gram	1 Btu/Pound	2.326
(4) Length	millimeter	1 Inch	25.4
	centimeter	1 Inch	2.54
	meter	1 Inch	0.0254
	meter	1 Foot	0.3048
	centimeter	1 Foot	30.48
	meter	1 Mile	1609.344
	kilometer	1 Mile	1.609344
(5) Volume	liter	1 Cubic Inch	0.01638706
	cubic centimeter	1 Cubic Inch	16.38706

	From	To convert to	Divide by
	cubic meter	1 Cubic Foot	0.02831685
	cubic centimeter	1 Cubic Foot	28316.85
	liter	1 Cubic Foot	28.31685
	cubic meter	1 Cubic Yard	0.7645549
	liter	1 Gallon (US)	3.785412
	cubic centimeter	1 Gallon (US)	3785.412
	E-03 cubic centimeter	1 Gallon (US)	3.785412
(6)	Volume Per Unit Time		
	cubic centimeter/s	1 Cubic Foot/Min	471.9474
	cubic meter/h	1 Cubic Foot/Min	1.69901
	liter/s	1 Cubic Foot/Min	0.4719474
	cubic meter/s	1 Cubic Foot/Sec	0.02831685
	E-05 cubic meter/s	1 Gallon/Min (US)	6.30902
	cubic meter/h	1 Gallon/Min (US)	0.22712
(7)	Velocity		
	centimeter/s	1 Foot/Sec	30.48
	centimeter/s	1 Foot/Min	0.508
	meter/s	1 Foot/Min	0.00508
	meter/min	1 Foot/Min	0.3048
	centimeter/s	1 Inches/Sec	2.54
(8)	Area		
	square centimeter	1 Square Inch	6.4516
	E-04 square meter	1 Square Inch	6.4516
	square centimeter	1 Square Foot	929.0304
	E-02 square meter	1 Square Foot	9.290304
(9)	Torque		
	newton-meter	1 Foot Pound	1.355818
(10)	Mass Per Unit Time		
	kilogram/s	1 Pound/Sec	0.4535924
	kilogram/min	1 Pound/Min	0.4535924
	kilogram/h	1 Pound/Min	27.215544

	From	To Convert to	Divide by
(11)	Mass Per Unit Volume		
	kilogram/cubic meter	1 Pound/Cubic Inch	27679.90
	kilogram/cubic meter	1 Pound/Cubic Foot	16.01846
	kilogram/cubic centimeter	1 Pound/Cubic Inch	0.0276799
	liter/s	1 Gallon/Min	0.0630902
(12)	Dynamic Viscosity		
	Pa*s	1 Pound-Sec/Sq Ft	47.88026
(13)	Specific Heat/Heat Transfer		
	joule/kilogram kelvin	1 Btu/Pound-Deg F	4186.8
	watt/square meter kelvin	1 Btu/Hr-Sq Ft-Deg F	5.678263
	watt/square meter kelvin	1 Btu/Sec-Sq Ft-Deg F	2.044175E+4
	watt/square meter	1 Btu/Hr-Sq Ft	3.154591
(14)	Temperature		
	degree celsius	Degrees Fahrenheit	$T_{\circ F} = T_{\circ C} \times 1.8 + 32$
	degree C increment	1 Degree F Increment	0.555556
(15)	Electricity		
	coulomb	1 ampere hour	3600
	siemens/meter	1 mho/centimeter	100
(16)	Light		
	candels/square meter	1 candela/square inch	1550.003
	lux	1 footcandle	10.76391
(17)	Radiation		
	megabequerel	1 curie	37,000
	gray	1 rad	0.01
	sievert	1 rem	0.01

Note:

Rounding of Calculated values per Appendix C of ANSI/IEEE Std. 268.