

Metric Conversions

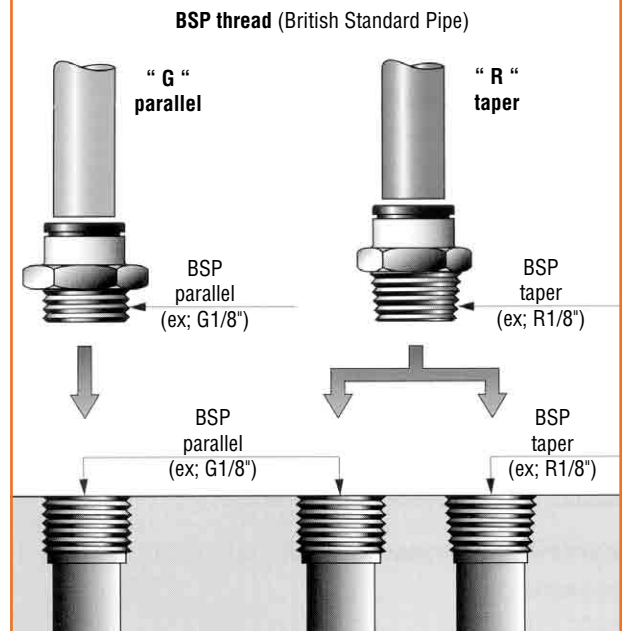
METRIC CONVERSIONS					
Length					
inches	x	25.4	=	mm	÷ 25.4 = inches
ft	x	304.8	=	mm	÷ 304.8 = ft
ft	x	0.3048	=	meter	÷ 0.3048 = ft
Pressure					
psi	x	0.06895	=	bar	÷ 0.06895 = psi
psi	x	68.947	=	mbar	÷ 68.947 = psi
psi	x	6.895	=	kPa	÷ 6.895 = psi
psi	x	0.0069	=	MPa	÷ 0.0069 = psi
psi	x	0.6895	=	N/cm ²	÷ 0.6895 = psi
psi	x	6894.76	=	Pa, N/m ²	÷ 6894.76 = psi
psi	x	2.036	=	in Hg	÷ 2.036 = psi
psi	x	51.715	=	mm Hg	÷ 51.715 = psi
psi	x	51.715	=	Torr	÷ 51.715 = psi
psi	x	0.0703	=	Kgf/cm ²	÷ 0.0703 = psi
psi	x	0.06805	=	atm	÷ 0.06805 = psi
bar	x	14.5038	=	psi	÷ 14.5038 = bar
bar	x	1000	=	mbar	÷ 1000 = bar
bar	x	100	=	kPa	÷ 100 = bar
bar	x	0.1	=	MPa	÷ 0.1 = bar
bar	x	10	=	N/cm ²	÷ 10 = bar
bar	x	100000	=	Pa, N/m ²	÷ 100000 = bar
bar	x	29.53	=	in Hg	÷ 29.53 = bar
bar	x	750.062	=	mm Hg	÷ 750.062 = bar
bar	x	750.062	=	Torr	÷ 750.062 = bar
bar	x	1.0197	=	Kgf/cm ²	÷ 1.0197 = bar
bar	x	0.9869	=	atm	÷ 0.9869 = bar
Vacuum					
% Vacuum	x	-0.01	=	bar	÷ -0.01 = % Vacuum
% Vacuum	x	-0.147	=	psi	÷ -0.147 = % Vacuum
% Vacuum	x	-0.2992	=	in Hg	÷ -0.2992 = % Vacuum
% Vacuum	x	-7.6923	=	mm Hg	÷ -7.6923 = % Vacuum
Force					
lbf	x	453.6	=	gf	÷ 453.6 = lbf
lbf	x	0.4536	=	kgf	÷ 0.4536 = lbf
lbf	x	4.4482	=	N	÷ 4.4482 = lbf
N	x	0.10197	=	kgf	÷ 0.10197 = N
Torque					
ft-lb	x	1.3559	=	Nm	÷ 1.3559 = ft-lb
ft-lb	x	135.59	=	Ncm	÷ 135.59 = ft-lb
ft-lb	x	0.1383	=	kgf-m	÷ 0.1383 = ft-lb
ft-lb	x	13825	=	gf-cm	÷ 13825 = ft-lb
ft-lb	x	12	=	in lb	÷ 12 = ft-lb
Nm	x	0.10197	=	kgf-m	÷ 0.10197 = Nm
Nm	x	100	=	Ncm	÷ 100 = Nm
Flow Rate					
SCFM (ft ³ /min)	x	28.57	=	L/min	÷ 28.57 = SCFM (ft ³ /min)
SCFM	x	1.699	=	m ³ /h	÷ 1.699 = SCFM
Weight					
oz	x	28.329	=	g	÷ 28.329 = oz
lb	x	0.4536	=	kg	÷ 0.4536 = lb
Temperature					
(°F - 32)	x	0.555	=	°C	
				(°C x 1.8) + 32	= °F
Volume					
gallons	x	0.134	=	cubic ft	÷ 0.134 = gallons
in ³	x	16387.1	=	mm ³	÷ 16387.1 = in ³
in ³	x	16.3871	=	cm ³ (cc)	÷ 16.3871 = in ³
ft ³	x	0.0283	=	m ³	÷ 0.0283 = ft ³
ft ³	x	28.329	=	liter	÷ 28.329 = ft ³

Thread Compatibility

What is G1/8" thread?

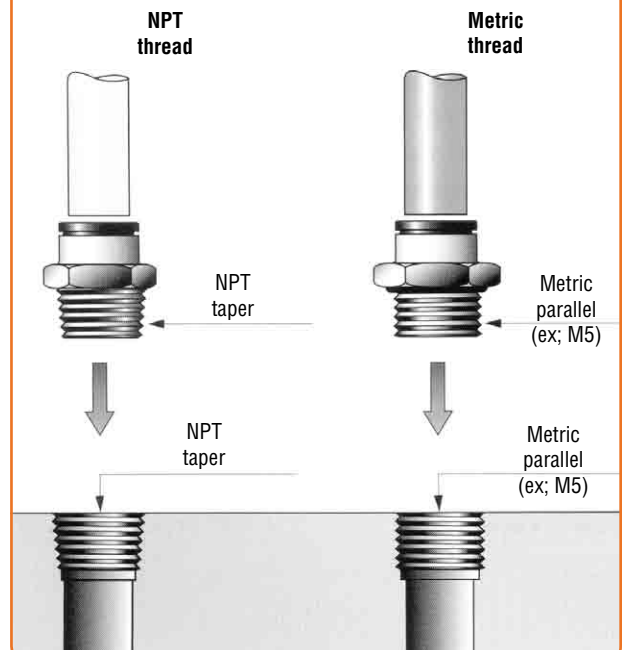
G1/8" thread is a British Standard Pipe (BSP) specification. It is used throughout Europe and is frequently used in conjunction with metric M threads. It comes to North American robot end-of-arm tooling via the presence of European robot suppliers.

Specifically, G1/8" is a parallel thread having 28 threads per inch. Sealing is ensured by an O-ring or washer ring. (1/8" NPT is a tapered thread with 27 threads per inch.) See adaptor fittings on page 930. G1/8" taps are available on page 939.



Note: Older usage can be as follows: Rp = parallel, Rc = taper

Special Note: M5 fits with 10-32 UNF.



More Conversion Charts

Pressure conversion table

	psi	Atm	bar	kg/cm²	m H₂O	cm Hg	kPa
1 psi	1	0.07	0.069	0.07	0.7	5.145	6.9
1Atm	14.2	1	0.981	1	10	73.6	98
1bar	14.5	1.02	1	1.02	10.2	74.9	100
1 kg/cm ²	14.2	1	0.981	1	10	73.6	98
1 m H ₂ O	1.42	0.1	0.098	0.1	1	7.36	9.8
73.6 cm Hg	14.2	1	0.981	1	10	73.6	98
1 kPa	0.145	0.0102	0.01	0.0102	0.102	0.759	1

Temperature conversion table

CELSIUS °C	KELVIN K	FAHRENHEIT °F
(Fahrenheit - 32) x 5/9	Celsius + 273.15	(Celsius x 1.8) + 32
Kelvin - 273.15	(Fahrenheit x 5/9) + 255.37	(Kelvin - 255.37) x 1.8
(Rankine x 5/9) - 273.15	Rankine x 5/9	Rankine - 459.67

Unit of measurement conversion table

Unit	Symbol	Unit SI	Conversion ratio[*]
Length			
1 inch	in	2.54 cm	0.393
1 foot = 12 in	ft	30.48 cm	0.032
1 yard = 3 feet	yd	0.9144 m	1.093
1 mile	mi	1.609 km	0.621
Surface			
1 square inch	sq in	6.451 cm ²	0.155
1 square foot=144 sq in	sq ft	929.03 cm ²	1.076x10 ⁻³
1 square mile	sq mi	2.590 km ²	0.386
Volume			
1 cubic inch	cu in	16.387 cm ³	0.061
1 cubic foot=1728 cu in	cu ft	28.317 dm ³	0.035
1 fluid ounce (GBr)	fl oz	0.028 dm ³	35.195
1 fluid ounce (USA)	fl oz	0.029 dm ³	33.813
1 quart	liq qt	0.946 dm ³	1.056
1 gallon (GBr)	gal	4.546 dm ³	0.219
1 gallon (USA)	gal	3.785 dm ³	0.264
Mass			
1 grain	gr	64.798 mg	0.015
1 ounce	oz	28.349 g	0.035
1 pound = 16 oz	lb	0.453 kg	2.204
1 long ton = 2240 lb	tn	1.016 kg	9.84x10 ⁻⁴

Unit	Symbol	Unit SI	Conversion ratio[*]
Force			
1 pound - weight	lb wt	4.448 N	0.224
1 pound - force	LB, lbf	4.448 N	0.224
1 kg force	kgf, kgp	9.806 N	0.101
1 ton - force	Ton, tonf	9.964 kN	0.100
Pressure			
1 pound - weight per square inch	lb wt/sq in ppsi, psi	6.894 kN/m ² 68.948 mbar	0.145 0.014
1 pound weight per square foot	lb wt/sq ft ppsf, psf	47.880 N/m ² 0.478 mbar	0.020 2.088
1 kg-force/sq in	kgf/sq in	1.520 N/m ²	0.657
1 foot of water	ft H ₂ O	0.029 bar	33.455
1 inch of Hg	in Hg	0.033 bar	29.530
Energy			
1 foot pound-weight	ft lb wt	1.355 J	0.737
1foot pound-force	ft Lb, ft lbf	1.355 J	0.737
1 British Thermal Unit	Btu, BTU B. th. u.	1.055 kJ 0.293 Wh	0.947 3.412
1 horse-power hour	hph, H Phr h. p. hr.	2.684 MJ 0.745 kWh	0.372 1.341

* Multiply by SI unit to obtain the USA or english unit.