

FROM MULTIPLY BY TO GET	
TEMPERATURE	Fahrenheit (tF-32)/1.8 Celsius
	Fahrenheit ... (tF+459.7)/1.8 ... Kelvin
	Kelvin tK-273.15 Celsius
LENGTH	Inch 2.540 Centimeters
	Centimeter3937 Inch
	Millimeter03937 Inch
	Meter 39.37 Inches
	Mils00234 Centimeter
	Mils001 Inch
	Feet3048 Meter
	Meter 3.281 Feet
	Feet0003048 Kilometer
	Feet 12000 Mils
	Mils00008333 Feet
	Micron000001 Meter
	AREA
Square Feet 144 Square Inch	
Square Feet0929 Square Meter	
Square Meter 10.76 Square Feet	
Square Mile 2.590 Square Kilometers	
Square Mile 640 Acres	
CIRCULAR MEASURES	Circumference31831 Diameter
	Diameter 3.1416 Circumference
	Radians 57.296 Degrees
	Radians 3438 Minutes
MASS	Pound linear foot 1.488 Kilogram/Meter
	Pound Square Feet 4.882 Kilogram/Sq Meter
	Pound Cubic Feet 16.02 Kilogram/Cubic Meter
	Pound/Feet1383 Kilogram/Meter
VOLUME - fluid	Fluid Ounces02957 Liters
	US Gallon 3.785 Liters
	Liters2642 US Gallon
	Liters 2.113 Pints
	Liters 1.057 Quarts
	Cubic Centimeters001 Liters
	Cubic Centimeters002113 Pints
	Cubic Feet 28.32 Liters
	Cubic Feet 7.48052 Gallons
	Gallons of Water 8.337 Pounds of Water

FROMMULTIPLY BY TO GET	
VOLUME	Cubic Centimeters06102 Cubic Inch
	Cubic Inches 16.39 Cubic Centimeters
	Cubic Feet 1728 Cubic Inches
	Cubic Feet02832 Cubic Meters
	Cubic Meter 35.31 Cubic Feet
	Cubic Yards7646 Cubic Meters
	Cubic Meters 61,023 Cubic Inches
	Cubic Meters 1.308 Cubic Yards
	WEIGHT
Ounces 28.349 Grams	
Grams 1000 Milligrams	
Grams002205 Pounds	
Pounds4536 Kilograms	
Kilograms 35.274 Ounces	
Kilograms 1000 Grams	
PRESSURE	
	PSF 47.88 Pascal
	PSI 6894.757 Pascal
VELOCITY	Feet/Min01136 Miles/Hr
	Kilometers/Hr 54.68 Feet/Min
	Kilometers/Hr 16.67 Meters/Min
	Kilometers/Hr5396 Knots
POWER	Horsepower 745.7 Watts
	Watts00134 Horsepower
	Watts7378 Ft lbs/Sec
	Horsepower 550 Ft lbs/Sec
	Horsepower 42.44 Btu/Min

Quick Reference

US Measures
 1 quart = 2 pints
 1 gallon = 4 quarts
 16 oz = 1 pound

Metric Equivalents
 1 ounce = 28.35 grams
 1 inch = 2.54 centimeters
 1 foot = 3.048 decimeters
 1 yard = 0.9144 meters
 1 mile = 1.6094 kilometers

Conversion Symbols

Multiplication Factor	Prefix	Symbol
1,000,000,000 = 10 ⁹	giga	G
1,000,000 = 10 ⁶	mega	M
1,000 = 10 ³	kilo	k
100 = 10 ²	hecto	h
1 = 1		
0.01 = 10 ⁻²	centi	c
0.001 = 10 ⁻³	milli	m
0.000001 = 10 ⁻⁶	micro	μ
0.000000001 = 10 ⁻⁹	nano	n



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A.F.B.M.A. Ball Grades

Grade	Deviation from Spherical Form	Basic Diameter Tolerance
3	.000003	± .00003"
5	.000005"	± .00005"
10	.00001"	± .0001"
24	.000024"	± .0001"
25	.000025"	± .0001"
48	.000048"	± .0002"
50	.00005"	± .0003"
100	.001"	± .0005"
1000	.001"	± .005"

Allowable deviation from spherical form is the greatest radial distance in any radial plane between a sphere circumscribed around the ball surface and any point on the ball surface.

Basic diameter tolerance is the maximum allowable deviation in any ball mean diameter from the basic diameter ordered.

Life - Load and Speed (rpm) Formulas

To calculate the theoretical L₁₀ life in hours while including application dynamic loading, application speeds (rpm) and defined catalog load capacities (C) use the following industry standard formula.

$$L_{10} = \frac{16,667}{S} * \left(\frac{C}{P} \right)^3$$

Using the catalog load capacities where:

- C = dynamic rating in catalog
- P = application applied load
- S = application speed in RPM
- L₁₀ = theoretical bearing L₁₀ life in hours

Inch to Millimeter Conversions

FRACTION	INCH	MM	FRACTION	INCH	MM	FRACTION	INCH	MM
1/64	0.0156	0.3969	27/64	0.4219	10.7156	61/64	0.9531	24.2094
	0.0250	0.6350		0.4250	10.7950	31/32	0.9687	24.6062
1/32	0.0312	0.7937		0.4331	11.0000		0.9843	25.0000
	0.0394	1.0000	7/16	0.4375	11.1125	63/64	0.9844	25.0031
	0.0400	1.0160	29/64	0.4531	11.5094	1	1.0000	25.4000
3/64	0.0469	1.1906		0.4600	11.6840		1.0236	26.0000
	0.0472	1.2000	15/32	0.4687	11.9062		1.0415	26.4541
	0.0550	1.3970		0.4724	12.0000		1.0480	26.6192
	0.0591	1.5000	31/64	0.4844	12.3031	1-1/16	1.0625	26.9875
1/16	0.0625	1.5875	1/2	0.5000	12.7000		1.0630	27.0000
	0.0709	1.8000		0.5118	13.0000		1.1025	28.0000
5/64	0.0781	1.9844	33/64	0.5156	13.0968	1-1/8	1.1250	28.5750
	0.0787	2.0000	17/32	0.5312	13.4937		1.1417	29.0000
	0.0906	2.3012	35/64	0.5469	13.8906		1.1812	30.0000
3/32	0.0937	2.3812		0.5512	14.0000	1-3/16	1.1875	30.1625
	0.0984	2.5000	9/16	0.5625	14.2875	1-1/4	1.2500	31.7500
	0.1000	2.5400	37/64	0.5781	14.6844	1-1/2	1.5000	38.1000
	0.1024	2.6000		0.5906	15.0000		1.5354	39.0000
7/64	0.1094	2.7781	19/32	0.5937	15.0812		1.5748	40.0000
	0.1100	2.7940	39/64	0.6094	15.4781		1.6535	42.0000
	0.1102	2.8000	5/8	0.6250	15.8750	1-3/4	1.7500	44.4500
	0.1181	3.0000		0.6299	16.0000		1.7717	45.0000
1/8	0.1250	3.1750	41/64	0.6406	16.2719		1.8898	48.0000
	0.1256	3.1902		0.6500	16.5100		1.9685	50.0000
	0.1378	3.5000	21/32	0.6562	16.6687	2	2.0000	50.8000
9/64	0.1406	3.5719		0.6620	16.8148		2.0472	52.0000
5/32	0.1562	3.9687		0.6693	17.0000		2.1654	55.0000
	0.1575	4.0000	43/64	0.6719	17.0656		2.2047	56.0000
11/64	0.1719	4.3656	11/16	0.6875	17.4625	2-1/4	2.2500	57.1500
3/16	0.1875	4.7625	45/64	0.7031	17.8594		2.3622	60.0000
	0.1892	4.8057		0.7087	18.0000	2-1/2	2.5000	63.5000
	0.1969	5.0000	23/32	0.7187	18.2562		2.5197	64.0000
13/64	0.2031	5.1594	47/64	0.7344	18.6532	2-3/4	2.7500	69.8500
	0.2165	5.4991		0.7435	18.8849		2.8346	72.0000
7/32	0.2187	5.5562		0.7480	19.0000		2.9528	75.0000
15/64	0.2344	5.9531	3/4	0.7500	19.0500	3	3.0000	76.2000
	0.2362	6.0000	49/64	0.7656	19.4469		3.1496	80.0000
1/4	0.2500	6.3500		0.7717	19.6012	3-1/4	3.2500	82.5500
17/64	0.2656	6.7469	25/32	0.7812	19.8433	3-1/2	3.5000	88.9000
	0.2756	7.0000		0.7874	20.0000		3.5433	90.0000
9/32	0.2812	7.1437	51/64	0.7969	20.2402	3-3/4	3.7500	95.2500
	0.2883	7.3228	13/16	0.8125	20.6375		3.9370	100.0000
19/64	0.2969	7.5406		0.8268	21.0000	4	4.0000	101.6000
5/16	0.3125	7.9375	53/64	0.8281	21.0344	4-1/4	4.2500	107.9500
	0.3150	8.0000	27/32	0.8437	21.4312		4.3307	110.0000
21/64	0.3281	8.3344	55/64	0.8594	21.8281	4-1/2	4.5000	114.3000
11/32	0.3437	8.7312		0.8661	22.0000		4.7244	120.0000
	0.3543	9.0000	7/8	0.8750	22.2250	4-3/4	4.7500	120.6500
23/64	0.3594	9.1281	57/64	0.8906	22.6219	5	5.0000	127.0000
	0.3750	9.5250		0.9055	23.0000	5-1/2	5.5000	139.7000
25/64	0.3906	9.9213	29/32	0.9062	23.0187			
	0.3937	10.0000	59/64	0.9219	23.4156			
13/32	0.4062	10.3187	15/16	0.9375	23.8125			
	0.4100	10.4140		0.9449	24.0000			

