

# Section 3

## CONVERSION TABLES

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### TABLES

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**Export Classification C, ECCN EAR99**

**11 JAN 2013 Rev. 2**

**3-1/3-2**





# Section 3

## CONVERSION TABLES

### 3-1. INTRODUCTION

This section contains additional information that may be useful for operational planning. Conversion tables, fuel flow charts, and additional performance charts are presented herein as necessary.

### 3-2. CONVERSION TABLES

The conversion tables ([Table 3-1](#) through [Table 3-8](#)) provide useful information to assist in flight planning and operations.

**Export Classification C, ECCN EAR99**

**11 JAN 2013 Rev. 2**

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MANUFACTURER'S DATA

Table 3-1. Celsius to Fahrenheit conversion

<p style="text-align: center;"><b>CELSIUS TO FAHRENHEIT CONVERSION TABLE</b></p> <p style="text-align: center;"><math>F = 9/5 C + 32 = 1.8 (C + 17.8)</math> <math>C = 5/9 (F - 32)</math></p>						
C. → F.	C. ← F.	C. → F.	C. ← F.	C. → F.	C. ← F.	
-62.2	-80	-112.0	71.1	160	320.0	
-56.7	-70	-94.0	73.9	165	329.0	
-51.1	-60	-76.0	76.7	170	338.0	
-45.6	-50	-58.0	79.4	175	347.0	
-40.0	-40	-40.0	82.2	180	356.0	
-34.4	-30	-22.0	85.0	185	365.0	
-31.7	-25	-13.0	87.8	190	374.0	
-28.9	-20	-4.0	90.6	195	383.0	
-26.1	-15	5.0	93.3	200	392.0	
-23.3	-10	14.0	96.1	205	401.0	
-20.6	-5	23.0	98.9	210	410.0	
-17.8	0	32.0	101.7	215	419.0	
-15.0	5	41.0	104.4	220	428.0	
-12.2	10	50.0	107.2	225	437.0	
-9.4	15	59.0	110.0	230	446.0	
-6.7	20	68.0	112.8	235	455.0	
-3.9	25	77.0	115.6	240	464.0	
-1.1	30	86.0	118.3	245	473.0	
1.6	35	95.0	121.1	250	482.0	
4.4	40	104.0	126.7	260	500.0	
7.2	45	113.0	132.2	270	518.0	
10.0	50	122.0	137.8	280	536.0	
12.8	55	131.0	143.3	290	554.0	
15.6	60	140.0	148.9	300	572.0	
18.3	65	149.0	154.4	310	590.0	
21.1	70	158.0	160.0	320	608.0	
23.9	75	167.0	165.6	330	626.0	
26.7	80	176.0	171.1	340	644.0	
29.4	85	185.0	176.7	350	662.0	
32.2	90	194.0	182.2	360	680.0	
35.0	95	203.0	187.8	370	698.0	
37.8	100	212.0	193.3	380	716.0	
40.6	105	221.0	198.9	390	734.0	
43.3	110	230.0	204.4	400	752.0	
46.1	115	239.0	210.0	410	770.0	
48.9	120	248.0	215.6	420	788.0	
51.7	125	257.0	221.1	430	806.0	
54.4	130	266.0	226.7	440	824.0	
57.2	135	275.0	232.2	450	842.0	
60.0	140	284.0	237.8	460	860.0	
62.8	145	293.0	243.3	470	878.0	
65.6	150	302.0	248.9	480	896.0	
68.3	155	311.0	254.4	490	914.0	
				1010.0	1850	3362.0

(TABLE I.D. 910630)

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## MANUFACTURER'S DATA

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Table 3-2. Gallons to liters conversion

GALLONS TO LITERS CONVERSION TABLE					
U.S. GALLON	IMPERIAL GALLON	LITER	U.S. GALLON	IMPERIAL GALLON	LITER
10	8.33	37.85	170	141.55	643.45
20	16.65	75.71	180	149.86	681.30
30	24.98	113.56	190	158.20	719.16
40	33.31	151.42	200	166.52	757.18
50	41.63	189.27	210	174.84	795.03
60	49.96	227.13	220	183.18	832.89
70	58.28	264.98	230	191.50	870.74
80	66.61	302.83	240	199.84	908.60
90	74.94	340.69	250	208.14	946.45
100	83.26	378.54	260	216.48	984.45
110	91.59	416.35	270	224.82	1022.16
120	99.92	454.20	280	233.14	1060.01
130	108.24	492.05	290	241.56	1097.87
140	116.57	529.90	300	249.80	1135.62
150	124.90	567.75	310	258.12	1173.47
160	133.22	605.60	320	266.44	1211.33

(TABLE I.D. 910628)

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MANUFACTURER'S DATA

Table 3-3. Inches to millimeters conversion

INCHES TO MILLIMETERS CONVERSION TABLE										
Inches	0	1	2	3	4	5	6	7	8	9
	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm
0	–	25.4	50.8	76.2	101.6	127.0	152.4	177.8	203.2	228.6
10	254.0	279.4	304.8	330.2	355.6	381.0	406.4	431.8	457.2	482.6
20	508.0	533.4	558.8	584.2	609.6	635.0	660.4	685.8	711.2	736.6
30	762.0	787.4	812.8	838.2	863.6	889.0	914.4	939.8	965.2	990.6
40	1016.0	1041.4	1066.8	1092.2	1117.6	1143.0	1168.4	1193.8	1219.2	1244.6
50	1270.0	1295.4	1320.8	1346.2	1371.6	1397.0	1422.4	1447.8	1473.2	1498.6
60	1524.0	1549.4	1574.8	1600.2	1625.6	1651.0	1676.4	1701.8	1727.2	1752.6
70	1778.0	1803.4	1828.8	1854.2	1879.6	1905.0	1930.4	1955.8	1981.2	2006.6
80	2032.0	2057.4	2082.8	2108.2	2133.6	2159.0	2184.4	2209.8	2235.2	2260.6
90	2286.0	2311.4	2336.8	2362.2	2387.6	2413.0	2438.4	2463.8	2489.2	2514.6
100	2540.0	2565.4	2590.8	2616.2	2641.6	2667.0	2692.4	2717.8	2743.2	2768.6

(TABLE I.D. 910627)

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## MANUFACTURER'S DATA

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Table 3-4. Feet to meters conversion

FEET TO METERS CONVERSION TABLE										
Feet	0	1	2	3	4	5	6	7	8	9
	Meter	Meters	Meters	Meters	Meters	Meters	Meters	Meters	Meters	Meters
0	–	0.305	0.610	0.914	1.219	1.524	1.829	2.134	2.438	2.743
10	3.048	3.353	3.658	3.962	4.267	4.572	4.877	5.182	5.486	5.791
20	6.096	6.401	6.706	7.010	7.315	7.620	7.925	8.229	8.534	8.839
30	9.144	9.449	9.753	10.058	10.363	10.668	10.972	11.277	11.582	11.887
40	12.192	12.496	12.801	13.106	13.411	13.716	14.020	14.325	14.630	14.935
50	15.240	15.544	15.849	16.154	16.459	16.763	17.068	17.373	17.678	17.983
60	18.287	18.592	18.897	19.202	19.507	19.811	20.116	20.421	20.726	21.031
70	21.335	21.640	21.945	22.250	22.555	22.859	23.164	23.469	23.774	24.079
80	24.383	24.688	24.993	25.298	25.602	25.907	26.212	26.517	26.822	27.126
90	27.431	27.736	28.041	28.346	28.651	28.955	29.260	29.565	29.870	30.174
100	30.479	30.784	31.089	31.394	31.698	32.003	32.308	32.613	32.918	33.222

(TABLE I.D. 910626)

Table 3-5. Pounds to kilograms conversion

POUNDS TO KILOGRAMS CONVERSION TABLE										
Pounds	0	1	2	3	4	5	6	7	8	9
	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams	Kilo-grams
0	–	0.454	0.907	1.361	1.814	2.268	2.722	3.175	3.629	4.082
10	4.536	4.990	5.443	5.897	6.350	6.804	7.257	7.711	8.165	8.618
20	9.072	9.525	9.979	10.433	10.886	11.340	11.793	12.247	12.701	13.154
30	13.608	14.061	14.515	14.969	15.422	15.876	16.329	16.783	17.237	17.690
40	18.144	18.597	19.051	19.504	19.958	20.412	20.865	21.319	21.772	22.226
50	22.680	23.133	23.587	24.040	24.494	24.948	25.401	25.855	26.308	26.762
60	27.216	27.669	28.123	28.576	29.030	29.484	29.937	30.391	30.844	31.298
70	31.751	32.205	32.659	33.112	33.566	34.019	34.473	34.927	35.380	35.834
80	36.287	36.741	37.195	37.648	38.102	38.555	39.009	39.463	39.916	40.370
90	40.823	41.277	41.730	42.184	42.638	43.091	43.545	43.998	44.453	44.906
100	45.359	45.813	46.266	46.720	47.174	47.627	48.081	48.534	48.988	49.442

(TABLE I.D. 910648)

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MANUFACTURER'S DATA

Table 3-6. Velocity conversion

VELOCITY CONVERSION TABLE							
KNOTS	MPH	km/HR	METERS/SEC	KNOTS	MPH	km/HR	METERS/SEC
5	5.8	9.3	2.6	105	120.8	194.4	54.0
10	11.5	18.5	5.1	110	126.6	203.7	56.6
15	17.3	27.8	7.7	115	132.3	213.0	59.2
20	23.0	37.0	10.3	120	138.1	222.2	61.7
25	28.8	46.3	12.9	125	143.8	231.5	64.3
30	34.5	55.6	15.4	130	149.6	240.7	66.9
35	40.3	64.8	18.0	135	155.4	250.0	69.4
40	46.0	74.1	20.6	140	161.1	259.3	72.0
45	51.8	83.3	23.1	145	166.9	268.5	74.6
50	57.5	92.6	25.7	150	172.6	277.8	77.2
55	63.3	101.9	28.3	155	178.4	287.0	79.7
60	69.0	111.1	30.9	160	184.1	296.3	82.3
65	74.8	120.4	33.4	165	189.9	305.6	84.9
70	80.6	129.6	36.0	170	195.6	314.8	87.4
75	86.3	138.9	38.6	175	201.4	324.1	90.0
80	92.1	148.1	41.2	180	207.1	333.3	92.6
85	97.8	157.4	43.7	185	212.9	342.6	95.2
90	103.6	166.7	46.3	190	218.6	351.9	97.8
95	109.3	175.9	48.9	195	224.4	361.1	100.3
100	115.1	185.2	51.4	200	230.2	370.4	102.9

(TABLE I.D. 910629)

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**MANUFACTURER'S DATA**

**BHT-212-MD-1**

**Table 3-7. Barometric pressure conversion**

<b>INCHES TO MILLIBARS</b>										
<b>MERCURY</b>	<b>0.00</b>	<b>0.01</b>	<b>0.02</b>	<b>0.03</b>	<b>0.04</b>	<b>0.05</b>	<b>0.06</b>	<b>0.07</b>	<b>0.08</b>	<b>0.09</b>
<b>INCHES</b>	<b>MILLIBARS</b>									
28.0-	948.2	948.5	948.9	949.2	949.5	949.9	950.2	950.6	950.9	951.2
28.1-	951.6	951.9	952.3	952.6	952.9	953.3	953.6	953.9	954.3	954.6
28.2-	955.0	955.3	955.6	956.0	956.3	956.7	957.0	957.3	957.7	958.0
28.3-	958.3	958.7	959.0	959.4	959.7	960.0	960.4	960.7	961.1	961.4
28.4-	961.7	962.1	962.4	962.8	963.1	963.4	963.8	964.1	964.4	964.8
28.5-	965.1	965.5	965.8	966.1	966.5	966.8	967.2	967.5	967.8	968.2
28.6-	968.5	968.8	969.2	969.5	969.9	970.2	970.5	970.9	971.2	971.6
28.7-	971.9	972.2	972.6	972.9	973.2	973.6	973.9	974.3	974.6	974.9
28.8-	975.3	975.6	976.0	976.3	976.6	977.0	977.3	977.7	978.0	978.3
28.9-	978.7	979.0	979.3	979.7	980.0	980.4	980.7	981.0	981.4	981.7
29.0-	982.1	982.4	982.7	983.1	983.4	983.7	984.1	984.4	984.8	985.1
29.1-	985.4	985.8	986.1	986.5	987.8	987.1	987.5	987.8	988.2	988.5
29.2-	988.8	989.2	989.5	989.8	990.2	990.5	990.9	991.2	991.5	991.9
29.3-	992.2	992.6	992.9	993.2	993.6	993.9	994.2	994.6	994.9	995.3
29.4-	995.6	995.9	996.3	996.6	997.0	997.3	997.6	998.0	998.3	998.6
29.5-	999.0	999.3	999.7	1000.0	1000.4	1000.7	1001.0	1001.4	1001.7	1002.0
29.6-	1002.4	1002.7	1003.1	1003.4	1003.7	1004.1	1004.4	1004.7	1005.1	1005.4
29.7-	1005.8	1006.1	1006.4	1006.8	1007.1	1007.5	1007.8	1008.1	1008.5	1008.8
29.8-	1009.1	1009.5	1009.8	1010.2	1010.5	1010.8	1011.2	1011.5	1011.9	1012.2
29.9-	1012.5	1012.9	1013.2	1013.5	1013.9	1014.2	1014.6	1014.9	1015.2	1015.6
30.0-	1015.9	1016.3	1016.6	1016.9	1017.3	1017.6	1018.0	1018.3	1018.6	1019.0
30.1-	1019.3	1019.6	1020.0	1020.3	1020.7	1021.0	1021.3	1021.7	1022.0	1022.4
30.2-	1022.7	1023.0	1023.4	1023.7	1024.0	1024.4	1024.7	1025.1	1025.4	1025.7
30.3-	1026.1	1026.4	1026.7	1027.1	1027.4	1027.8	1028.1	1028.4	1028.8	1029.1
30.4-	1029.5	1029.8	1030.1	1030.5	1030.8	1031.2	1031.5	1031.8	1032.2	1032.5
30.5-	1032.9	1033.2	1033.5	1033.9	1034.2	1034.5	1034.9	1035.2	1035.5	1035.9
30.6-	1036.2	1036.6	1036.9	1037.3	1037.6	1037.9	1038.3	1038.6	1038.9	1039.3
30.7-	1039.6	1040.0	1040.3	1040.6	1041.0	1041.3	1041.7	1042.0	1042.3	1042.7
30.8-	1043.0	1043.3	1043.7	1044.0	1044.4	1044.7	1045.0	1045.4	1045.7	1046.1
30.9-	1046.4	1046.7	1047.1	1047.4	1047.8	1048.1	1048.4	1048.8	1049.1	1049.5
<b>MILLIBARS TO INCHES</b>										
<b>MILLIBARS</b>	<b>0</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>6</b>	<b>7</b>	<b>8</b>	<b>9</b>
<b>MILLIBARS</b>	<b>INCHES</b>									
940	27.76	27.79	27.82	27.85	27.88	27.91	27.94	27.96	27.99	28.02
950	28.05	28.08	28.11	28.14	28.17	28.20	28.23	28.26	28.29	28.32
960	28.35	28.38	28.41	28.44	28.47	28.50	28.53	28.56	28.58	28.61
970	28.64	28.67	28.70	28.73	28.76	28.79	28.82	28.85	28.88	28.91
980	28.94	28.97	29.00	29.03	29.06	29.09	29.12	29.15	29.18	29.21
990	29.23	29.26	29.29	29.32	29.35	29.38	29.41	29.44	29.47	29.50
1000	29.53	29.56	29.59	29.62	29.65	29.68	29.71	29.74	29.77	29.80
1010	29.83	29.85	29.88	29.91	29.94	29.97	30.00	30.03	30.06	30.09
1020	30.12	30.15	30.18	30.21	30.24	30.27	30.30	30.33	30.36	30.39
1030	30.42	30.45	30.47	30.50	30.53	30.56	30.59	30.62	30.65	30.68
1040	30.71	30.74	30.77	30.80	30.83	30.86	30.89	30.92	30.95	30.98
1050	31.01	31.04	31.07	31.09	31.12	31.15	31.18	31.21	31.24	31.27

(TABLE I.D. 910647)

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MANUFACTURER'S DATA

Table 3-8. Standard atmosphere

STANDARD ATMOSPHERE TABLE							
STANDARD CONDITIONS:				CONVERSION FACTORS:			
TEMPERATURE		15°C (59°F)		1 IN. Hg = 70.727 LB/SQ FT		1 IN. Hg = 0.49116 LB/SQ IN.	
PRESSURE		29.921 IN. Hg (2116.216 LB/SQ FT)		1 KNOT = 1.151 M.P.H.		1 KNOT = 1.688 FT/SEC	
DENSITY		0.0023769 SLUGS/CU FT					
SPEED OF SOUND		1116.89 FT/SEC (661.7 KNOTS)					
ALTITUDE FEET	DENSITY RATIO $\sigma$	$\frac{1}{\sqrt{\sigma}}$	TEMPERATURE		SPEED OF SOUND KNOTS	PRESSURE IN. Hg	PRESSURE RATIO
			°C	°F			
0	1.0000	1.0000	15.000	59.000	661.7	29.921	1.0000
1000	0.9711	1.0148	13.019	55.434	659.5	28.856	0.9644
2000	0.9428	1.0299	11.038	51.868	657.2	27.821	0.9298
3000	0.9151	1.0454	9.056	48.302	654.9	26.817	0.8962
4000	0.8881	1.0611	7.076	44.735	652.6	25.842	0.8637
5000	0.8617	1.0773	5.094	41.169	650.3	24.896	0.8320
6000	0.8359	1.0938	3.113	37.603	648.7	23.978	0.8014
7000	0.8106	1.1107	1.132	34.037	645.6	23.088	0.7716
8000	0.7860	1.1279	-0.850	30.471	643.3	22.225	0.7428
9000	0.7620	1.1456	-2.831	26.905	640.9	21.388	0.7148
10,000	0.7385	1.1637	-4.812	23.338	638.6	20.577	0.6877
11,000	0.7155	1.1822	-6.793	19.772	636.2	19.791	0.6614
12,000	0.6932	1.2011	-8.774	16.206	633.9	19.029	0.6360
13,000	0.6713	1.2205	-10.756	12.640	631.5	18.292	0.6113
14,000	0.6500	1.2403	-12.737	9.074	629.0	17.577	0.5875
15,000	0.6292	1.2606	-14.718	5.508	626.6	16.886	0.5643
16,000	0.6090	1.2815	-16.699	1.941	624.2	16.216	0.5420
17,000	0.5892	1.3028	-18.680	-1.625	621.8	15.569	0.5203
18,000	0.5699	1.3246	-20.662	-5.191	619.4	14.942	0.4994
19,000	0.5511	1.3470	-22.643	-8.757	617.0	14.336	0.4791
20,000	0.5328	1.3700	-24.624	-12.323	614.6	13.750	0.4595
21,000	0.5150	1.3935	-26.605	-15.899	612.1	13.184	0.4406
22,000	0.4976	1.4176	-28.587	-19.456	609.6	12.636	0.4223
23,000	0.4806	1.4424	-30.568	-23.022	607.1	12.107	0.4046
24,000	0.4642	1.4678	-32.549	-26.588	604.6	11.597	0.3874
25,000	0.4481	1.4938	-34.530	-30.154	602.1	11.103	0.3711

(TABLE I.D. 910646)

**3-10**