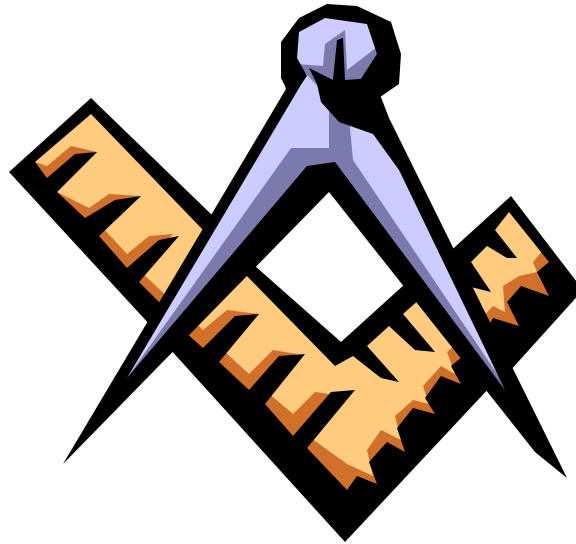


# **Practical Aspects of Metrification**



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# PRACTICAL ASPECTS OF METRIFICATION

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## Introduction

The purpose of this report is to provide basic information for converting measurements between the English (inch, pound) and Metric (System Internationale) systems. It is not a comprehensive presentation of engineering units, but focuses instead on those units commonly used in the energy engineering field.

Currently available scientific and professional reference and research often expresses energy measurement in only one of the English or Metric systems. Researchers, consultants, students and energy professionals often need to convert information from one system to another.

United States scientists, consultants, manufacturers, etc., already work with both systems, particularly those who do business internationally. It is important for them to be able to present their data in the metric system when abroad or dealing with international customers. Metric system users from abroad also need to be able to convert non-metric data in United States literature and be familiar with the English system when cross-referencing US equipment.

The following information includes equations, tables and charts which one may use to convert engineering units between the English and Metric systems.

## Characteristics of the “Metric System” or “Système International d'Unités” (SI)

The metric system is a decimal-based measurement system that was officially created in 1790 by French scientists. They believed in a system of measurement that would be simpler to use than the multiple European systems, such as the English system which measures things in varying fractional or integral increments (1/2 or 1/8 of a yard of cloth; rods for a fence line's length; gallons and barrels of liquid; bushels or tons of grain) and employs a variety of traditional measures that vary from trade to trade (inches for the width of a board and feet for its length; yards for a football field and from discipline to discipline). The “metric” system they developed was based on a decimal system (powers of ten). It simplifies calculations by using a common set of prefixes based on powers of ten.

The Metric System is assembled on the basis of seven basic units, and all other units are derived from them. They are as follows:

Time = second  
Mass = gram  
Temperature = degree Kelvin  
Electric Current = Ampere  
Luminous Intensity = Candela  
Amount of Substance = Mole

Prefixes relating to powers of 10 are attached to a base metric unit to create a new metric unit that is appropriate to the magnitude or precision for physical application. These prefixes represent thousandths, thousand, million, billion and trillion. For example:

1,000 milliamps = 1 amp  
1,000 joules = 1 kilojoules (kj);  
1,000,000 joules = 1,000 kj = 1 megajoule (MJ);  
1,000 MJ = 1 gigajoule (GJ);  
1,000 gigajoules = 1 terajoule.

The prefixes milli, kilo, mega, giga, and tera apply to any unit in the system.

### **Why The United States Should Adopt The Metric System**

In the United States it has become both increasing popular and necessary to employ metric units in engineering and design. In part it is due to the need to improve the competitiveness of American business and industry in the world marketplace. This provides international consistency and a uniform measurement in the exchange of commodities. Users of the metric system also often prefer the simpler decimal-based system.

Because of its many advantages of easy conversion between units of the same quantity, the metric system has become the internationally accepted system of measurement units. It has been adopted by most nations of the world, largely because of its commercial and trade advantage, and has increasingly become referred to as the “Système International d'Unités” or SI. According to the European Commission, the governing body of the European Union, more than 95% of the world’s population uses the metric system. Only the United States, Burma (Myanmar) and Liberia are exceptions and are not fully committed to the internationally practiced metric system.

The United States has never mandated the adoption of the metric system among the public. Repeated attempts to require industry and government to adopt it have failed. Those industries and individuals that have chosen to use it have done so on a voluntary basis. For example, motor vehicles, farm machinery, and computer equipment are manufactured to metric specifications. Also, our scientific and medical communities use metric units almost exclusively.

Adopting the metric system in United States industries will result in greater efficiency and productivity in their operations. Several studies have shown that changing to the metric system is in the best interests of the United States, particularly in view of the increasing importance and influence of growing technology in American life and our foreign trade. Indeed, because trade with other nations is critical to the health of our economy, adoption of the metric measurement system is not a matter of choice, but a matter of good common sense for United States industry.

## PRACTICAL ENERGY UNITS CONVERSIONS

### Example #1

What is the chiller capacity in kW/hour if its rating is 500 tons/hour?

Definitions:

- 1 kW = 3,412 Btu's
- 1 ton of refrigeration = 12,000 Btu's/hour

Solution:

$$\text{kW} = \frac{(\text{Tons}) (12,000)}{3,412}$$

Solution:

$$\text{kW} = \frac{(500) (12,000)}{3,412} = 1,760 \text{ kW}$$

### Example #2

What is the horsepower of a boiler if its rating is 2,453 kW ?

Definitions:

- 1 boiler horsepower = 33,479 Btu's
- 1 horsepower (electric) = 745.7 Watts
- 1 kW = 3,412 Btu's

Solution:

$$\text{BHp} = \frac{(\text{kW}) (3,412)}{33,479}$$

Solution:

$$\text{BHp} = \frac{(2,453) (3,412)}{33,479} = 250 \text{ BHp}$$

### Example #3

What is the boiler steam output per hour in Lbs. If its thermal rating is 300 MW<sub>t</sub> ?

Definitions:

- 1 MW<sub>t</sub> = 1,000 Kg of steam per hour
- 1 Kg 2.204 lbs.

Solution:

$$\begin{aligned} \text{Boiler steam out put per hour} &= (\text{MW}_t) (1,000) (2.204) = \\ &= (300) (1,000) (2.204) = \\ &= 661,200 \text{ lbs. per hour} \end{aligned}$$

#### Example #4

A powerhouse has just received a delivery of 20,000 Kg of coal. What is the heating value of the coal in Btu/lb. if an average metric ton of coal has a heating value of  $27.8 \times 10^6$  Btu's.

Definitions:

- 1 metric ton of coal =  $27.8 \times 10^6$
- 1 metric ton is = 1,000 Kg
- 1,000 Kg = 2,204 lbs.

Solution:

$$\begin{aligned} \text{Total lbs.} &= (\text{Kg}) (\text{Lbs.}) = \\ (20,000) 2.204 &= 44,080 \text{ Lbs.} \end{aligned}$$

$$\text{Btu/lb.} = \frac{(20,000) (27.8 \times 10^6)}{(1,000) (44,080)} = 12,613 \text{ Btu/lb.}$$

#### Example #5

An electric room heater rated at 1,000 Watts is consuming 1,000 Joules/1 second. What is its energy use in Btu/1 hour?

Definitions:

- 1 Watt = 1 Joule/s
- 1 Watt = 3,600 Joules per hour
- 1 kW = 1,000 Watts
- 1 kW = 3,412 Btu
- 1 Btu = 1,054.615 Joules
- 1 MJ = 1,000,000 Joules or  $10^6$

Solution:

$$\text{Joules} = (\text{Watts}) (60 \text{ sec./min.}) (60 \text{ min./hour})$$

$$\text{Joules} = (1,000) (60) (60) = 3,600,000 \text{ Joules or } 3.6 \text{ Megajoules}$$

$$\text{Btu/hr.} = \frac{3,600,000}{1,054.615} = 3,413 \text{ Btu's/hr}$$

### Example #6

A power plant has an electrical capacity of 300 MWe. What is its equivalent capacity in Megajoules (energy units)?

Definitions:

- 1 kWh = 3.6 MJ
- 1 MJ =  $10^6$  Joules
- 1 MW == 1,000 kW
- GJ = 1,000 MJ

Solution:

$$\text{MJ} = (\text{MWe}) (\text{KW}) (\text{MJ})$$

$$\text{MJ} = (300) (1,000) (3.6) = 1,080,000 \text{ MJ or } 1,080 \text{ Gigajoules}$$

### Example #7

In Poland, there are 3,725 heating degree days (metric SI) on an average per year. Determine what the degree days' equivalent would be if we are to use the (English IP) system in the United States:

Definitions:

- The number of heating degree days in a regular 24-hour period is determined as the difference between 65°F (18.333 °C) and the average of the high and low temperature for a specific day in question. Adding all degree days each day represents the total degree days per year.

English (°F) Version

$$\text{Heating Degree Days} = 65^\circ\text{F} - \frac{(\text{High Temperature } ^\circ\text{F} - \text{Low Temperature } ^\circ\text{F})}{2}$$

Metric (°C) Version

$$\text{Heating Degree Days} = 18.333^\circ\text{C} - \frac{(\text{High Temperature } ^\circ\text{C} - \text{Low Temperature } ^\circ\text{C})}{2}$$

Conversion Factors

$$1 \text{ English D.D.} = 0.5556 \text{ Metric D.D.}$$

$$1 \text{ Metric D.D.} = 1.8 \text{ English D.D.}$$

Solution:

$$\text{English D.D.} = (1.8) (3,725 \text{ Metric D.D.}) = 6,705 \text{ degree days}$$

### Example #8

A power station in Central Europe is utilizing lignite coal to generate electricity for residential, commercial and industrial customers. The heating value of the coal is 9,500 KJ/Kg. What is the equivalent value of the coal in Btu/lb.?

Definitions:

- 1 KJ = 1,000 joules
- 1 KJ = .239005 kilocalories
- 1 Btu = 252 calories
- 1 kilo calories = 4.186 kilojoules
- 1 Btu per lb. = 2.3260000 KJ per Kg
- 1 Kg = 2.204 lbs.
- 1 Joule = 0.23901 calories

Solution:

$$\text{Btu/lb.} = \frac{(9,500) (1,000) (0.23901)}{(252) (2.204)} = 4,088 \text{ Btu/lb.}$$

## MISCELLANEOUS ENERGY & POWER CONVERSIONS

### Power & Heat Units

1 MW	=	1,000 kW
1 kW	=	1,000 Watts
1 kWh	=	3,412 Btu
1 kWh	=	1.340 Hp hours
1,000 Btu	=	0.293 kWh
1 Therm	=	100,000 Btu (British Thermal Units)
1 Million Btu	=	293.1 Kilowatt hours
100,000 Btu	=	1 Therm
1 Watt	=	3.412 Btu per hour
1 Horsepower	=	0.746 Watts
1 Horsepower hr.	=	2,545 Btu

### Heat & Energy Units

1 KJ	=	1,000 Joules
1 MJ	=	1,000 KJ
1 MJ	=	1,000,000 Joules
1 KJ	=	.239005 Kilocalories
1 Joule	=	0.23901 Calories
1 Calorie	=	4.184 Joules
1 Kcal/Kg	=	1.8 Btu's/lb.
1 Million Btu	=	252 Megacalories
1 Btu	=	252 Calories
1 Btu	=	1,055 Joules
1 Million Btu	=	1,055 Megajoules
1 Btu/hour	=	.2519 Kilocalories/hour
1 Btu/lb.	=	2.3260000 KJ/KG
1 Btu/lb.	=	0.5559 Kilocalories/KG

## Power Generation Units

1 MW <sub>e</sub>	=	1,000 kW
1 MWh	=	3,600 MJ
1 MW <sub>t</sub> (thermal energy)	=	Approximately 1,000 kg. steam/hr.

## Natural Gas Units

1 Cubic foot of natural gas	=	1,000 Btu
1 Therm	=	100,000 Btu
1 Decatherm	=	10 therms
1 Decatherm	=	10 <sup>6</sup> Btu
1 Decatherm	=	1,000 cubic feet of natural gas
1 Decatherm	=	.0974 Mcf at 1,026 Btu per cubic foot
1 Mcf	=	1.026 MMBtu
1 Mcf	=	1.026 Decatherm
1 MMBtu	=	10 <sup>6</sup> Btu's

## Mass Units

1 Metric ton	=	1,000 KG
1 Metric ton	=	0.9071847 short tons
1 Metric ton	=	1.016047 long tons
1 Metric ton	=	2,204.622 pounds (lb.)

## OTHER CONVERSION FACTORS

### Temperature

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \frac{5}{9}$$

$$^{\circ}\text{F} = (9/5)^{\circ}\text{C} + 32$$

## Prefixes

<b>Prefix</b>	<b>Symbol</b>	<b>Order Of Magnitude</b>	<b>Expression</b>
tera	T	$10^{12}$	1,000,000,000,000 (one trillion)
giga	G	$10^9$	1,000,000,000 (one billion)
mega	M	$10^6$	1,000,000 (one million)
kilo	k	$10^3$	1,000 (one thousand)
milli	m	$10^{-3}$	0.001 (one thousandth)
micro	$\mu$	$10^{-6}$	0.000001 (one millionth)
nano	n	$10^{-9}$	0.000000001 (one billionth)

**TABLE OF CONTENTS**  
**FOR CONVERSIONS**

**ENERGY**

Joule	<==>	Btu
Joule	<==>	Kilogram- Calories
Calorie	<==>	Btu
Foot-Pounds	<==>	Btu
Horsepower-Hours	<==>	Btu
Horsepower-Hours	<==>	Joules

**TEMPERATURE**

°C <==> °F

**PRESSURE**

Kilogram/Centimeter<sup>2</sup> <==> Pounds/Inches<sup>2</sup>

**POWER**

Horsepower (boiler) <==> Btu/Hour

**MASS**

Grams <==> Pounds

# CONVERSION FACTORS

## FOR TABLES AND CHARTS

### ENERGY

Joule * $9.486 \times 10^{-4}$	=	Btu
Joule * $2.389 \times 10^{-4}$	=	Kilogram-Calories
Calorie * $3.968 \times 10^{-3}$	=	Btu
Foot-Pounds * $1.286 \times 10^{-3}$	=	Btu
Horsepower-Hours * $2.547 \times 10^3$	=	Btu
Horsepower-Hours * $2.684 \times 10^3$	=	Joules

### TEMPERATURE

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) \frac{5}{9}$$

$$^{\circ}\text{F} = (9/5)(^{\circ}\text{C}) + 32$$

### PRESSURE

$$\text{Kilogram/Centimeter}^2 * 1.422 \times 10^1 = \text{Pounds/Inches}^2$$

### POWER

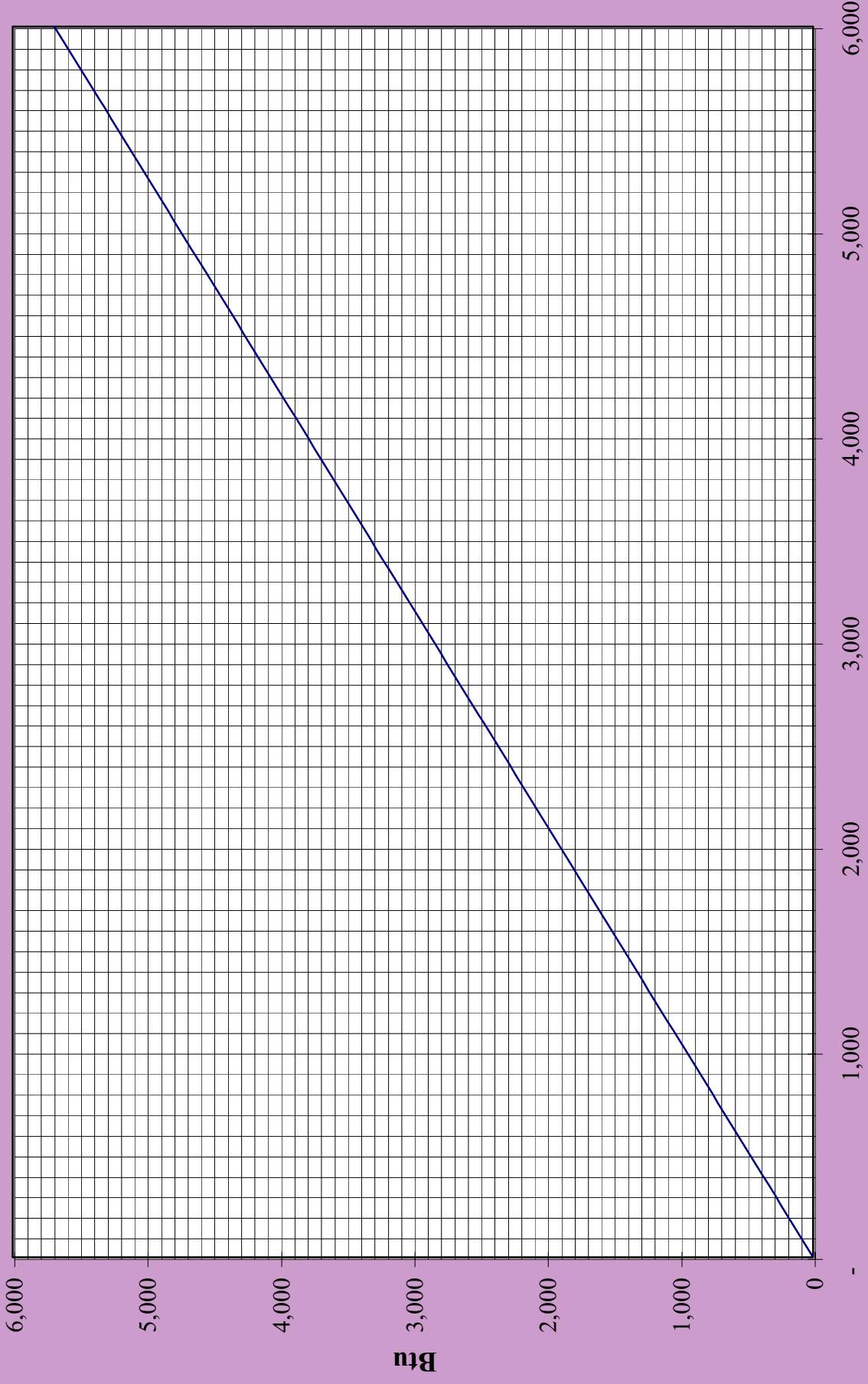
$$\text{Horsepower (boiler)} * 3.352 \times 10^4 = \text{Btu/Hour}$$

### MASS

$$\text{Grams} * 2.205 \times 10^{-3} = \text{Pounds}$$

# ENERGY CONVERSION

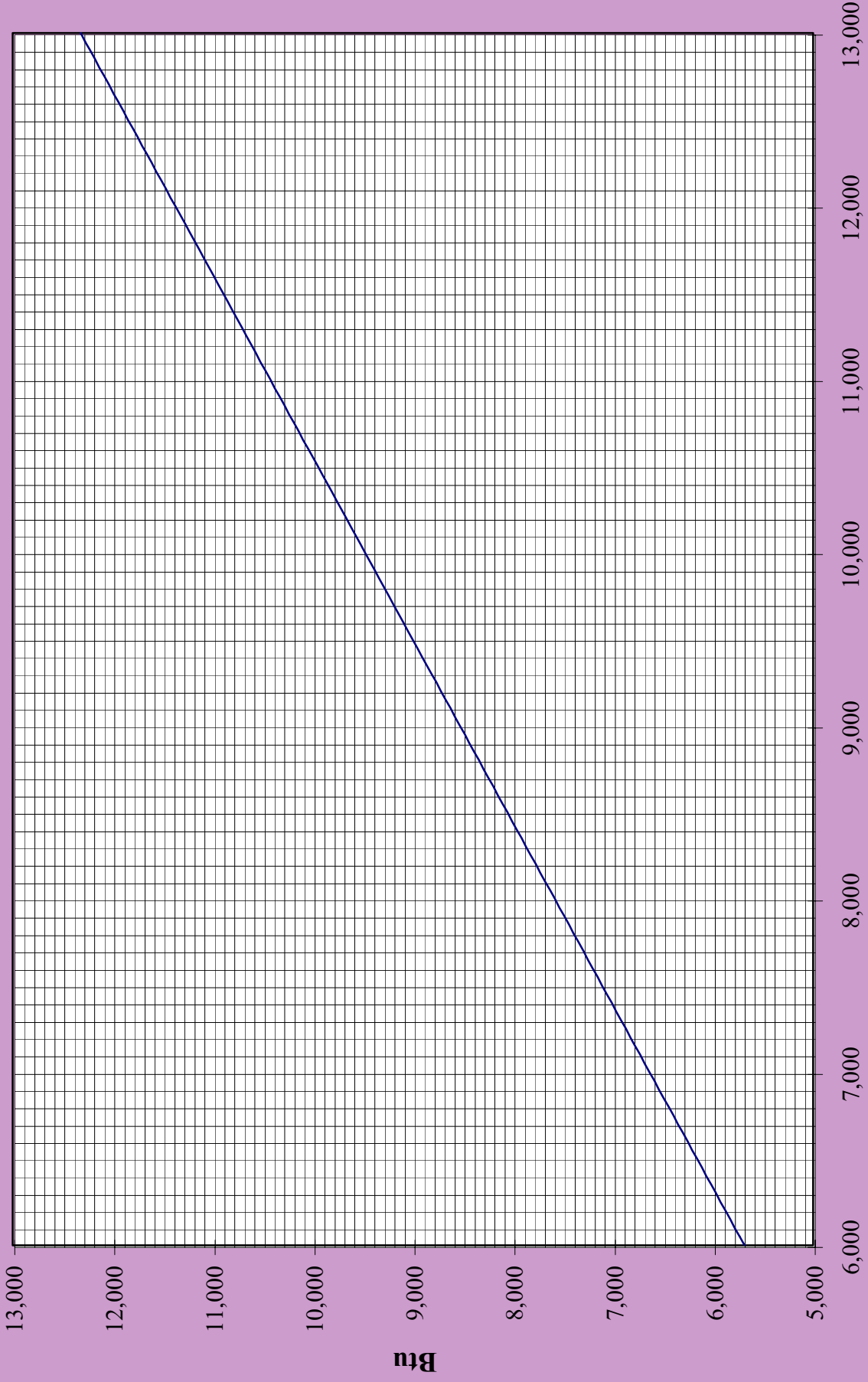
Joule - Btu



Kilo-Joule

# ENERGY CONVERSION

Joule - Btu



Kilo-Joule

## ENERGY CONVERSION TABLE

J	KJ	Btu	J	KJ	Btu	J	KJ	Btu
50,000	50	47.39	870,000	870	824.60	1,690,000	1,690	1,601.81
70,000	70	66.35	890,000	890	843.56	1,710,000	1,710	1,620.77
90,000	90	85.30	910,000	910	862.51	1,730,000	1,730	1,639.72
110,000	110	104.26	930,000	930	881.47	1,750,000	1,750	1,658.68
130,000	130	123.22	950,000	950	900.43	1,770,000	1,770	1,677.64
150,000	150	142.17	970,000	970	919.38	1,790,000	1,790	1,696.59
170,000	170	161.13	990,000	990	938.34	1,810,000	1,810	1,715.55
190,000	190	180.09	1,010,000	1,010	957.30	1,830,000	1,830	1,734.51
210,000	210	199.04	1,030,000	1,030	976.25	1,850,000	1,850	1,753.46
230,000	230	218.00	1,050,000	1,050	995.21	1,870,000	1,870	1,772.42
250,000	250	236.95	1,070,000	1,070	1,014.16	1,890,000	1,890	1,791.37
270,000	270	255.91	1,090,000	1,090	1,033.12	1,910,000	1,910	1,810.33
290,000	290	274.87	1,110,000	1,110	1,052.08	1,930,000	1,930	1,829.29
310,000	310	293.82	1,130,000	1,130	1,071.03	1,950,000	1,950	1,848.24
330,000	330	312.78	1,150,000	1,150	1,089.99	1,970,000	1,970	1,867.20
350,000	350	331.74	1,170,000	1,170	1,108.95	1,990,000	1,990	1,886.16
370,000	370	350.69	1,190,000	1,190	1,127.90	2,010,000	2,010	1,905.11
390,000	390	369.65	1,210,000	1,210	1,146.86	2,030,000	2,030	1,924.07
410,000	410	388.60	1,230,000	1,230	1,165.81	2,050,000	2,050	1,943.02
430,000	430	407.56	1,250,000	1,250	1,184.77	2,070,000	2,070	1,961.98
450,000	450	426.52	1,270,000	1,270	1,203.73	2,090,000	2,090	1,980.94
470,000	470	445.47	1,290,000	1,290	1,222.68	2,110,000	2,110	1,999.89
490,000	490	464.43	1,310,000	1,310	1,241.64	2,130,000	2,130	2,018.85
510,000	510	483.39	1,330,000	1,330	1,260.60	2,150,000	2,150	2,037.81
530,000	530	502.34	1,350,000	1,350	1,279.55	2,170,000	2,170	2,056.76
550,000	550	521.30	1,370,000	1,370	1,298.51	2,190,000	2,190	2,075.72
570,000	570	540.26	1,390,000	1,390	1,317.47	2,210,000	2,210	2,094.68
590,000	590	559.21	1,410,000	1,410	1,336.42	2,230,000	2,230	2,113.63
610,000	610	578.17	1,430,000	1,430	1,355.38	2,250,000	2,250	2,132.59
630,000	630	597.12	1,450,000	1,450	1,374.33	2,270,000	2,270	2,151.54
650,000	650	616.08	1,470,000	1,470	1,393.29	2,290,000	2,290	2,170.50
670,000	670	635.04	1,490,000	1,490	1,412.25	2,310,000	2,310	2,189.46
690,000	690	653.99	1,510,000	1,510	1,431.20	2,330,000	2,330	2,208.41
710,000	710	672.95	1,530,000	1,530	1,450.16	2,350,000	2,350	2,227.37
730,000	730	691.91	1,550,000	1,550	1,469.12	2,370,000	2,370	2,246.33
750,000	750	710.86	1,570,000	1,570	1,488.07	2,390,000	2,390	2,265.28
770,000	770	729.82	1,590,000	1,590	1,507.03	2,410,000	2,410	2,284.24
790,000	790	748.78	1,610,000	1,610	1,525.99	2,430,000	2,430	2,303.20
810,000	810	767.73	1,630,000	1,630	1,544.94	2,450,000	2,450	2,322.15
830,000	830	786.69	1,650,000	1,650	1,563.90	2,470,000	2,470	2,341.11
850,000	850	805.64	1,670,000	1,670	1,582.85	2,490,000	2,490	2,360.06

## ENERGY CONVERSION TABLE

J	KJ	Btu	J	KJ	Btu	J	KJ	Btu
2,510,000	2,510	2,379.02	3,330,000	3,330	3,156.23	4,150,000	4,150	3,933.44
2,530,000	2,530	2,397.98	3,350,000	3,350	3,175.19	4,170,000	4,170	3,952.40
2,550,000	2,550	2,416.93	3,370,000	3,370	3,194.14	4,190,000	4,190	3,971.35
2,570,000	2,570	2,435.89	3,390,000	3,390	3,213.10	4,210,000	4,210	3,990.31
2,590,000	2,590	2,454.85	3,410,000	3,410	3,232.06	4,230,000	4,230	4,009.27
2,610,000	2,610	2,473.80	3,430,000	3,430	3,251.01	4,250,000	4,250	4,028.22
2,630,000	2,630	2,492.76	3,450,000	3,450	3,269.97	4,270,000	4,270	4,047.18
2,650,000	2,650	2,511.72	3,470,000	3,470	3,288.92	4,290,000	4,290	4,066.13
2,670,000	2,670	2,530.67	3,490,000	3,490	3,307.88	4,310,000	4,310	4,085.09
2,690,000	2,690	2,549.63	3,510,000	3,510	3,326.84	4,330,000	4,330	4,104.05
2,710,000	2,710	2,568.58	3,530,000	3,530	3,345.79	4,350,000	4,350	4,123.00
2,730,000	2,730	2,587.54	3,550,000	3,550	3,364.75	4,370,000	4,370	4,141.96
2,750,000	2,750	2,606.50	3,570,000	3,570	3,383.71	4,390,000	4,390	4,160.92
2,770,000	2,770	2,625.45	3,590,000	3,590	3,402.66	4,410,000	4,410	4,179.87
2,790,000	2,790	2,644.41	3,610,000	3,610	3,421.62	4,430,000	4,430	4,198.83
2,810,000	2,810	2,663.37	3,630,000	3,630	3,440.58	4,450,000	4,450	4,217.79
2,830,000	2,830	2,682.32	3,650,000	3,650	3,459.53	4,470,000	4,470	4,236.74
2,850,000	2,850	2,701.28	3,670,000	3,670	3,478.49	4,490,000	4,490	4,255.70
2,870,000	2,870	2,720.23	3,690,000	3,690	3,497.44	4,510,000	4,510	4,274.65
2,890,000	2,890	2,739.19	3,710,000	3,710	3,516.40	4,530,000	4,530	4,293.61
2,910,000	2,910	2,758.15	3,730,000	3,730	3,535.36	4,550,000	4,550	4,312.57
2,930,000	2,930	2,777.10	3,750,000	3,750	3,554.31	4,570,000	4,570	4,331.52
2,950,000	2,950	2,796.06	3,770,000	3,770	3,573.27	4,590,000	4,590	4,350.48
2,970,000	2,970	2,815.02	3,790,000	3,790	3,592.23	4,610,000	4,610	4,369.44
2,990,000	2,990	2,833.97	3,810,000	3,810	3,611.18	4,630,000	4,630	4,388.39
3,010,000	3,010	2,852.93	3,830,000	3,830	3,630.14	4,650,000	4,650	4,407.35
3,030,000	3,030	2,871.89	3,850,000	3,850	3,649.10	4,670,000	4,670	4,426.31
3,050,000	3,050	2,890.84	3,870,000	3,870	3,668.05	4,690,000	4,690	4,445.26
3,070,000	3,070	2,909.80	3,890,000	3,890	3,687.01	4,710,000	4,710	4,464.22
3,090,000	3,090	2,928.75	3,910,000	3,910	3,705.96	4,730,000	4,730	4,483.17
3,110,000	3,110	2,947.71	3,930,000	3,930	3,724.92	4,750,000	4,750	4,502.13
3,130,000	3,130	2,966.67	3,950,000	3,950	3,743.88	4,770,000	4,770	4,521.09
3,150,000	3,150	2,985.62	3,970,000	3,970	3,762.83	4,790,000	4,790	4,540.04
3,170,000	3,170	3,004.58	3,990,000	3,990	3,781.79	4,810,000	4,810	4,559.00
3,190,000	3,190	3,023.54	4,010,000	4,010	3,800.75	4,830,000	4,830	4,577.96
3,210,000	3,210	3,042.49	4,030,000	4,030	3,819.70	4,850,000	4,850	4,596.91
3,230,000	3,230	3,061.45	4,050,000	4,050	3,838.66	4,870,000	4,870	4,615.87
3,250,000	3,250	3,080.41	4,070,000	4,070	3,857.62	4,890,000	4,890	4,634.83
3,270,000	3,270	3,099.36	4,090,000	4,090	3,876.57	4,910,000	4,910	4,653.78
3,290,000	3,290	3,118.32	4,110,000	4,110	3,895.53	4,930,000	4,930	4,672.74
3,310,000	3,310	3,137.27	4,130,000	4,130	3,914.48	4,950,000	4,950	4,691.69

## ENERGY CONVERSION TABLE

J	KJ	Btu	J	KJ	Btu	J	KJ	Btu
4,970,000	4,970	4,710.65	5,790,000	5,790	5,487.86	6,610,000	6,610	6,265.07
4,990,000	4,990	4,729.61	5,810,000	5,810	5,506.82	6,630,000	6,630	6,284.03
5,010,000	5,010	4,748.56	5,830,000	5,830	5,525.77	6,650,000	6,650	6,302.98
5,030,000	5,030	4,767.52	5,850,000	5,850	5,544.73	6,670,000	6,670	6,321.94
5,050,000	5,050	4,786.48	5,870,000	5,870	5,563.69	6,690,000	6,690	6,340.90
5,070,000	5,070	4,805.43	5,890,000	5,890	5,582.64	6,710,000	6,710	6,359.85
5,090,000	5,090	4,824.39	5,910,000	5,910	5,601.60	6,730,000	6,730	6,378.81
5,110,000	5,110	4,843.34	5,930,000	5,930	5,620.55	6,750,000	6,750	6,397.76
5,130,000	5,130	4,862.30	5,950,000	5,950	5,639.51	6,770,000	6,770	6,416.72
5,150,000	5,150	4,881.26	5,970,000	5,970	5,658.47	6,790,000	6,790	6,435.68
5,170,000	5,170	4,900.21	5,990,000	5,990	5,677.42	6,810,000	6,810	6,454.63
5,190,000	5,190	4,919.17	6,010,000	6,010	5,696.38	6,830,000	6,830	6,473.59
5,210,000	5,210	4,938.13	6,030,000	6,030	5,715.34	6,850,000	6,850	6,492.55
5,230,000	5,230	4,957.08	6,050,000	6,050	5,734.29	6,870,000	6,870	6,511.50
5,250,000	5,250	4,976.04	6,070,000	6,070	5,753.25	6,890,000	6,890	6,530.46
5,270,000	5,270	4,995.00	6,090,000	6,090	5,772.21	6,910,000	6,910	6,549.42
5,290,000	5,290	5,013.95	6,110,000	6,110	5,791.16	6,930,000	6,930	6,568.37
5,310,000	5,310	5,032.91	6,130,000	6,130	5,810.12	6,950,000	6,950	6,587.33
5,330,000	5,330	5,051.86	6,150,000	6,150	5,829.07	6,970,000	6,970	6,606.28
5,350,000	5,350	5,070.82	6,170,000	6,170	5,848.03	6,990,000	6,990	6,625.24
5,370,000	5,370	5,089.78	6,190,000	6,190	5,866.99	7,010,000	7,010	6,644.20
5,390,000	5,390	5,108.73	6,210,000	6,210	5,885.94	7,030,000	7,030	6,663.15
5,410,000	5,410	5,127.69	6,230,000	6,230	5,904.90	7,050,000	7,050	6,682.11
5,430,000	5,430	5,146.65	6,250,000	6,250	5,923.86	7,070,000	7,070	6,701.07
5,450,000	5,450	5,165.60	6,270,000	6,270	5,942.81	7,090,000	7,090	6,720.02
5,470,000	5,470	5,184.56	6,290,000	6,290	5,961.77	7,110,000	7,110	6,738.98
5,490,000	5,490	5,203.52	6,310,000	6,310	5,980.73	7,130,000	7,130	6,757.94
5,510,000	5,510	5,222.47	6,330,000	6,330	5,999.68	7,150,000	7,150	6,776.89
5,530,000	5,530	5,241.43	6,350,000	6,350	6,018.64	7,170,000	7,170	6,795.85
5,550,000	5,550	5,260.38	6,370,000	6,370	6,037.59	7,190,000	7,190	6,814.80
5,570,000	5,570	5,279.34	6,390,000	6,390	6,056.55	7,210,000	7,210	6,833.76
5,590,000	5,590	5,298.30	6,410,000	6,410	6,075.51	7,230,000	7,230	6,852.72
5,610,000	5,610	5,317.25	6,430,000	6,430	6,094.46	7,250,000	7,250	6,871.67
5,630,000	5,630	5,336.21	6,450,000	6,450	6,113.42	7,270,000	7,270	6,890.63
5,650,000	5,650	5,355.17	6,470,000	6,470	6,132.38	7,290,000	7,290	6,909.59
5,670,000	5,670	5,374.12	6,490,000	6,490	6,151.33	7,310,000	7,310	6,928.54
5,690,000	5,690	5,393.08	6,510,000	6,510	6,170.29	7,330,000	7,330	6,947.50
5,710,000	5,710	5,412.04	6,530,000	6,530	6,189.25	7,350,000	7,350	6,966.45
5,730,000	5,730	5,430.99	6,550,000	6,550	6,208.20	7,370,000	7,370	6,985.41
5,750,000	5,750	5,449.95	6,570,000	6,570	6,227.16	7,390,000	7,390	7,004.37
5,770,000	5,770	5,468.90	6,590,000	6,590	6,246.11	7,410,000	7,410	7,023.32

## ENERGY CONVERSION TABLE

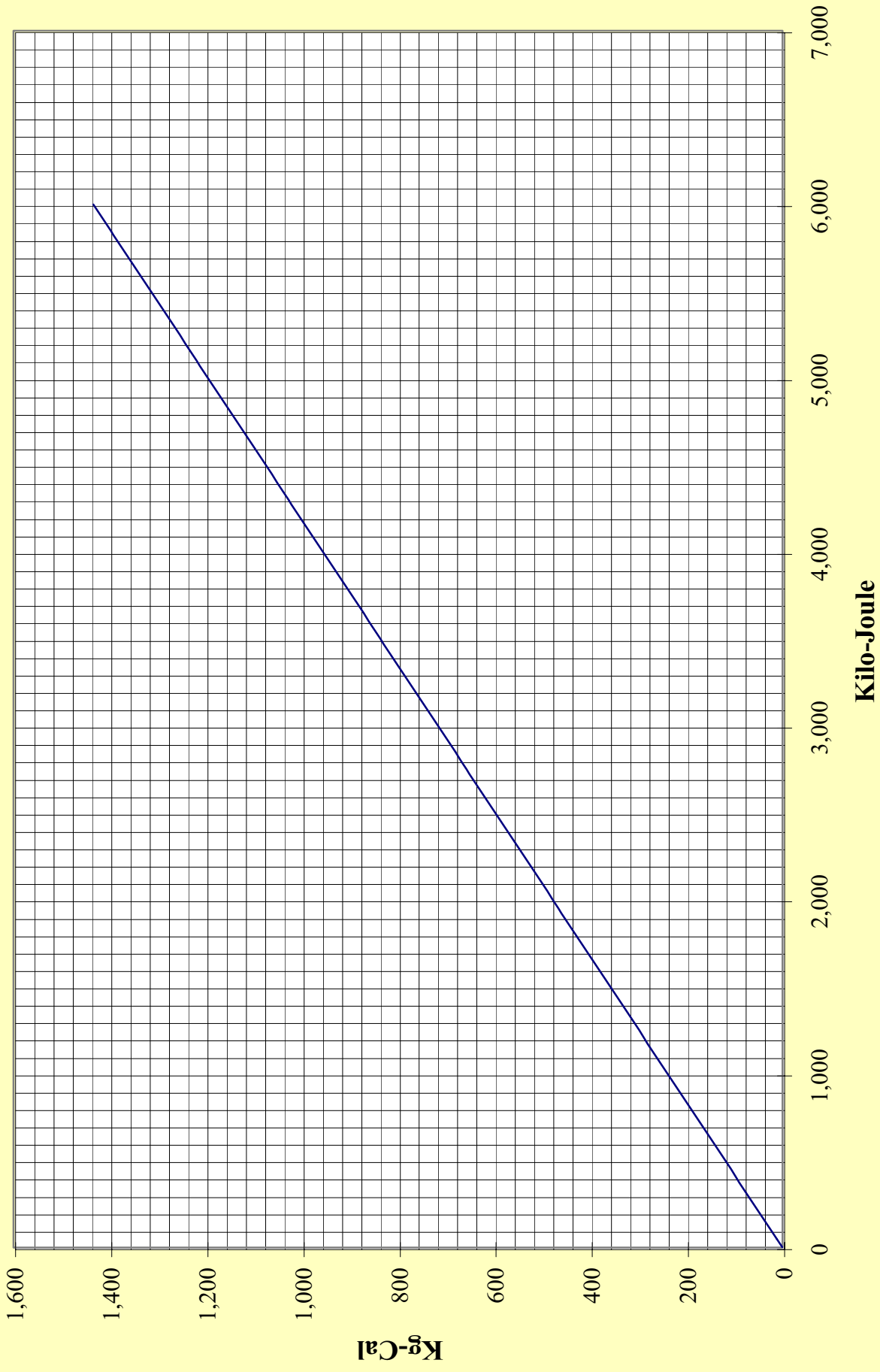
J	KJ	Btu	J	KJ	Btu	J	KJ	Btu
7,430,000	7,430	7,042.28	8,250,000	8,250	7,819.49	9,070,000	9,070	8,596.70
7,450,000	7,450	7,061.24	8,270,000	8,270	7,838.45	9,090,000	9,090	8,615.66
7,470,000	7,470	7,080.19	8,290,000	8,290	7,857.40	9,110,000	9,110	8,634.61
7,490,000	7,490	7,099.15	8,310,000	8,310	7,876.36	9,130,000	9,130	8,653.57
7,510,000	7,510	7,118.11	8,330,000	8,330	7,895.32	9,150,000	9,150	8,672.53
7,530,000	7,530	7,137.06	8,350,000	8,350	7,914.27	9,170,000	9,170	8,691.48
7,550,000	7,550	7,156.02	8,370,000	8,370	7,933.23	9,190,000	9,190	8,710.44
7,570,000	7,570	7,174.97	8,390,000	8,390	7,952.18	9,210,000	9,210	8,729.39
7,590,000	7,590	7,193.93	8,410,000	8,410	7,971.14	9,230,000	9,230	8,748.35
7,610,000	7,610	7,212.89	8,430,000	8,430	7,990.10	9,250,000	9,250	8,767.31
7,630,000	7,630	7,231.84	8,450,000	8,450	8,009.05	9,270,000	9,270	8,786.26
7,650,000	7,650	7,250.80	8,470,000	8,470	8,028.01	9,290,000	9,290	8,805.22
7,670,000	7,670	7,269.76	8,490,000	8,490	8,046.97	9,310,000	9,310	8,824.18
7,690,000	7,690	7,288.71	8,510,000	8,510	8,065.92	9,330,000	9,330	8,843.13
7,710,000	7,710	7,307.67	8,530,000	8,530	8,084.88	9,350,000	9,350	8,862.09
7,730,000	7,730	7,326.63	8,550,000	8,550	8,103.84	9,370,000	9,370	8,881.05
7,750,000	7,750	7,345.58	8,570,000	8,570	8,122.79	9,390,000	9,390	8,900.00
7,770,000	7,770	7,364.54	8,590,000	8,590	8,141.75	9,410,000	9,410	8,918.96
7,790,000	7,790	7,383.49	8,610,000	8,610	8,160.70	9,430,000	9,430	8,937.91
7,810,000	7,810	7,402.45	8,630,000	8,630	8,179.66	9,450,000	9,450	8,956.87
7,830,000	7,830	7,421.41	8,650,000	8,650	8,198.62	9,470,000	9,470	8,975.83
7,850,000	7,850	7,440.36	8,670,000	8,670	8,217.57	9,490,000	9,490	8,994.78
7,870,000	7,870	7,459.32	8,690,000	8,690	8,236.53	9,510,000	9,510	9,013.74
7,890,000	7,890	7,478.28	8,710,000	8,710	8,255.49	9,530,000	9,530	9,032.70
7,910,000	7,910	7,497.23	8,730,000	8,730	8,274.44	9,550,000	9,550	9,051.65
7,930,000	7,930	7,516.19	8,750,000	8,750	8,293.40	9,570,000	9,570	9,070.61
7,950,000	7,950	7,535.15	8,770,000	8,770	8,312.36	9,590,000	9,590	9,089.57
7,970,000	7,970	7,554.10	8,790,000	8,790	8,331.31	9,610,000	9,610	9,108.52
7,990,000	7,990	7,573.06	8,810,000	8,810	8,350.27	9,630,000	9,630	9,127.48
8,010,000	8,010	7,592.01	8,830,000	8,830	8,369.22	9,650,000	9,650	9,146.43
8,030,000	8,030	7,610.97	8,850,000	8,850	8,388.18	9,670,000	9,670	9,165.39
8,050,000	8,050	7,629.93	8,870,000	8,870	8,407.14	9,690,000	9,690	9,184.35
8,070,000	8,070	7,648.88	8,890,000	8,890	8,426.09	9,710,000	9,710	9,203.30
8,090,000	8,090	7,667.84	8,910,000	8,910	8,445.05	9,730,000	9,730	9,222.26
8,110,000	8,110	7,686.80	8,930,000	8,930	8,464.01	9,750,000	9,750	9,241.22
8,130,000	8,130	7,705.75	8,950,000	8,950	8,482.96	9,770,000	9,770	9,260.17
8,150,000	8,150	7,724.71	8,970,000	8,970	8,501.92	9,790,000	9,790	9,279.13
8,170,000	8,170	7,743.66	8,990,000	8,990	8,520.87	9,810,000	9,810	9,298.08
8,190,000	8,190	7,762.62	9,010,000	9,010	8,539.83	9,830,000	9,830	9,317.04
8,210,000	8,210	7,781.58	9,030,000	9,030	8,558.79	9,850,000	9,850	9,336.00
8,230,000	8,230	7,800.53	9,050,000	9,050	8,577.74	9,870,000	9,870	9,354.95

## ENERGY CONVERSION TABLE

J	KJ	Btu	J	KJ	Btu	J	KJ	Btu
9,890,000	9,890	9,373.91	10,710,000	10,710	10,151.12	11,530,000	11,530	10,928.33
9,910,000	9,910	9,392.87	10,730,000	10,730	10,170.08	11,550,000	11,550	10,947.29
9,930,000	9,930	9,411.82	10,750,000	10,750	10,189.03	11,570,000	11,570	10,966.24
9,950,000	9,950	9,430.78	10,770,000	10,770	10,207.99	11,590,000	11,590	10,985.20
9,970,000	9,970	9,449.74	10,790,000	10,790	10,226.95	11,610,000	11,610	11,004.16
9,990,000	9,990	9,468.69	10,810,000	10,810	10,245.90	11,630,000	11,630	11,023.11
10,010,000	10,010	9,487.65	10,830,000	10,830	10,264.86	11,650,000	11,650	11,042.07
10,030,000	10,030	9,506.60	10,850,000	10,850	10,283.81	11,670,000	11,670	11,061.02
10,050,000	10,050	9,525.56	10,870,000	10,870	10,302.77	11,690,000	11,690	11,079.98
10,070,000	10,070	9,544.52	10,890,000	10,890	10,321.73	11,710,000	11,710	11,098.94
10,090,000	10,090	9,563.47	10,910,000	10,910	10,340.68	11,730,000	11,730	11,117.89
10,110,000	10,110	9,582.43	10,930,000	10,930	10,359.64	11,750,000	11,750	11,136.85
10,130,000	10,130	9,601.39	10,950,000	10,950	10,378.60	11,770,000	11,770	11,155.81
10,150,000	10,150	9,620.34	10,970,000	10,970	10,397.55	11,790,000	11,790	11,174.76
10,170,000	10,170	9,639.30	10,990,000	10,990	10,416.51	11,810,000	11,810	11,193.72
10,190,000	10,190	9,658.26	11,010,000	11,010	10,435.47	11,830,000	11,830	11,212.68
10,210,000	10,210	9,677.21	11,030,000	11,030	10,454.42	11,850,000	11,850	11,231.63
10,230,000	10,230	9,696.17	11,050,000	11,050	10,473.38	11,870,000	11,870	11,250.59
10,250,000	10,250	9,715.12	11,070,000	11,070	10,492.33	11,890,000	11,890	11,269.54
10,270,000	10,270	9,734.08	11,090,000	11,090	10,511.29	11,910,000	11,910	11,288.50
10,290,000	10,290	9,753.04	11,110,000	11,110	10,530.25	11,930,000	11,930	11,307.46
10,310,000	10,310	9,771.99	11,130,000	11,130	10,549.20	11,950,000	11,950	11,326.41
10,330,000	10,330	9,790.95	11,150,000	11,150	10,568.16	11,970,000	11,970	11,345.37
10,350,000	10,350	9,809.91	11,170,000	11,170	10,587.12	11,990,000	11,990	11,364.33
10,370,000	10,370	9,828.86	11,190,000	11,190	10,606.07	12,010,000	12,010	11,383.28
10,390,000	10,390	9,847.82	11,210,000	11,210	10,625.03	12,030,000	12,030	11,402.24
10,410,000	10,410	9,866.77	11,230,000	11,230	10,643.98	12,050,000	12,050	11,421.19
10,430,000	10,430	9,885.73	11,250,000	11,250	10,662.94	12,070,000	12,070	11,440.15
10,450,000	10,450	9,904.69	11,270,000	11,270	10,681.90	12,090,000	12,090	11,459.11
10,470,000	10,470	9,923.64	11,290,000	11,290	10,700.85	12,110,000	12,110	11,478.06
10,490,000	10,490	9,942.60	11,310,000	11,310	10,719.81	12,130,000	12,130	11,497.02
10,510,000	10,510	9,961.56	11,330,000	11,330	10,738.77	12,150,000	12,150	11,515.98
10,530,000	10,530	9,980.51	11,350,000	11,350	10,757.72	12,170,000	12,170	11,534.93
10,550,000	10,550	9,999.47	11,370,000	11,370	10,776.68	12,190,000	12,190	11,553.89
10,570,000	10,570	10,018.43	11,390,000	11,390	10,795.64	12,210,000	12,210	11,572.85
10,590,000	10,590	10,037.38	11,410,000	11,410	10,814.59	12,230,000	12,230	11,591.80
10,610,000	10,610	10,056.34	11,430,000	11,430	10,833.55	12,250,000	12,250	11,610.76
10,630,000	10,630	10,075.29	11,450,000	11,450	10,852.50	12,270,000	12,270	11,629.71
10,650,000	10,650	10,094.25	11,470,000	11,470	10,871.46	12,290,000	12,290	11,648.67
10,670,000	10,670	10,113.21	11,490,000	11,490	10,890.42	12,310,000	12,310	11,667.63
10,690,000	10,690	10,132.16	11,510,000	11,510	10,909.37	12,330,000	12,330	11,686.58

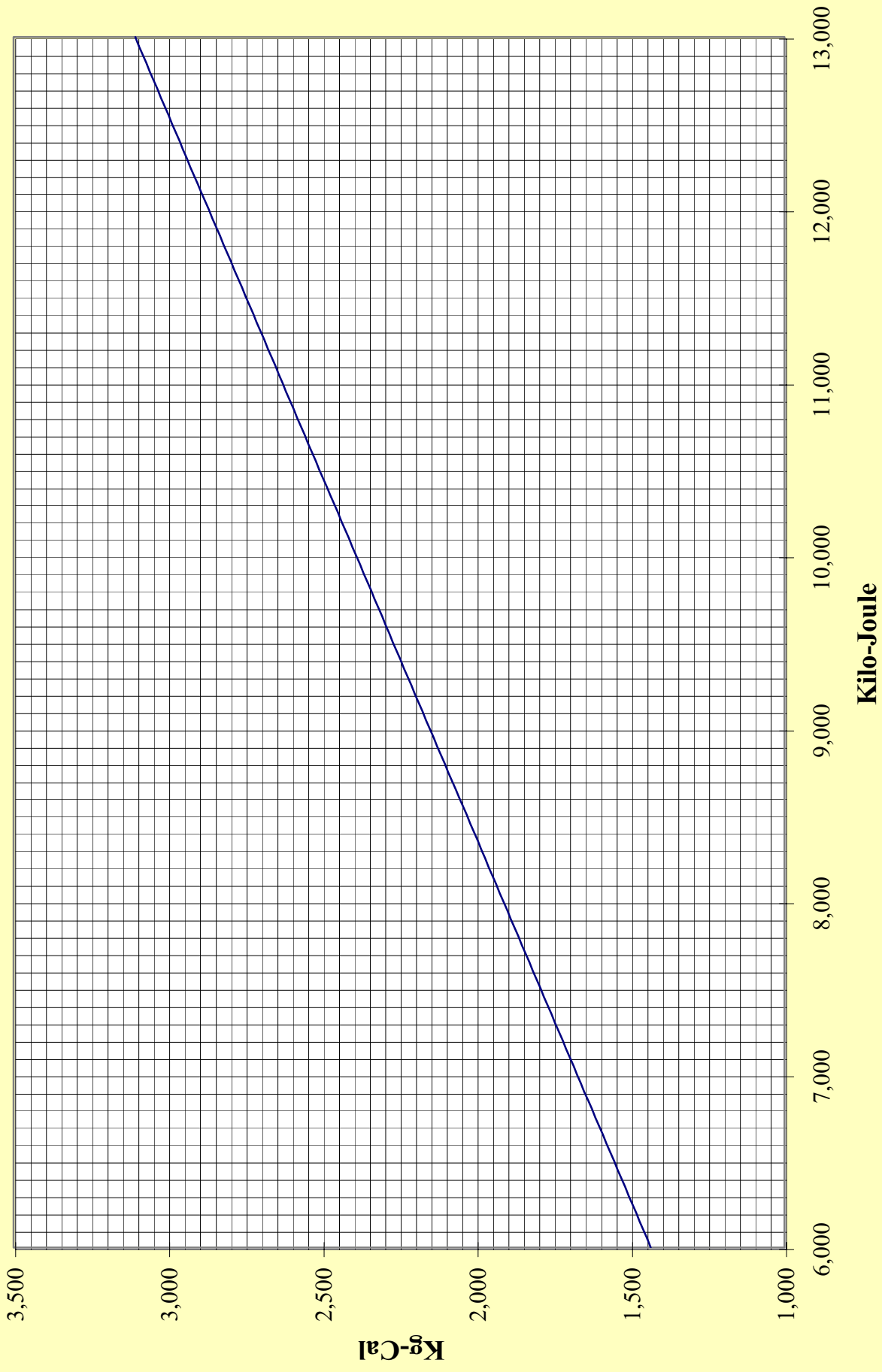
# ENERGY CONVERSION

## Joule - Kilogram Calories



# ENERGY CONVERSION

## Joule - Kilogram Calories



## ENERGY CONVERSION TABLE

J	KJ	Kg-Cal	J	KJ	Kg-Cal	J	KJ	Kg-Cal
50,000	50	11.95	870,000	870	207.84	1,690,000	1,690	403.74
70,000	70	16.72	890,000	890	212.62	1,710,000	1,710	408.52
90,000	90	21.50	910,000	910	217.40	1,730,000	1,730	413.30
110,000	110	26.28	930,000	930	222.18	1,750,000	1,750	418.08
130,000	130	31.06	950,000	950	226.96	1,770,000	1,770	422.85
150,000	150	35.84	970,000	970	231.73	1,790,000	1,790	427.63
170,000	170	40.61	990,000	990	236.51	1,810,000	1,810	432.41
190,000	190	45.39	1,010,000	1,010	241.29	1,830,000	1,830	437.19
210,000	210	50.17	1,030,000	1,030	246.07	1,850,000	1,850	441.97
230,000	230	54.95	1,050,000	1,050	250.85	1,870,000	1,870	446.74
250,000	250	59.73	1,070,000	1,070	255.62	1,890,000	1,890	451.52
270,000	270	64.50	1,090,000	1,090	260.40	1,910,000	1,910	456.30
290,000	290	69.28	1,110,000	1,110	265.18	1,930,000	1,930	461.08
310,000	310	74.06	1,130,000	1,130	269.96	1,950,000	1,950	465.86
330,000	330	78.84	1,150,000	1,150	274.74	1,970,000	1,970	470.63
350,000	350	83.62	1,170,000	1,170	279.51	1,990,000	1,990	475.41
370,000	370	88.39	1,190,000	1,190	284.29	2,010,000	2,010	480.19
390,000	390	93.17	1,210,000	1,210	289.07	2,030,000	2,030	484.97
410,000	410	97.95	1,230,000	1,230	293.85	2,050,000	2,050	489.75
430,000	430	102.73	1,250,000	1,250	298.63	2,070,000	2,070	494.52
450,000	450	107.51	1,270,000	1,270	303.40	2,090,000	2,090	499.30
470,000	470	112.28	1,290,000	1,290	308.18	2,110,000	2,110	504.08
490,000	490	117.06	1,310,000	1,310	312.96	2,130,000	2,130	508.86
510,000	510	121.84	1,330,000	1,330	317.74	2,150,000	2,150	513.64
530,000	530	126.62	1,350,000	1,350	322.52	2,170,000	2,170	518.41
550,000	550	131.40	1,370,000	1,370	327.29	2,190,000	2,190	523.19
570,000	570	136.17	1,390,000	1,390	332.07	2,210,000	2,210	527.97
590,000	590	140.95	1,410,000	1,410	336.85	2,230,000	2,230	532.75
610,000	610	145.73	1,430,000	1,430	341.63	2,250,000	2,250	537.53
630,000	630	150.51	1,450,000	1,450	346.41	2,270,000	2,270	542.30
650,000	650	155.29	1,470,000	1,470	351.18	2,290,000	2,290	547.08
670,000	670	160.06	1,490,000	1,490	355.96	2,310,000	2,310	551.86
690,000	690	164.84	1,510,000	1,510	360.74	2,330,000	2,330	556.64
710,000	710	169.62	1,530,000	1,530	365.52	2,350,000	2,350	561.42
730,000	730	174.40	1,550,000	1,550	370.30	2,370,000	2,370	566.19
750,000	750	179.18	1,570,000	1,570	375.07	2,390,000	2,390	570.97
770,000	770	183.95	1,590,000	1,590	379.85	2,410,000	2,410	575.75
790,000	790	188.73	1,610,000	1,610	384.63	2,430,000	2,430	580.53
810,000	810	193.51	1,630,000	1,630	389.41	2,450,000	2,450	585.31
830,000	830	198.29	1,650,000	1,650	394.19	2,470,000	2,470	590.08
850,000	850	203.07	1,670,000	1,670	398.96	2,490,000	2,490	594.86

## ENERGY CONVERSION TABLE

J	KJ	Kg-Cal	J	KJ	Kg-Cal	J	KJ	Kg-Cal
2,510,000	2,510	599.64	3,330,000	3,330	795.54	4,150,000	4,150	991.44
2,530,000	2,530	604.42	3,350,000	3,350	800.32	4,170,000	4,170	996.21
2,550,000	2,550	609.20	3,370,000	3,370	805.09	4,190,000	4,190	1,000.99
2,570,000	2,570	613.97	3,390,000	3,390	809.87	4,210,000	4,210	1,005.77
2,590,000	2,590	618.75	3,410,000	3,410	814.65	4,230,000	4,230	1,010.55
2,610,000	2,610	623.53	3,430,000	3,430	819.43	4,250,000	4,250	1,015.33
2,630,000	2,630	628.31	3,450,000	3,450	824.21	4,270,000	4,270	1,020.10
2,650,000	2,650	633.09	3,470,000	3,470	828.98	4,290,000	4,290	1,024.88
2,670,000	2,670	637.86	3,490,000	3,490	833.76	4,310,000	4,310	1,029.66
2,690,000	2,690	642.64	3,510,000	3,510	838.54	4,330,000	4,330	1,034.44
2,710,000	2,710	647.42	3,530,000	3,530	843.32	4,350,000	4,350	1,039.22
2,730,000	2,730	652.20	3,550,000	3,550	848.10	4,370,000	4,370	1,043.99
2,750,000	2,750	656.98	3,570,000	3,570	852.87	4,390,000	4,390	1,048.77
2,770,000	2,770	661.75	3,590,000	3,590	857.65	4,410,000	4,410	1,053.55
2,790,000	2,790	666.53	3,610,000	3,610	862.43	4,430,000	4,430	1,058.33
2,810,000	2,810	671.31	3,630,000	3,630	867.21	4,450,000	4,450	1,063.11
2,830,000	2,830	676.09	3,650,000	3,650	871.99	4,470,000	4,470	1,067.88
2,850,000	2,850	680.87	3,670,000	3,670	876.76	4,490,000	4,490	1,072.66
2,870,000	2,870	685.64	3,690,000	3,690	881.54	4,510,000	4,510	1,077.44
2,890,000	2,890	690.42	3,710,000	3,710	886.32	4,530,000	4,530	1,082.22
2,910,000	2,910	695.20	3,730,000	3,730	891.10	4,550,000	4,550	1,087.00
2,930,000	2,930	699.98	3,750,000	3,750	895.88	4,570,000	4,570	1,091.77
2,950,000	2,950	704.76	3,770,000	3,770	900.65	4,590,000	4,590	1,096.55
2,970,000	2,970	709.53	3,790,000	3,790	905.43	4,610,000	4,610	1,101.33
2,990,000	2,990	714.31	3,810,000	3,810	910.21	4,630,000	4,630	1,106.11
3,010,000	3,010	719.09	3,830,000	3,830	914.99	4,650,000	4,650	1,110.89
3,030,000	3,030	723.87	3,850,000	3,850	919.77	4,670,000	4,670	1,115.66
3,050,000	3,050	728.65	3,870,000	3,870	924.54	4,690,000	4,690	1,120.44
3,070,000	3,070	733.42	3,890,000	3,890	929.32	4,710,000	4,710	1,125.22
3,090,000	3,090	738.20	3,910,000	3,910	934.10	4,730,000	4,730	1,130.00
3,110,000	3,110	742.98	3,930,000	3,930	938.88	4,750,000	4,750	1,134.78
3,130,000	3,130	747.76	3,950,000	3,950	943.66	4,770,000	4,770	1,139.55
3,150,000	3,150	752.54	3,970,000	3,970	948.43	4,790,000	4,790	1,144.33
3,170,000	3,170	757.31	3,990,000	3,990	953.21	4,810,000	4,810	1,149.11
3,190,000	3,190	762.09	4,010,000	4,010	957.99	4,830,000	4,830	1,153.89
3,210,000	3,210	766.87	4,030,000	4,030	962.77	4,850,000	4,850	1,158.67
3,230,000	3,230	771.65	4,050,000	4,050	967.55	4,870,000	4,870	1,163.44
3,250,000	3,250	776.43	4,070,000	4,070	972.32	4,890,000	4,890	1,168.22
3,270,000	3,270	781.20	4,090,000	4,090	977.10	4,910,000	4,910	1,173.00
3,290,000	3,290	785.98	4,110,000	4,110	981.88	4,930,000	4,930	1,177.78
3,310,000	3,310	790.76	4,130,000	4,130	986.66	4,950,000	4,950	1,182.56

## ENERGY CONVERSION TABLE

J	KJ	Kg-Cal	J	KJ	Kg-Cal	J	KJ	Kg-Cal
4,970,000	4,970	1,187.33	5,790,000	5,790	1,383.23	6,610,000	6,610	1,579.13
4,990,000	4,990	1,192.11	5,810,000	5,810	1,388.01	6,630,000	6,630	1,583.91
5,010,000	5,010	1,196.89	5,830,000	5,830	1,392.79	6,650,000	6,650	1,588.69
5,030,000	5,030	1,201.67	5,850,000	5,850	1,397.57	6,670,000	6,670	1,593.46
5,050,000	5,050	1,206.45	5,870,000	5,870	1,402.34	6,690,000	6,690	1,598.24
5,070,000	5,070	1,211.22	5,890,000	5,890	1,407.12	6,710,000	6,710	1,603.02
5,090,000	5,090	1,216.00	5,910,000	5,910	1,411.90	6,730,000	6,730	1,607.80
5,110,000	5,110	1,220.78	5,930,000	5,930	1,416.68	6,750,000	6,750	1,612.58
5,130,000	5,130	1,225.56	5,950,000	5,950	1,421.46	6,770,000	6,770	1,617.35
5,150,000	5,150	1,230.34	5,970,000	5,970	1,426.23	6,790,000	6,790	1,622.13
5,170,000	5,170	1,235.11	5,990,000	5,990	1,431.01	6,810,000	6,810	1,626.91
5,190,000	5,190	1,239.89	6,010,000	6,010	1,435.79	6,830,000	6,830	1,631.69
5,210,000	5,210	1,244.67	6,030,000	6,030	1,440.57	6,850,000	6,850	1,636.47
5,230,000	5,230	1,249.45	6,050,000	6,050	1,445.35	6,870,000	6,870	1,641.24
5,250,000	5,250	1,254.23	6,070,000	6,070	1,450.12	6,890,000	6,890	1,646.02
5,270,000	5,270	1,259.00	6,090,000	6,090	1,454.90	6,910,000	6,910	1,650.80
5,290,000	5,290	1,263.78	6,110,000	6,110	1,459.68	6,930,000	6,930	1,655.58
5,310,000	5,310	1,268.56	6,130,000	6,130	1,464.46	6,950,000	6,950	1,660.36
5,330,000	5,330	1,273.34	6,150,000	6,150	1,469.24	6,970,000	6,970	1,665.13
5,350,000	5,350	1,278.12	6,170,000	6,170	1,474.01	6,990,000	6,990	1,669.91
5,370,000	5,370	1,282.89	6,190,000	6,190	1,478.79	7,010,000	7,010	1,674.69
5,390,000	5,390	1,287.67	6,210,000	6,210	1,483.57	7,030,000	7,030	1,679.47
5,410,000	5,410	1,292.45	6,230,000	6,230	1,488.35	7,050,000	7,050	1,684.25
5,430,000	5,430	1,297.23	6,250,000	6,250	1,493.13	7,070,000	7,070	1,689.02
5,450,000	5,450	1,302.01	6,270,000	6,270	1,497.90	7,090,000	7,090	1,693.80
5,470,000	5,470	1,306.78	6,290,000	6,290	1,502.68	7,110,000	7,110	1,698.58
5,490,000	5,490	1,311.56	6,310,000	6,310	1,507.46	7,130,000	7,130	1,703.36
5,510,000	5,510	1,316.34	6,330,000	6,330	1,512.24	7,150,000	7,150	1,708.14
5,530,000	5,530	1,321.12	6,350,000	6,350	1,517.02	7,170,000	7,170	1,712.91
5,550,000	5,550	1,325.90	6,370,000	6,370	1,521.79	7,190,000	7,190	1,717.69
5,570,000	5,570	1,330.67	6,390,000	6,390	1,526.57	7,210,000	7,210	1,722.47
5,590,000	5,590	1,335.45	6,410,000	6,410	1,531.35	7,230,000	7,230	1,727.25
5,610,000	5,610	1,340.23	6,430,000	6,430	1,536.13	7,250,000	7,250	1,732.03
5,630,000	5,630	1,345.01	6,450,000	6,450	1,540.91	7,270,000	7,270	1,736.80
5,650,000	5,650	1,349.79	6,470,000	6,470	1,545.68	7,290,000	7,290	1,741.58
5,670,000	5,670	1,354.56	6,490,000	6,490	1,550.46	7,310,000	7,310	1,746.36
5,690,000	5,690	1,359.34	6,510,000	6,510	1,555.24	7,330,000	7,330	1,751.14
5,710,000	5,710	1,364.12	6,530,000	6,530	1,560.02	7,350,000	7,350	1,755.92
5,730,000	5,730	1,368.90	6,550,000	6,550	1,564.80	7,370,000	7,370	1,760.69
5,750,000	5,750	1,373.68	6,570,000	6,570	1,569.57	7,390,000	7,390	1,765.47
5,770,000	5,770	1,378.45	6,590,000	6,590	1,574.35	7,410,000	7,410	1,770.25

## ENERGY CONVERSION TABLE

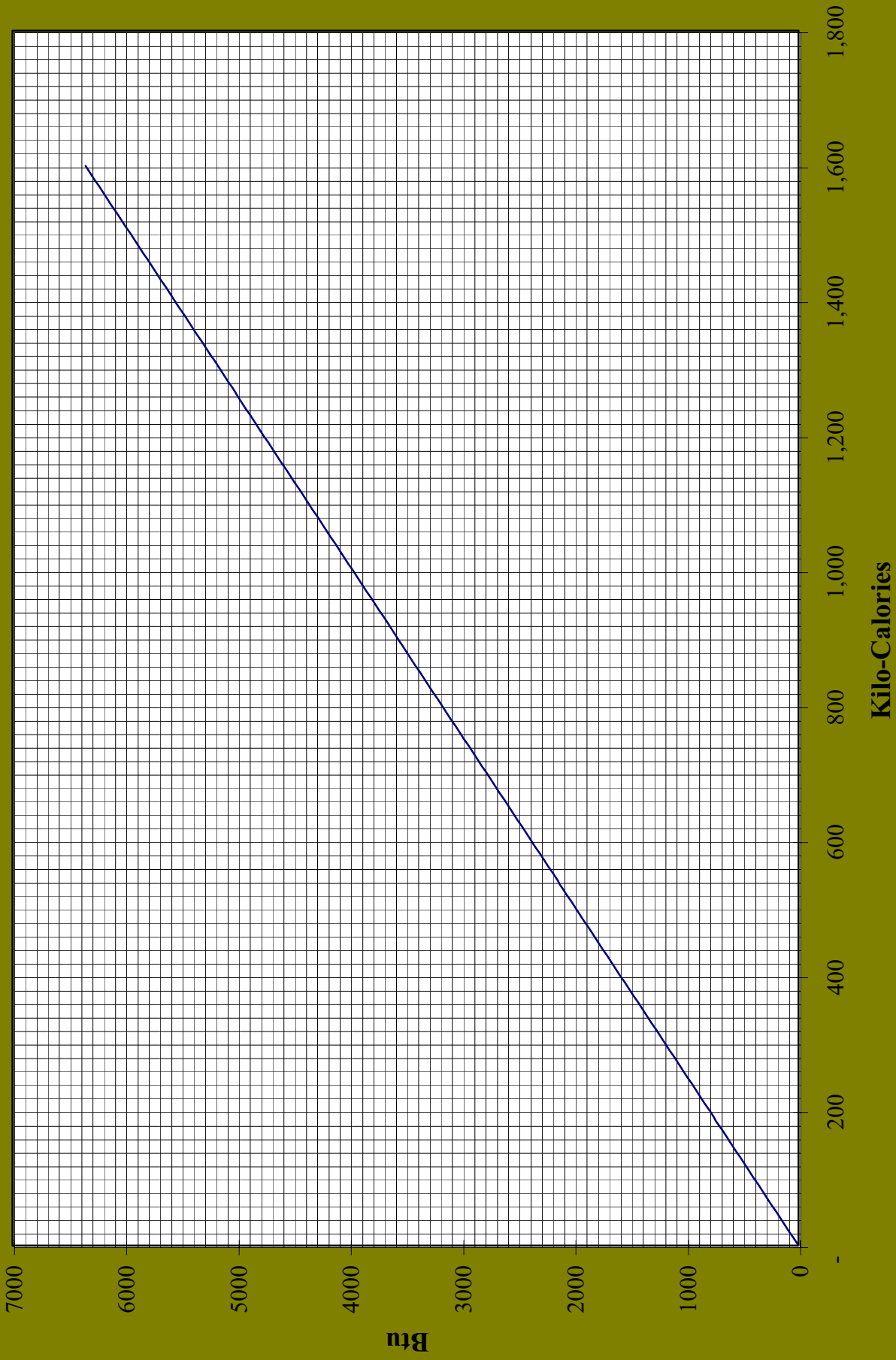
J	KJ	Kg-Cal	J	KJ	Kg-Cal	J	KJ	Kg-Cal
7,430,000	7,430	1,775.03	8,250,000	8,250	1,970.93	9,070,000	9,070	2,166.82
7,450,000	7,450	1,779.81	8,270,000	8,270	1,975.70	9,090,000	9,090	2,171.60
7,470,000	7,470	1,784.58	8,290,000	8,290	1,980.48	9,110,000	9,110	2,176.38
7,490,000	7,490	1,789.36	8,310,000	8,310	1,985.26	9,130,000	9,130	2,181.16
7,510,000	7,510	1,794.14	8,330,000	8,330	1,990.04	9,150,000	9,150	2,185.94
7,530,000	7,530	1,798.92	8,350,000	8,350	1,994.82	9,170,000	9,170	2,190.71
7,550,000	7,550	1,803.70	8,370,000	8,370	1,999.59	9,190,000	9,190	2,195.49
7,570,000	7,570	1,808.47	8,390,000	8,390	2,004.37	9,210,000	9,210	2,200.27
7,590,000	7,590	1,813.25	8,410,000	8,410	2,009.15	9,230,000	9,230	2,205.05
7,610,000	7,610	1,818.03	8,430,000	8,430	2,013.93	9,250,000	9,250	2,209.83
7,630,000	7,630	1,822.81	8,450,000	8,450	2,018.71	9,270,000	9,270	2,214.60
7,650,000	7,650	1,827.59	8,470,000	8,470	2,023.48	9,290,000	9,290	2,219.38
7,670,000	7,670	1,832.36	8,490,000	8,490	2,028.26	9,310,000	9,310	2,224.16
7,690,000	7,690	1,837.14	8,510,000	8,510	2,033.04	9,330,000	9,330	2,228.94
7,710,000	7,710	1,841.92	8,530,000	8,530	2,037.82	9,350,000	9,350	2,233.72
7,730,000	7,730	1,846.70	8,550,000	8,550	2,042.60	9,370,000	9,370	2,238.49
7,750,000	7,750	1,851.48	8,570,000	8,570	2,047.37	9,390,000	9,390	2,243.27
7,770,000	7,770	1,856.25	8,590,000	8,590	2,052.15	9,410,000	9,410	2,248.05
7,790,000	7,790	1,861.03	8,610,000	8,610	2,056.93	9,430,000	9,430	2,252.83
7,810,000	7,810	1,865.81	8,630,000	8,630	2,061.71	9,450,000	9,450	2,257.61
7,830,000	7,830	1,870.59	8,650,000	8,650	2,066.49	9,470,000	9,470	2,262.38
7,850,000	7,850	1,875.37	8,670,000	8,670	2,071.26	9,490,000	9,490	2,267.16
7,870,000	7,870	1,880.14	8,690,000	8,690	2,076.04	9,510,000	9,510	2,271.94
7,890,000	7,890	1,884.92	8,710,000	8,710	2,080.82	9,530,000	9,530	2,276.72
7,910,000	7,910	1,889.70	8,730,000	8,730	2,085.60	9,550,000	9,550	2,281.50
7,930,000	7,930	1,894.48	8,750,000	8,750	2,090.38	9,570,000	9,570	2,286.27
7,950,000	7,950	1,899.26	8,770,000	8,770	2,095.15	9,590,000	9,590	2,291.05
7,970,000	7,970	1,904.03	8,790,000	8,790	2,099.93	9,610,000	9,610	2,295.83
7,990,000	7,990	1,908.81	8,810,000	8,810	2,104.71	9,630,000	9,630	2,300.61
8,010,000	8,010	1,913.59	8,830,000	8,830	2,109.49	9,650,000	9,650	2,305.39
8,030,000	8,030	1,918.37	8,850,000	8,850	2,114.27	9,670,000	9,670	2,310.16
8,050,000	8,050	1,923.15	8,870,000	8,870	2,119.04	9,690,000	9,690	2,314.94
8,070,000	8,070	1,927.92	8,890,000	8,890	2,123.82	9,710,000	9,710	2,319.72
8,090,000	8,090	1,932.70	8,910,000	8,910	2,128.60	9,730,000	9,730	2,324.50
8,110,000	8,110	1,937.48	8,930,000	8,930	2,133.38	9,750,000	9,750	2,329.28
8,130,000	8,130	1,942.26	8,950,000	8,950	2,138.16	9,770,000	9,770	2,334.05
8,150,000	8,150	1,947.04	8,970,000	8,970	2,142.93	9,790,000	9,790	2,338.83
8,170,000	8,170	1,951.81	8,990,000	8,990	2,147.71	9,810,000	9,810	2,343.61
8,190,000	8,190	1,956.59	9,010,000	9,010	2,152.49	9,830,000	9,830	2,348.39
8,210,000	8,210	1,961.37	9,030,000	9,030	2,157.27	9,850,000	9,850	2,353.17
8,230,000	8,230	1,966.15	9,050,000	9,050	2,162.05	9,870,000	9,870	2,357.94

## ENERGY CONVERSION TABLE

J	KJ	Kg-Cal	J	KJ	Kg-Cal	J	KJ	Kg-Cal
9,890,000	9,890	2,362.72	10,710,000	10,710	2,558.62	11,530,000	11,530	2,754.52
9,910,000	9,910	2,367.50	10,730,000	10,730	2,563.40	11,550,000	11,550	2,759.30
9,930,000	9,930	2,372.28	10,750,000	10,750	2,568.18	11,570,000	11,570	2,764.07
9,950,000	9,950	2,377.06	10,770,000	10,770	2,572.95	11,590,000	11,590	2,768.85
9,970,000	9,970	2,381.83	10,790,000	10,790	2,577.73	11,610,000	11,610	2,773.63
9,990,000	9,990	2,386.61	10,810,000	10,810	2,582.51	11,630,000	11,630	2,778.41
10,010,000	10,010	2,391.39	10,830,000	10,830	2,587.29	11,650,000	11,650	2,783.19
10,030,000	10,030	2,396.17	10,850,000	10,850	2,592.07	11,670,000	11,670	2,787.96
10,050,000	10,050	2,400.95	10,870,000	10,870	2,596.84	11,690,000	11,690	2,792.74
10,070,000	10,070	2,405.72	10,890,000	10,890	2,601.62	11,710,000	11,710	2,797.52
10,090,000	10,090	2,410.50	10,910,000	10,910	2,606.40	11,730,000	11,730	2,802.30
10,110,000	10,110	2,415.28	10,930,000	10,930	2,611.18	11,750,000	11,750	2,807.08
10,130,000	10,130	2,420.06	10,950,000	10,950	2,615.96	11,770,000	11,770	2,811.85
10,150,000	10,150	2,424.84	10,970,000	10,970	2,620.73	11,790,000	11,790	2,816.63
10,170,000	10,170	2,429.61	10,990,000	10,990	2,625.51	11,810,000	11,810	2,821.41
10,190,000	10,190	2,434.39	11,010,000	11,010	2,630.29	11,830,000	11,830	2,826.19
10,210,000	10,210	2,439.17	11,030,000	11,030	2,635.07	11,850,000	11,850	2,830.97
10,230,000	10,230	2,443.95	11,050,000	11,050	2,639.85	11,870,000	11,870	2,835.74
10,250,000	10,250	2,448.73	11,070,000	11,070	2,644.62	11,890,000	11,890	2,840.52
10,270,000	10,270	2,453.50	11,090,000	11,090	2,649.40	11,910,000	11,910	2,845.30
10,290,000	10,290	2,458.28	11,110,000	11,110	2,654.18	11,930,000	11,930	2,850.08
10,310,000	10,310	2,463.06	11,130,000	11,130	2,658.96	11,950,000	11,950	2,854.86
10,330,000	10,330	2,467.84	11,150,000	11,150	2,663.74	11,970,000	11,970	2,859.63
10,350,000	10,350	2,472.62	11,170,000	11,170	2,668.51	11,990,000	11,990	2,864.41
10,370,000	10,370	2,477.39	11,190,000	11,190	2,673.29	12,010,000	12,010	2,869.19
10,390,000	10,390	2,482.17	11,210,000	11,210	2,678.07	12,030,000	12,030	2,873.97
10,410,000	10,410	2,486.95	11,230,000	11,230	2,682.85	12,050,000	12,050	2,878.75
10,430,000	10,430	2,491.73	11,250,000	11,250	2,687.63	12,070,000	12,070	2,883.52
10,450,000	10,450	2,496.51	11,270,000	11,270	2,692.40	12,090,000	12,090	2,888.30
10,470,000	10,470	2,501.28	11,290,000	11,290	2,697.18	12,110,000	12,110	2,893.08
10,490,000	10,490	2,506.06	11,310,000	11,310	2,701.96	12,130,000	12,130	2,897.86
10,510,000	10,510	2,510.84	11,330,000	11,330	2,706.74	12,150,000	12,150	2,902.64
10,530,000	10,530	2,515.62	11,350,000	11,350	2,711.52	12,170,000	12,170	2,907.41
10,550,000	10,550	2,520.40	11,370,000	11,370	2,716.29	12,190,000	12,190	2,912.19
10,570,000	10,570	2,525.17	11,390,000	11,390	2,721.07	12,210,000	12,210	2,916.97
10,590,000	10,590	2,529.95	11,410,000	11,410	2,725.85	12,230,000	12,230	2,921.75
10,610,000	10,610	2,534.73	11,430,000	11,430	2,730.63	12,250,000	12,250	2,926.53
10,630,000	10,630	2,539.51	11,450,000	11,450	2,735.41	12,270,000	12,270	2,931.30
10,650,000	10,650	2,544.29	11,470,000	11,470	2,740.18	12,290,000	12,290	2,936.08
10,670,000	10,670	2,549.06	11,490,000	11,490	2,744.96	12,310,000	12,310	2,940.86
10,690,000	10,690	2,553.84	11,510,000	11,510	2,749.74	12,330,000	12,330	2,945.64

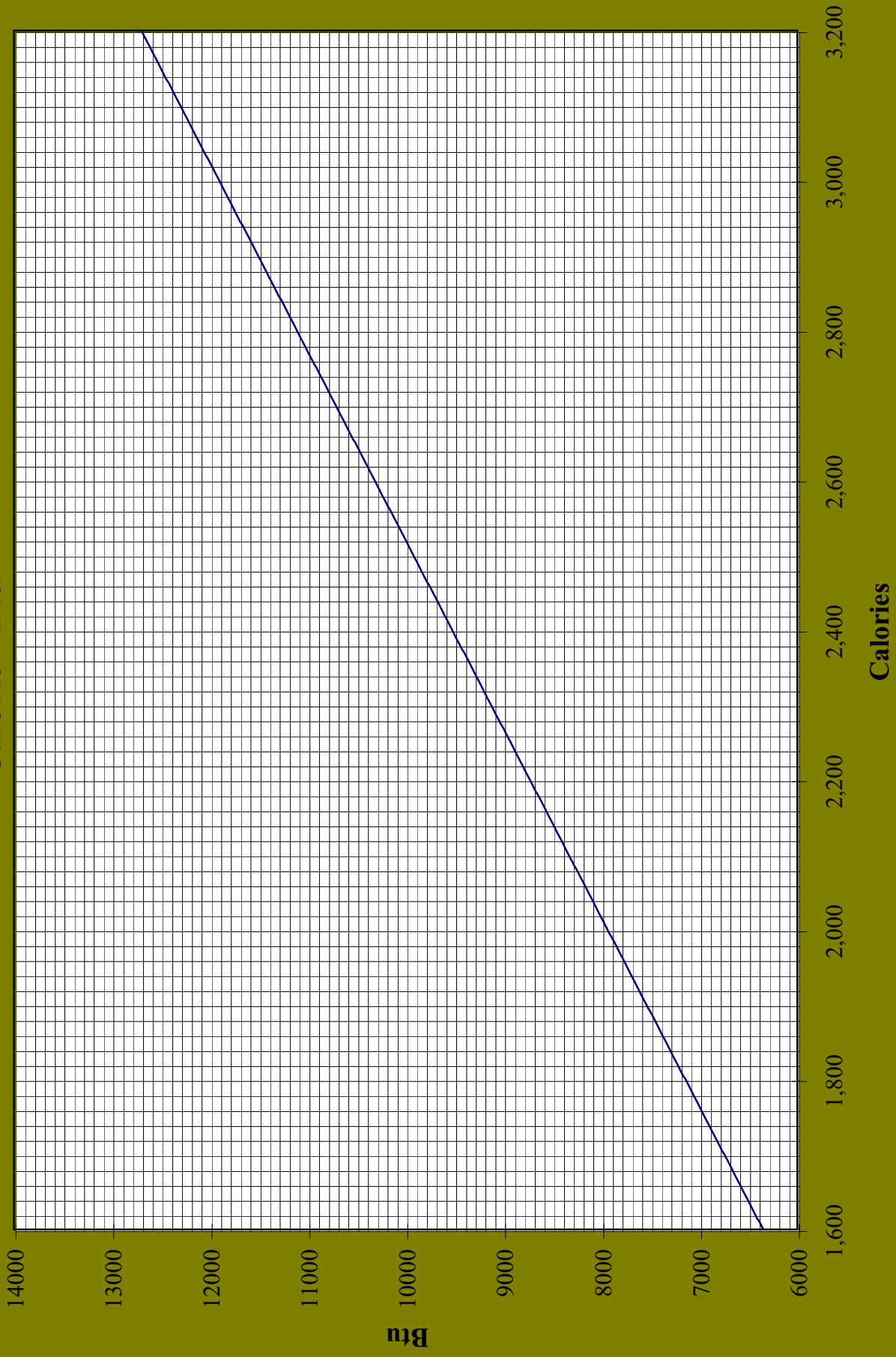
# ENERGY CONVERSION

Calorie - Btu



# ENERGY CONVERSION

## Calorie - Btu



## ENERGY CONVERSION TABLE

Calorie	KCal	Btu	Calorie	KCal	Btu	Calorie	KCal	Btu
5,000	5	19.84	210,000	210	833.35	415,000	415	1,646.85
10,000	10	39.68	215,000	215	853.19	420,000	420	1,666.69
15,000	15	59.52	220,000	220	873.03	425,000	425	1,686.54
20,000	20	79.37	225,000	225	892.87	430,000	430	1,706.38
25,000	25	99.21	230,000	230	912.71	435,000	435	1,726.22
30,000	30	119.05	235,000	235	932.56	440,000	440	1,746.06
35,000	35	138.89	240,000	240	952.40	445,000	445	1,765.90
40,000	40	158.73	245,000	245	972.24	450,000	450	1,785.74
45,000	45	178.57	250,000	250	992.08	455,000	455	1,805.59
50,000	50	198.42	255,000	255	1,011.92	460,000	460	1,825.43
55,000	55	218.26	260,000	260	1,031.76	465,000	465	1,845.27
60,000	60	238.10	265,000	265	1,051.60	470,000	470	1,865.11
65,000	65	257.94	270,000	270	1,071.45	475,000	475	1,884.95
70,000	70	277.78	275,000	275	1,091.29	480,000	480	1,904.79
75,000	75	297.62	280,000	280	1,111.13	485,000	485	1,924.64
80,000	80	317.47	285,000	285	1,130.97	490,000	490	1,944.48
85,000	85	337.31	290,000	290	1,150.81	495,000	495	1,964.32
90,000	90	357.15	295,000	295	1,170.65	500,000	500	1,984.16
95,000	95	376.99	300,000	300	1,190.50	505,000	505	2,004.00
100,000	100	396.83	305,000	305	1,210.34	510,000	510	2,023.84
105,000	105	416.67	310,000	310	1,230.18	515,000	515	2,043.68
110,000	110	436.52	315,000	315	1,250.02	520,000	520	2,063.53
115,000	115	456.36	320,000	320	1,269.86	525,000	525	2,083.37
120,000	120	476.20	325,000	325	1,289.70	530,000	530	2,103.21
125,000	125	496.04	330,000	330	1,309.55	535,000	535	2,123.05
130,000	130	515.88	335,000	335	1,329.39	540,000	540	2,142.89
135,000	135	535.72	340,000	340	1,349.23	545,000	545	2,162.73
140,000	140	555.56	345,000	345	1,369.07	550,000	550	2,182.58
145,000	145	575.41	350,000	350	1,388.91	555,000	555	2,202.42
150,000	150	595.25	355,000	355	1,408.75	560,000	560	2,222.26
155,000	155	615.09	360,000	360	1,428.60	565,000	565	2,242.10
160,000	160	634.93	365,000	365	1,448.44	570,000	570	2,261.94
165,000	165	654.77	370,000	370	1,468.28	575,000	575	2,281.78
170,000	170	674.61	375,000	375	1,488.12	580,000	580	2,301.63
175,000	175	694.46	380,000	380	1,507.96	585,000	585	2,321.47
180,000	180	714.30	385,000	385	1,527.80	590,000	590	2,341.31
185,000	185	734.14	390,000	390	1,547.64	595,000	595	2,361.15
190,000	190	753.98	395,000	395	1,567.49	600,000	600	2,380.99
195,000	195	773.82	400,000	400	1,587.33	605,000	605	2,400.83
200,000	200	793.66	405,000	405	1,607.17	610,000	610	2,420.68
205,000	205	813.51	410,000	410	1,627.01	615,000	615	2,440.52

## ENERGY CONVERSION TABLE

Calorie	KCal	Btu	Calorie	KCal	Btu	Calorie	KCal	Btu
620,000	620	2,460.36	825,000	825	3,273.86	1,030,000	1,030	4,087.37
625,000	625	2,480.20	830,000	830	3,293.71	1,035,000	1,035	4,107.21
630,000	630	2,500.04	835,000	835	3,313.55	1,040,000	1,040	4,127.05
635,000	635	2,519.88	840,000	840	3,333.39	1,045,000	1,045	4,146.89
640,000	640	2,539.72	845,000	845	3,353.23	1,050,000	1,050	4,166.74
645,000	645	2,559.57	850,000	850	3,373.07	1,055,000	1,055	4,186.58
650,000	650	2,579.41	855,000	855	3,392.91	1,060,000	1,060	4,206.42
655,000	655	2,599.25	860,000	860	3,412.76	1,065,000	1,065	4,226.26
660,000	660	2,619.09	865,000	865	3,432.60	1,070,000	1,070	4,246.10
665,000	665	2,638.93	870,000	870	3,452.44	1,075,000	1,075	4,265.94
670,000	670	2,658.77	875,000	875	3,472.28	1,080,000	1,080	4,285.79
675,000	675	2,678.62	880,000	880	3,492.12	1,085,000	1,085	4,305.63
680,000	680	2,698.46	885,000	885	3,511.96	1,090,000	1,090	4,325.47
685,000	685	2,718.30	890,000	890	3,531.80	1,095,000	1,095	4,345.31
690,000	690	2,738.14	895,000	895	3,551.65	1,100,000	1,100	4,365.15
695,000	695	2,757.98	900,000	900	3,571.49	1,105,000	1,105	4,384.99
700,000	700	2,777.82	905,000	905	3,591.33	1,110,000	1,110	4,404.84
705,000	705	2,797.67	910,000	910	3,611.17	1,115,000	1,115	4,424.68
710,000	710	2,817.51	915,000	915	3,631.01	1,120,000	1,120	4,444.52
715,000	715	2,837.35	920,000	920	3,650.85	1,125,000	1,125	4,464.36
720,000	720	2,857.19	925,000	925	3,670.70	1,130,000	1,130	4,484.20
725,000	725	2,877.03	930,000	930	3,690.54	1,135,000	1,135	4,504.04
730,000	730	2,896.87	935,000	935	3,710.38	1,140,000	1,140	4,523.88
735,000	735	2,916.72	940,000	940	3,730.22	1,145,000	1,145	4,543.73
740,000	740	2,936.56	945,000	945	3,750.06	1,150,000	1,150	4,563.57
745,000	745	2,956.40	950,000	950	3,769.90	1,155,000	1,155	4,583.41
750,000	750	2,976.24	955,000	955	3,789.75	1,160,000	1,160	4,603.25
755,000	755	2,996.08	960,000	960	3,809.59	1,165,000	1,165	4,623.09
760,000	760	3,015.92	965,000	965	3,829.43	1,170,000	1,170	4,642.93
765,000	765	3,035.76	970,000	970	3,849.27	1,175,000	1,175	4,662.78
770,000	770	3,055.61	975,000	975	3,869.11	1,180,000	1,180	4,682.62
775,000	775	3,075.45	980,000	980	3,888.95	1,185,000	1,185	4,702.46
780,000	780	3,095.29	985,000	985	3,908.80	1,190,000	1,190	4,722.30
785,000	785	3,115.13	990,000	990	3,928.64	1,195,000	1,195	4,742.14
790,000	790	3,134.97	995,000	995	3,948.48	1,200,000	1,200	4,761.98
795,000	795	3,154.81	1,000,000	1,000	3,968.32	1,205,000	1,205	4,781.83
800,000	800	3,174.66	1,005,000	1,005	3,988.16	1,210,000	1,210	4,801.67
805,000	805	3,194.50	1,010,000	1,010	4,008.00	1,215,000	1,215	4,821.51
810,000	810	3,214.34	1,015,000	1,015	4,027.84	1,220,000	1,220	4,841.35
815,000	815	3,234.18	1,020,000	1,020	4,047.69	1,225,000	1,225	4,861.19
820,000	820	3,254.02	1,025,000	1,025	4,067.53	1,230,000	1,230	4,881.03

## ENERGY CONVERSION TABLE

Calorie	KCal	Btu	Calorie	KCal	Btu	Calorie	KCal	Btu
1,235,000	1,235	4,900.88	1,440,000	1,440	5,714.38	1,645,000	1,645	6,527.89
1,240,000	1,240	4,920.72	1,445,000	1,445	5,734.22	1,650,000	1,650	6,547.73
1,245,000	1,245	4,940.56	1,450,000	1,450	5,754.06	1,655,000	1,655	6,567.57
1,250,000	1,250	4,960.40	1,455,000	1,455	5,773.91	1,660,000	1,660	6,587.41
1,255,000	1,255	4,980.24	1,460,000	1,460	5,793.75	1,665,000	1,665	6,607.25
1,260,000	1,260	5,000.08	1,465,000	1,465	5,813.59	1,670,000	1,670	6,627.09
1,265,000	1,265	5,019.92	1,470,000	1,470	5,833.43	1,675,000	1,675	6,646.94
1,270,000	1,270	5,039.77	1,475,000	1,475	5,853.27	1,680,000	1,680	6,666.78
1,275,000	1,275	5,059.61	1,480,000	1,480	5,873.11	1,685,000	1,685	6,686.62
1,280,000	1,280	5,079.45	1,485,000	1,485	5,892.96	1,690,000	1,690	6,706.46
1,285,000	1,285	5,099.29	1,490,000	1,490	5,912.80	1,695,000	1,695	6,726.30
1,290,000	1,290	5,119.13	1,495,000	1,495	5,932.64	1,700,000	1,700	6,746.14
1,295,000	1,295	5,138.97	1,500,000	1,500	5,952.48	1,705,000	1,705	6,765.99
1,300,000	1,300	5,158.82	1,505,000	1,505	5,972.32	1,710,000	1,710	6,785.83
1,305,000	1,305	5,178.66	1,510,000	1,510	5,992.16	1,715,000	1,715	6,805.67
1,310,000	1,310	5,198.50	1,515,000	1,515	6,012.00	1,720,000	1,720	6,825.51
1,315,000	1,315	5,218.34	1,520,000	1,520	6,031.85	1,725,000	1,725	6,845.35
1,320,000	1,320	5,238.18	1,525,000	1,525	6,051.69	1,730,000	1,730	6,865.19
1,325,000	1,325	5,258.02	1,530,000	1,530	6,071.53	1,735,000	1,735	6,885.04
1,330,000	1,330	5,277.87	1,535,000	1,535	6,091.37	1,740,000	1,740	6,904.88
1,335,000	1,335	5,297.71	1,540,000	1,540	6,111.21	1,745,000	1,745	6,924.72
1,340,000	1,340	5,317.55	1,545,000	1,545	6,131.05	1,750,000	1,750	6,944.56
1,345,000	1,345	5,337.39	1,550,000	1,550	6,150.90	1,755,000	1,755	6,964.40
1,350,000	1,350	5,357.23	1,555,000	1,555	6,170.74	1,760,000	1,760	6,984.24
1,355,000	1,355	5,377.07	1,560,000	1,560	6,190.58	1,765,000	1,765	7,004.08
1,360,000	1,360	5,396.92	1,565,000	1,565	6,210.42	1,770,000	1,770	7,023.93
1,365,000	1,365	5,416.76	1,570,000	1,570	6,230.26	1,775,000	1,775	7,043.77
1,370,000	1,370	5,436.60	1,575,000	1,575	6,250.10	1,780,000	1,780	7,063.61
1,375,000	1,375	5,456.44	1,580,000	1,580	6,269.95	1,785,000	1,785	7,083.45
1,380,000	1,380	5,476.28	1,585,000	1,585	6,289.79	1,790,000	1,790	7,103.29
1,385,000	1,385	5,496.12	1,590,000	1,590	6,309.63	1,795,000	1,795	7,123.13
1,390,000	1,390	5,515.96	1,595,000	1,595	6,329.47	1,800,000	1,800	7,142.98
1,395,000	1,395	5,535.81	1,600,000	1,600	6,349.31	1,805,000	1,805	7,162.82
1,400,000	1,400	5,555.65	1,605,000	1,605	6,369.15	1,810,000	1,810	7,182.66
1,405,000	1,405	5,575.49	1,610,000	1,610	6,389.00	1,815,000	1,815	7,202.50
1,410,000	1,410	5,595.33	1,615,000	1,615	6,408.84	1,820,000	1,820	7,222.34
1,415,000	1,415	5,615.17	1,620,000	1,620	6,428.68	1,825,000	1,825	7,242.18
1,420,000	1,420	5,635.01	1,625,000	1,625	6,448.52	1,830,000	1,830	7,262.03
1,425,000	1,425	5,654.86	1,630,000	1,630	6,468.36	1,835,000	1,835	7,281.87
1,430,000	1,430	5,674.70	1,635,000	1,635	6,488.20	1,840,000	1,840	7,301.71
1,435,000	1,435	5,694.54	1,640,000	1,640	6,508.04	1,845,000	1,845	7,321.55

## ENERGY CONVERSION TABLE

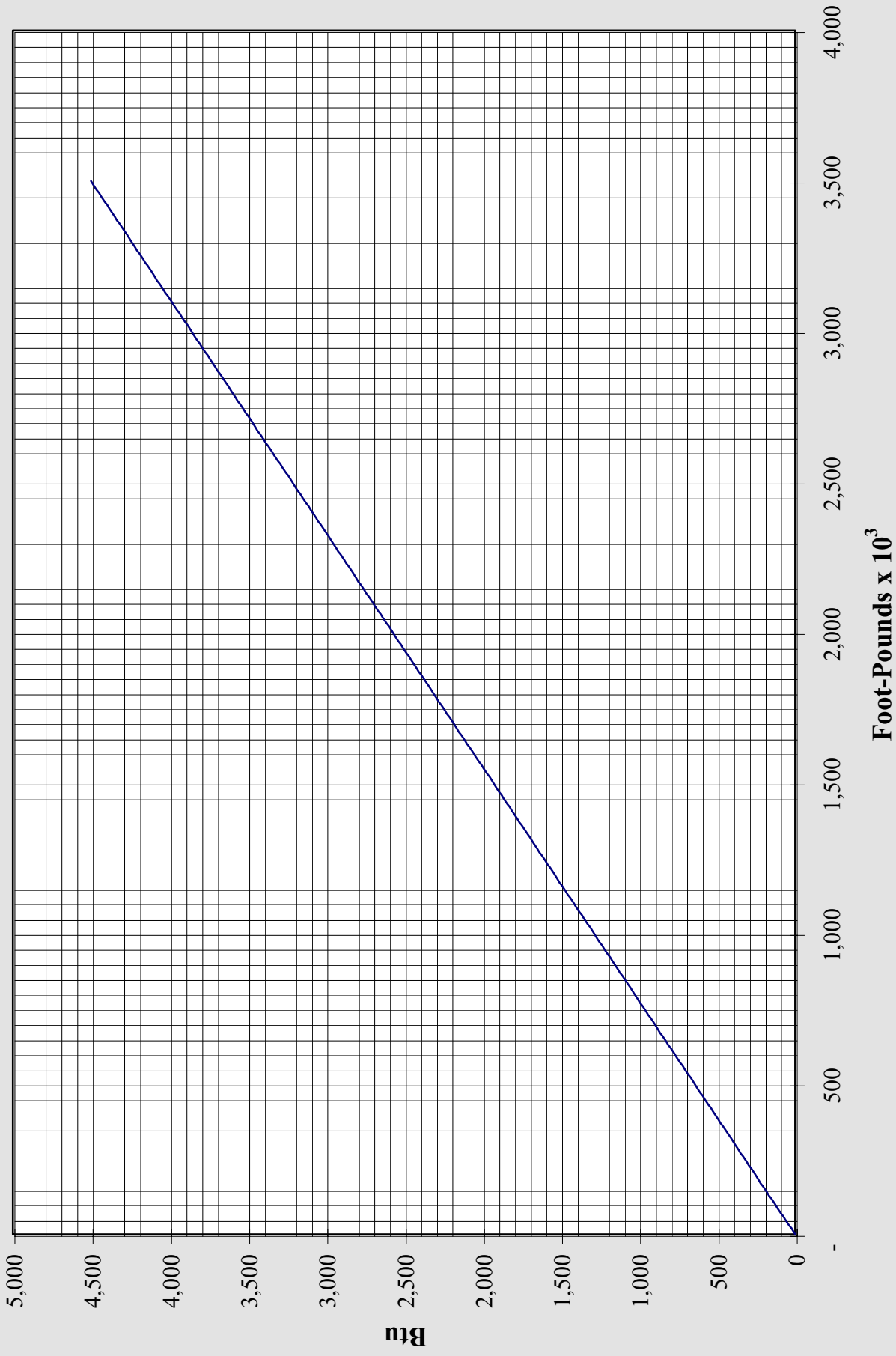
Calorie	KCal	Btu	Calorie	KCal	Btu	Calorie	KCal	Btu
1,850,000	1,850	7,341.39	2,055,000	2,055	8,154.90	2,260,000	2,260	8,968.40
1,855,000	1,855	7,361.23	2,060,000	2,060	8,174.74	2,265,000	2,265	8,988.24
1,860,000	1,860	7,381.08	2,065,000	2,065	8,194.58	2,270,000	2,270	9,008.09
1,865,000	1,865	7,400.92	2,070,000	2,070	8,214.42	2,275,000	2,275	9,027.93
1,870,000	1,870	7,420.76	2,075,000	2,075	8,234.26	2,280,000	2,280	9,047.77
1,875,000	1,875	7,440.60	2,080,000	2,080	8,254.11	2,285,000	2,285	9,067.61
1,880,000	1,880	7,460.44	2,085,000	2,085	8,273.95	2,290,000	2,290	9,087.45
1,885,000	1,885	7,480.28	2,090,000	2,090	8,293.79	2,295,000	2,295	9,107.29
1,890,000	1,890	7,500.12	2,095,000	2,095	8,313.63	2,300,000	2,300	9,127.14
1,895,000	1,895	7,519.97	2,100,000	2,100	8,333.47	2,305,000	2,305	9,146.98
1,900,000	1,900	7,539.81	2,105,000	2,105	8,353.31	2,310,000	2,310	9,166.82
1,905,000	1,905	7,559.65	2,110,000	2,110	8,373.16	2,315,000	2,315	9,186.66
1,910,000	1,910	7,579.49	2,115,000	2,115	8,393.00	2,320,000	2,320	9,206.50
1,915,000	1,915	7,599.33	2,120,000	2,120	8,412.84	2,325,000	2,325	9,226.34
1,920,000	1,920	7,619.17	2,125,000	2,125	8,432.68	2,330,000	2,330	9,246.19
1,925,000	1,925	7,639.02	2,130,000	2,130	8,452.52	2,335,000	2,335	9,266.03
1,930,000	1,930	7,658.86	2,135,000	2,135	8,472.36	2,340,000	2,340	9,285.87
1,935,000	1,935	7,678.70	2,140,000	2,140	8,492.20	2,345,000	2,345	9,305.71
1,940,000	1,940	7,698.54	2,145,000	2,145	8,512.05	2,350,000	2,350	9,325.55
1,945,000	1,945	7,718.38	2,150,000	2,150	8,531.89	2,355,000	2,355	9,345.39
1,950,000	1,950	7,738.22	2,155,000	2,155	8,551.73	2,360,000	2,360	9,365.24
1,955,000	1,955	7,758.07	2,160,000	2,160	8,571.57	2,365,000	2,365	9,385.08
1,960,000	1,960	7,777.91	2,165,000	2,165	8,591.41	2,370,000	2,370	9,404.92
1,965,000	1,965	7,797.75	2,170,000	2,170	8,611.25	2,375,000	2,375	9,424.76
1,970,000	1,970	7,817.59	2,175,000	2,175	8,631.10	2,380,000	2,380	9,444.60
1,975,000	1,975	7,837.43	2,180,000	2,180	8,650.94	2,385,000	2,385	9,464.44
1,980,000	1,980	7,857.27	2,185,000	2,185	8,670.78	2,390,000	2,390	9,484.28
1,985,000	1,985	7,877.12	2,190,000	2,190	8,690.62	2,395,000	2,395	9,504.13
1,990,000	1,990	7,896.96	2,195,000	2,195	8,710.46	2,400,000	2,400	9,523.97
1,995,000	1,995	7,916.80	2,200,000	2,200	8,730.30	2,405,000	2,405	9,543.81
2,000,000	2,000	7,936.64	2,205,000	2,205	8,750.15	2,410,000	2,410	9,563.65
2,005,000	2,005	7,956.48	2,210,000	2,210	8,769.99	2,415,000	2,415	9,583.49
2,010,000	2,010	7,976.32	2,215,000	2,215	8,789.83	2,420,000	2,420	9,603.33
2,015,000	2,015	7,996.16	2,220,000	2,220	8,809.67	2,425,000	2,425	9,623.18
2,020,000	2,020	8,016.01	2,225,000	2,225	8,829.51	2,430,000	2,430	9,643.02
2,025,000	2,025	8,035.85	2,230,000	2,230	8,849.35	2,435,000	2,435	9,662.86
2,030,000	2,030	8,055.69	2,235,000	2,235	8,869.20	2,440,000	2,440	9,682.70
2,035,000	2,035	8,075.53	2,240,000	2,240	8,889.04	2,445,000	2,445	9,702.54
2,040,000	2,040	8,095.37	2,245,000	2,245	8,908.88	2,450,000	2,450	9,722.38
2,045,000	2,045	8,115.21	2,250,000	2,250	8,928.72	2,455,000	2,455	9,742.23
2,050,000	2,050	8,135.06	2,255,000	2,255	8,948.56	2,460,000	2,460	9,762.07

## ENERGY CONVERSION TABLE

Calorie	KCal	Btu	Calorie	KCal	Btu	Calorie	KCal	Btu
2,465,000	2,465	9,781.91	2,670,000	2,670	10,595.41	2,875,000	2,875	11,408.92
2,470,000	2,470	9,801.75	2,675,000	2,675	10,615.26	2,880,000	2,880	11,428.76
2,475,000	2,475	9,821.59	2,680,000	2,680	10,635.10	2,885,000	2,885	11,448.60
2,480,000	2,480	9,841.43	2,685,000	2,685	10,654.94	2,890,000	2,890	11,468.44
2,485,000	2,485	9,861.28	2,690,000	2,690	10,674.78	2,895,000	2,895	11,488.29
2,490,000	2,490	9,881.12	2,695,000	2,695	10,694.62	2,900,000	2,900	11,508.13
2,495,000	2,495	9,900.96	2,700,000	2,700	10,714.46	2,905,000	2,905	11,527.97
2,500,000	2,500	9,920.80	2,705,000	2,705	10,734.31	2,910,000	2,910	11,547.81
2,505,000	2,505	9,940.64	2,710,000	2,710	10,754.15	2,915,000	2,915	11,567.65
2,510,000	2,510	9,960.48	2,715,000	2,715	10,773.99	2,920,000	2,920	11,587.49
2,515,000	2,515	9,980.32	2,720,000	2,720	10,793.83	2,925,000	2,925	11,607.34
2,520,000	2,520	10,000.17	2,725,000	2,725	10,813.67	2,930,000	2,930	11,627.18
2,525,000	2,525	10,020.01	2,730,000	2,730	10,833.51	2,935,000	2,935	11,647.02
2,530,000	2,530	10,039.85	2,735,000	2,735	10,853.36	2,940,000	2,940	11,666.86
2,535,000	2,535	10,059.69	2,740,000	2,740	10,873.20	2,945,000	2,945	11,686.70
2,540,000	2,540	10,079.53	2,745,000	2,745	10,893.04	2,950,000	2,950	11,706.54
2,545,000	2,545	10,099.37	2,750,000	2,750	10,912.88	2,955,000	2,955	11,726.39
2,550,000	2,550	10,119.22	2,755,000	2,755	10,932.72	2,960,000	2,960	11,746.23
2,555,000	2,555	10,139.06	2,760,000	2,760	10,952.56	2,965,000	2,965	11,766.07
2,560,000	2,560	10,158.90	2,765,000	2,765	10,972.40	2,970,000	2,970	11,785.91
2,565,000	2,565	10,178.74	2,770,000	2,770	10,992.25	2,975,000	2,975	11,805.75
2,570,000	2,570	10,198.58	2,775,000	2,775	11,012.09	2,980,000	2,980	11,825.59
2,575,000	2,575	10,218.42	2,780,000	2,780	11,031.93	2,985,000	2,985	11,845.44
2,580,000	2,580	10,238.27	2,785,000	2,785	11,051.77	2,990,000	2,990	11,865.28
2,585,000	2,585	10,258.11	2,790,000	2,790	11,071.61	2,995,000	2,995	11,885.12
2,590,000	2,590	10,277.95	2,795,000	2,795	11,091.45	3,000,000	3,000	11,904.96
2,595,000	2,595	10,297.79	2,800,000	2,800	11,111.30	3,005,000	3,005	11,924.80
2,600,000	2,600	10,317.63	2,805,000	2,805	11,131.14	3,010,000	3,010	11,944.64
2,605,000	2,605	10,337.47	2,810,000	2,810	11,150.98	3,015,000	3,015	11,964.48
2,610,000	2,610	10,357.32	2,815,000	2,815	11,170.82	3,020,000	3,020	11,984.33
2,615,000	2,615	10,377.16	2,820,000	2,820	11,190.66	3,025,000	3,025	12,004.17
2,620,000	2,620	10,397.00	2,825,000	2,825	11,210.50	3,030,000	3,030	12,024.01
2,625,000	2,625	10,416.84	2,830,000	2,830	11,230.35	3,035,000	3,035	12,043.85
2,630,000	2,630	10,436.68	2,835,000	2,835	11,250.19	3,040,000	3,040	12,063.69
2,635,000	2,635	10,456.52	2,840,000	2,840	11,270.03	3,045,000	3,045	12,083.53
2,640,000	2,640	10,476.36	2,845,000	2,845	11,289.87	3,050,000	3,050	12,103.38
2,645,000	2,645	10,496.21	2,850,000	2,850	11,309.71	3,055,000	3,055	12,123.22
2,650,000	2,650	10,516.05	2,855,000	2,855	11,329.55	3,060,000	3,060	12,143.06
2,655,000	2,655	10,535.89	2,860,000	2,860	11,349.40	3,065,000	3,065	12,162.90
2,660,000	2,660	10,555.73	2,865,000	2,865	11,369.24	3,070,000	3,070	12,182.74
2,665,000	2,665	10,575.57	2,870,000	2,870	11,389.08	3,075,000	3,075	12,202.58

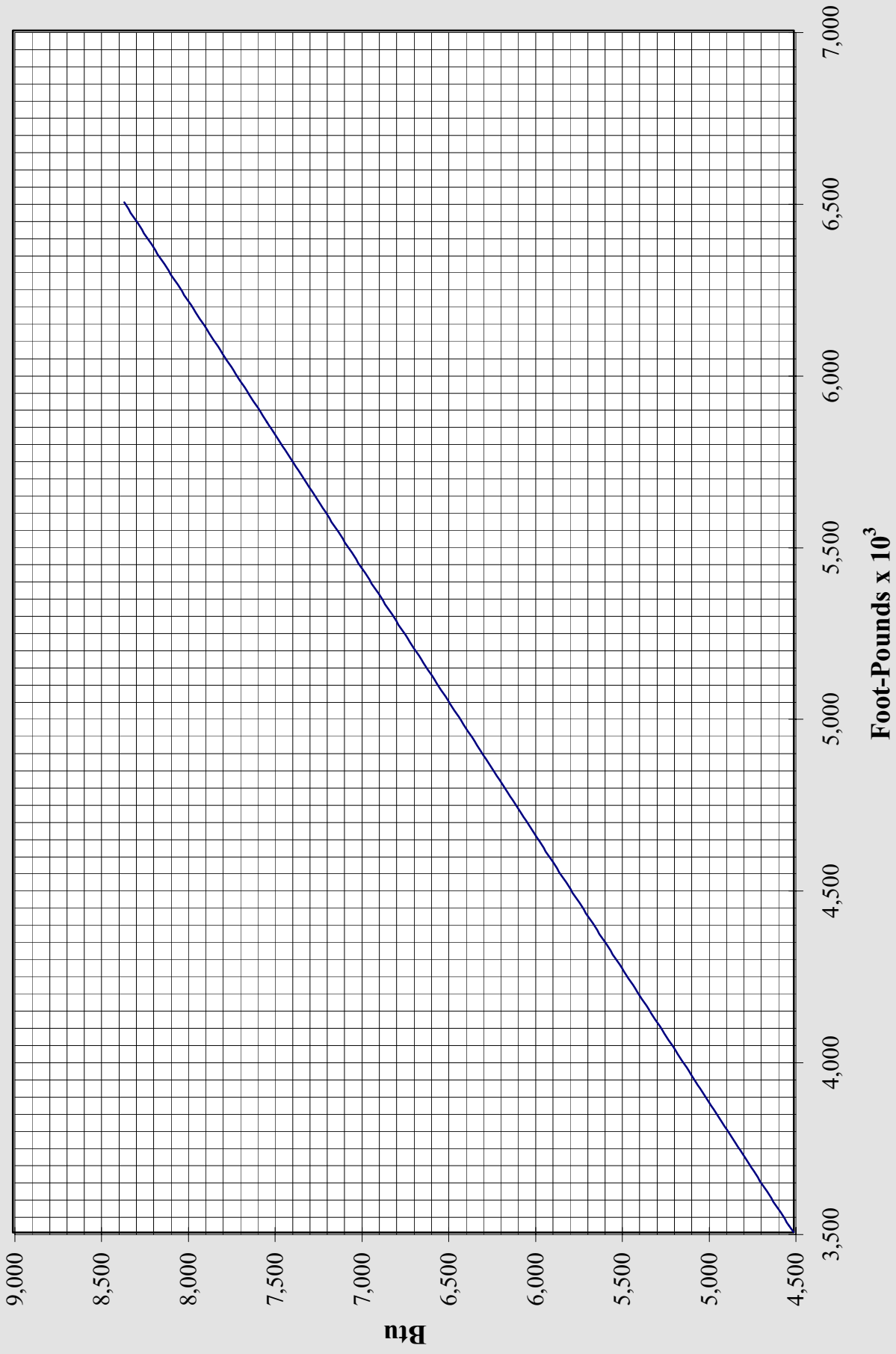
# ENERGY CONVERSION

Foot-Pound - Btu



# ENERGY CONVERSION

Foot-Pound - Btu



## ENERGY CONVERSION TABLE

Foot-Lbs		Btu	Foot-Lbs		Btu	Foot-Lbs		Btu
10,000	1.00E+4	12.86	420,000	4.20E+5	540.12	830,000	8.30E+5	1,067.38
20,000	2.00E+4	25.72	430,000	4.30E+5	552.98	840,000	8.40E+5	1,080.24
30,000	3.00E+4	38.58	440,000	4.40E+5	565.84	850,000	8.50E+5	1,093.10
40,000	4.00E+4	51.44	450,000	4.50E+5	578.70	860,000	8.60E+5	1,105.96
50,000	5.00E+4	64.30	460,000	4.60E+5	591.56	870,000	8.70E+5	1,118.82
60,000	6.00E+4	77.16	470,000	4.70E+5	604.42	880,000	8.80E+5	1,131.68
70,000	7.00E+4	90.02	480,000	4.80E+5	617.28	890,000	8.90E+5	1,144.54
80,000	8.00E+4	102.88	490,000	4.90E+5	630.14	900,000	9.00E+5	1,157.40
90,000	9.00E+4	115.74	500,000	5.00E+5	643.00	910,000	9.10E+5	1,170.26
100,000	1.00E+5	128.60	510,000	5.10E+5	655.86	920,000	9.20E+5	1,183.12
110,000	1.10E+5	141.46	520,000	5.20E+5	668.72	930,000	9.30E+5	1,195.98
120,000	1.20E+5	154.32	530,000	5.30E+5	681.58	940,000	9.40E+5	1,208.84
130,000	1.30E+5	167.18	540,000	5.40E+5	694.44	950,000	9.50E+5	1,221.70
140,000	1.40E+5	180.04	550,000	5.50E+5	707.30	960,000	9.60E+5	1,234.56
150,000	1.50E+5	192.90	560,000	5.60E+5	720.16	970,000	9.70E+5	1,247.42
160,000	1.60E+5	205.76	570,000	5.70E+5	733.02	980,000	9.80E+5	1,260.28
170,000	1.70E+5	218.62	580,000	5.80E+5	745.88	990,000	9.90E+5	1,273.14
180,000	1.80E+5	231.48	590,000	5.90E+5	758.74	1,000,000	1.00E+6	1,286.00
190,000	1.90E+5	244.34	600,000	6.00E+5	771.60	1,010,000	1.01E+6	1,298.86
200,000	2.00E+5	257.20	610,000	6.10E+5	784.46	1,020,000	1.02E+6	1,311.72
210,000	2.10E+5	270.06	620,000	6.20E+5	797.32	1,030,000	1.03E+6	1,324.58
220,000	2.20E+5	282.92	630,000	6.30E+5	810.18	1,040,000	1.04E+6	1,337.44
230,000	2.30E+5	295.78	640,000	6.40E+5	823.04	1,050,000	1.05E+6	1,350.30
240,000	2.40E+5	308.64	650,000	6.50E+5	835.90	1,060,000	1.06E+6	1,363.16
250,000	2.50E+5	321.50	660,000	6.60E+5	848.76	1,070,000	1.07E+6	1,376.02
260,000	2.60E+5	334.36	670,000	6.70E+5	861.62	1,080,000	1.08E+6	1,388.88
270,000	2.70E+5	347.22	680,000	6.80E+5	874.48	1,090,000	1.09E+6	1,401.74
280,000	2.80E+5	360.08	690,000	6.90E+5	887.34	1,100,000	1.10E+6	1,414.60
290,000	2.90E+5	372.94	700,000	7.00E+5	900.20	1,110,000	1.11E+6	1,427.46
300,000	3.00E+5	385.80	710,000	7.10E+5	913.06	1,120,000	1.12E+6	1,440.32
310,000	3.10E+5	398.66	720,000	7.20E+5	925.92	1,130,000	1.13E+6	1,453.18
320,000	3.20E+5	411.52	730,000	7.30E+5	938.78	1,140,000	1.14E+6	1,466.04
330,000	3.30E+5	424.38	740,000	7.40E+5	951.64	1,150,000	1.15E+6	1,478.90
340,000	3.40E+5	437.24	750,000	7.50E+5	964.50	1,160,000	1.16E+6	1,491.76
350,000	3.50E+5	450.10	760,000	7.60E+5	977.36	1,170,000	1.17E+6	1,504.62
360,000	3.60E+5	462.96	770,000	7.70E+5	990.22	1,180,000	1.18E+6	1,517.48
370,000	3.70E+5	475.82	780,000	7.80E+5	1,003.08	1,190,000	1.19E+6	1,530.34
380,000	3.80E+5	488.68	790,000	7.90E+5	1,015.94	1,200,000	1.20E+6	1,543.20
390,000	3.90E+5	501.54	800,000	8.00E+5	1,028.80	1,210,000	1.21E+6	1,556.06
400,000	4.00E+5	514.40	810,000	8.10E+5	1,041.66	1,220,000	1.22E+6	1,568.92
410,000	4.10E+5	527.26	820,000	8.20E+5	1,054.52	1,230,000	1.23E+6	1,581.78

## ENERGY CONVERSION TABLE

Foot-Lbs		Btu	Foot-Lbs		Btu	Foot-Lbs		Btu
1,240,000	1.24E+6	1,594.64	1,650,000	1.65E+6	2,121.90	2,060,000	2.06E+6	2,649.16
1,250,000	1.25E+6	1,607.50	1,660,000	1.66E+6	2,134.76	2,070,000	2.07E+6	2,662.02
1,260,000	1.26E+6	1,620.36	1,670,000	1.67E+6	2,147.62	2,080,000	2.08E+6	2,674.88
1,270,000	1.27E+6	1,633.22	1,680,000	1.68E+6	2,160.48	2,090,000	2.09E+6	2,687.74
1,280,000	1.28E+6	1,646.08	1,690,000	1.69E+6	2,173.34	2,100,000	2.10E+6	2,700.60
1,290,000	1.29E+6	1,658.94	1,700,000	1.70E+6	2,186.20	2,110,000	2.11E+6	2,713.46
1,300,000	1.30E+6	1,671.80	1,710,000	1.71E+6	2,199.06	2,120,000	2.12E+6	2,726.32
1,310,000	1.31E+6	1,684.66	1,720,000	1.72E+6	2,211.92	2,130,000	2.13E+6	2,739.18
1,320,000	1.32E+6	1,697.52	1,730,000	1.73E+6	2,224.78	2,140,000	2.14E+6	2,752.04
1,330,000	1.33E+6	1,710.38	1,740,000	1.74E+6	2,237.64	2,150,000	2.15E+6	2,764.90
1,340,000	1.34E+6	1,723.24	1,750,000	1.75E+6	2,250.50	2,160,000	2.16E+6	2,777.76
1,350,000	1.35E+6	1,736.10	1,760,000	1.76E+6	2,263.36	2,170,000	2.17E+6	2,790.62
1,360,000	1.36E+6	1,748.96	1,770,000	1.77E+6	2,276.22	2,180,000	2.18E+6	2,803.48
1,370,000	1.37E+6	1,761.82	1,780,000	1.78E+6	2,289.08	2,190,000	2.19E+6	2,816.34
1,380,000	1.38E+6	1,774.68	1,790,000	1.79E+6	2,301.94	2,200,000	2.20E+6	2,829.20
1,390,000	1.39E+6	1,787.54	1,800,000	1.80E+6	2,314.80	2,210,000	2.21E+6	2,842.06
1,400,000	1.40E+6	1,800.40	1,810,000	1.81E+6	2,327.66	2,220,000	2.22E+6	2,854.92
1,410,000	1.41E+6	1,813.26	1,820,000	1.82E+6	2,340.52	2,230,000	2.23E+6	2,867.78
1,420,000	1.42E+6	1,826.12	1,830,000	1.83E+6	2,353.38	2,240,000	2.24E+6	2,880.64
1,430,000	1.43E+6	1,838.98	1,840,000	1.84E+6	2,366.24	2,250,000	2.25E+6	2,893.50
1,440,000	1.44E+6	1,851.84	1,850,000	1.85E+6	2,379.10	2,260,000	2.26E+6	2,906.36
1,450,000	1.45E+6	1,864.70	1,860,000	1.86E+6	2,391.96	2,270,000	2.27E+6	2,919.22
1,460,000	1.46E+6	1,877.56	1,870,000	1.87E+6	2,404.82	2,280,000	2.28E+6	2,932.08
1,470,000	1.47E+6	1,890.42	1,880,000	1.88E+6	2,417.68	2,290,000	2.29E+6	2,944.94
1,480,000	1.48E+6	1,903.28	1,890,000	1.89E+6	2,430.54	2,300,000	2.30E+6	2,957.80
1,490,000	1.49E+6	1,916.14	1,900,000	1.90E+6	2,443.40	2,310,000	2.31E+6	2,970.66
1,500,000	1.50E+6	1,929.00	1,910,000	1.91E+6	2,456.26	2,320,000	2.32E+6	2,983.52
1,510,000	1.51E+6	1,941.86	1,920,000	1.92E+6	2,469.12	2,330,000	2.33E+6	2,996.38
1,520,000	1.52E+6	1,954.72	1,930,000	1.93E+6	2,481.98	2,340,000	2.34E+6	3,009.24
1,530,000	1.53E+6	1,967.58	1,940,000	1.94E+6	2,494.84	2,350,000	2.35E+6	3,022.10
1,540,000	1.54E+6	1,980.44	1,950,000	1.95E+6	2,507.70	2,360,000	2.36E+6	3,034.96
1,550,000	1.55E+6	1,993.30	1,960,000	1.96E+6	2,520.56	2,370,000	2.37E+6	3,047.82
1,560,000	1.56E+6	2,006.16	1,970,000	1.97E+6	2,533.42	2,380,000	2.38E+6	3,060.68
1,570,000	1.57E+6	2,019.02	1,980,000	1.98E+6	2,546.28	2,390,000	2.39E+6	3,073.54
1,580,000	1.58E+6	2,031.88	1,990,000	1.99E+6	2,559.14	2,400,000	2.40E+6	3,086.40
1,590,000	1.59E+6	2,044.74	2,000,000	2.00E+6	2,572.00	2,410,000	2.41E+6	3,099.26
1,600,000	1.60E+6	2,057.60	2,010,000	2.01E+6	2,584.86	2,420,000	2.42E+6	3,112.12
1,610,000	1.61E+6	2,070.46	2,020,000	2.02E+6	2,597.72	2,430,000	2.43E+6	3,124.98
1,620,000	1.62E+6	2,083.32	2,030,000	2.03E+6	2,610.58	2,440,000	2.44E+6	3,137.84
1,630,000	1.63E+6	2,096.18	2,040,000	2.04E+6	2,623.44	2,450,000	2.45E+6	3,150.70
1,640,000	1.64E+6	2,109.04	2,050,000	2.05E+6	2,636.30	2,460,000	2.46E+6	3,163.56

## ENERGY CONVERSION TABLE

Foot-Lbs		Btu	Foot-Lbs		Btu	Foot-Lbs		Btu
2,470,000	2.47E+6	3,176.42	2,880,000	2.88E+6	3,703.68	3,290,000	3.29E+6	4,230.94
2,480,000	2.48E+6	3,189.28	2,890,000	2.89E+6	3,716.54	3,300,000	3.30E+6	4,243.80
2,490,000	2.49E+6	3,202.14	2,900,000	2.90E+6	3,729.40	3,310,000	3.31E+6	4,256.66
2,500,000	2.50E+6	3,215.00	2,910,000	2.91E+6	3,742.26	3,320,000	3.32E+6	4,269.52
2,510,000	2.51E+6	3,227.86	2,920,000	2.92E+6	3,755.12	3,330,000	3.33E+6	4,282.38
2,520,000	2.52E+6	3,240.72	2,930,000	2.93E+6	3,767.98	3,340,000	3.34E+6	4,295.24
2,530,000	2.53E+6	3,253.58	2,940,000	2.94E+6	3,780.84	3,350,000	3.35E+6	4,308.10
2,540,000	2.54E+6	3,266.44	2,950,000	2.95E+6	3,793.70	3,360,000	3.36E+6	4,320.96
2,550,000	2.55E+6	3,279.30	2,960,000	2.96E+6	3,806.56	3,370,000	3.37E+6	4,333.82
2,560,000	2.56E+6	3,292.16	2,970,000	2.97E+6	3,819.42	3,380,000	3.38E+6	4,346.68
2,570,000	2.57E+6	3,305.02	2,980,000	2.98E+6	3,832.28	3,390,000	3.39E+6	4,359.54
2,580,000	2.58E+6	3,317.88	2,990,000	2.99E+6	3,845.14	3,400,000	3.40E+6	4,372.40
2,590,000	2.59E+6	3,330.74	3,000,000	3.00E+6	3,858.00	3,410,000	3.41E+6	4,385.26
2,600,000	2.60E+6	3,343.60	3,010,000	3.01E+6	3,870.86	3,420,000	3.42E+6	4,398.12
2,610,000	2.61E+6	3,356.46	3,020,000	3.02E+6	3,883.72	3,430,000	3.43E+6	4,410.98
2,620,000	2.62E+6	3,369.32	3,030,000	3.03E+6	3,896.58	3,440,000	3.44E+6	4,423.84
2,630,000	2.63E+6	3,382.18	3,040,000	3.04E+6	3,909.44	3,450,000	3.45E+6	4,436.70
2,640,000	2.64E+6	3,395.04	3,050,000	3.05E+6	3,922.30	3,460,000	3.46E+6	4,449.56
2,650,000	2.65E+6	3,407.90	3,060,000	3.06E+6	3,935.16	3,470,000	3.47E+6	4,462.42
2,660,000	2.66E+6	3,420.76	3,070,000	3.07E+6	3,948.02	3,480,000	3.48E+6	4,475.28
2,670,000	2.67E+6	3,433.62	3,080,000	3.08E+6	3,960.88	3,490,000	3.49E+6	4,488.14
2,680,000	2.68E+6	3,446.48	3,090,000	3.09E+6	3,973.74	3,500,000	3.50E+6	4,501.00
2,690,000	2.69E+6	3,459.34	3,100,000	3.10E+6	3,986.60	3,510,000	3.51E+6	4,513.86
2,700,000	2.70E+6	3,472.20	3,110,000	3.11E+6	3,999.46	3,520,000	3.52E+6	4,526.72
2,710,000	2.71E+6	3,485.06	3,120,000	3.12E+6	4,012.32	3,530,000	3.53E+6	4,539.58
2,720,000	2.72E+6	3,497.92	3,130,000	3.13E+6	4,025.18	3,540,000	3.54E+6	4,552.44
2,730,000	2.73E+6	3,510.78	3,140,000	3.14E+6	4,038.04	3,550,000	3.55E+6	4,565.30
2,740,000	2.74E+6	3,523.64	3,150,000	3.15E+6	4,050.90	3,560,000	3.56E+6	4,578.16
2,750,000	2.75E+6	3,536.50	3,160,000	3.16E+6	4,063.76	3,570,000	3.57E+6	4,591.02
2,760,000	2.76E+6	3,549.36	3,170,000	3.17E+6	4,076.62	3,580,000	3.58E+6	4,603.88
2,770,000	2.77E+6	3,562.22	3,180,000	3.18E+6	4,089.48	3,590,000	3.59E+6	4,616.74
2,780,000	2.78E+6	3,575.08	3,190,000	3.19E+6	4,102.34	3,600,000	3.60E+6	4,629.60
2,790,000	2.79E+6	3,587.94	3,200,000	3.20E+6	4,115.20	3,610,000	3.61E+6	4,642.46
2,800,000	2.80E+6	3,600.80	3,210,000	3.21E+6	4,128.06	3,620,000	3.62E+6	4,655.32
2,810,000	2.81E+6	3,613.66	3,220,000	3.22E+6	4,140.92	3,630,000	3.63E+6	4,668.18
2,820,000	2.82E+6	3,626.52	3,230,000	3.23E+6	4,153.78	3,640,000	3.64E+6	4,681.04
2,830,000	2.83E+6	3,639.38	3,240,000	3.24E+6	4,166.64	3,650,000	3.65E+6	4,693.90
2,840,000	2.84E+6	3,652.24	3,250,000	3.25E+6	4,179.50	3,660,000	3.66E+6	4,706.76
2,850,000	2.85E+6	3,665.10	3,260,000	3.26E+6	4,192.36	3,670,000	3.67E+6	4,719.62
2,860,000	2.86E+6	3,677.96	3,270,000	3.27E+6	4,205.22	3,680,000	3.68E+6	4,732.48
2,870,000	2.87E+6	3,690.82	3,280,000	3.28E+6	4,218.08	3,690,000	3.69E+6	4,745.34

## ENERGY CONVERSION TABLE

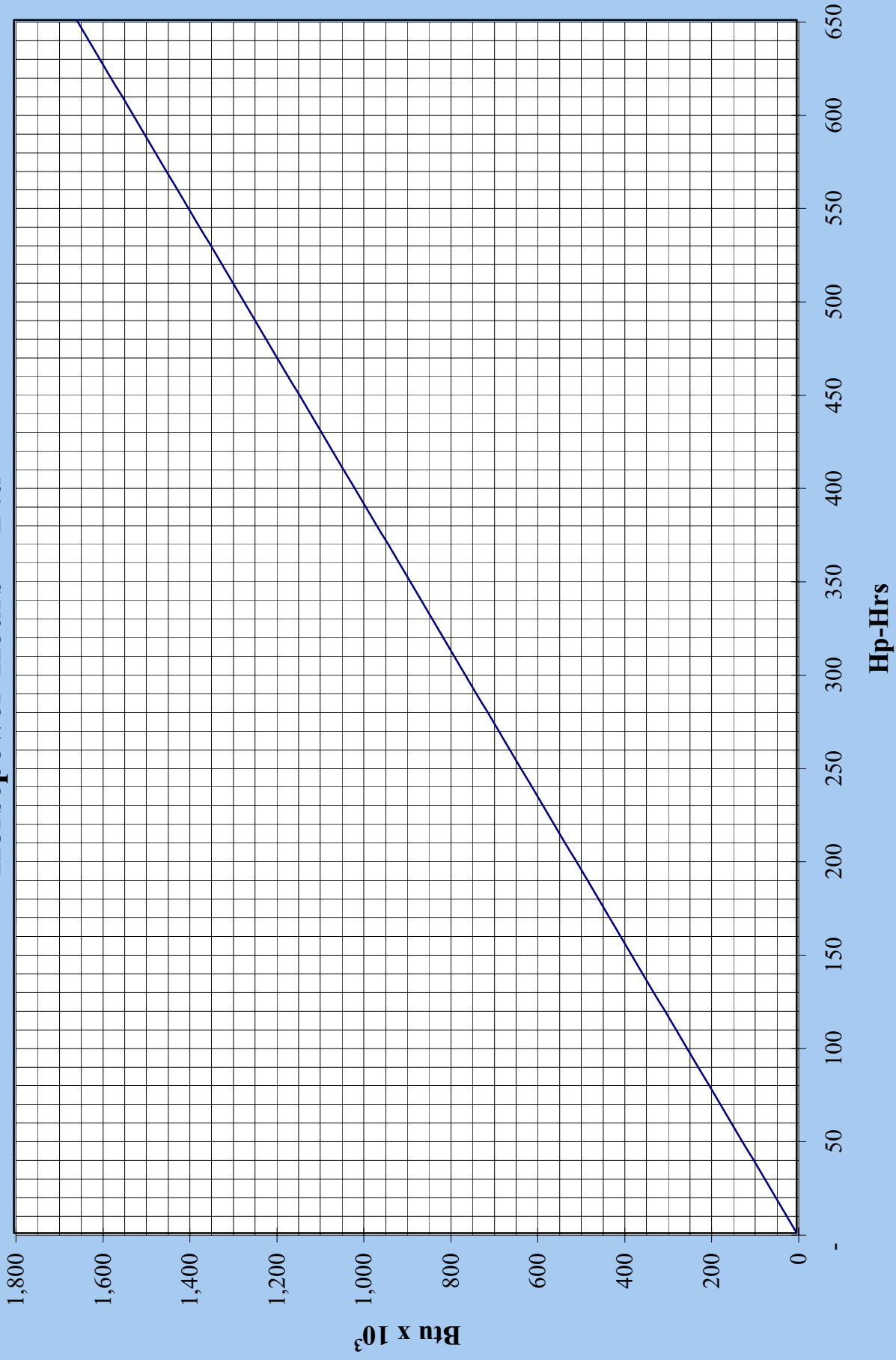
Foot-Lbs		Btu	Foot-Lbs		Btu	Foot-Lbs		Btu
3,700,000	3.70E+6	4,758.20	4,110,000	4.11E+6	5,285.46	4,520,000	4.52E+6	5,812.72
3,710,000	3.71E+6	4,771.06	4,120,000	4.12E+6	5,298.32	4,530,000	4.53E+6	5,825.58
3,720,000	3.72E+6	4,783.92	4,130,000	4.13E+6	5,311.18	4,540,000	4.54E+6	5,838.44
3,730,000	3.73E+6	4,796.78	4,140,000	4.14E+6	5,324.04	4,550,000	4.55E+6	5,851.30
3,740,000	3.74E+6	4,809.64	4,150,000	4.15E+6	5,336.90	4,560,000	4.56E+6	5,864.16
3,750,000	3.75E+6	4,822.50	4,160,000	4.16E+6	5,349.76	4,570,000	4.57E+6	5,877.02
3,760,000	3.76E+6	4,835.36	4,170,000	4.17E+6	5,362.62	4,580,000	4.58E+6	5,889.88
3,770,000	3.77E+6	4,848.22	4,180,000	4.18E+6	5,375.48	4,590,000	4.59E+6	5,902.74
3,780,000	3.78E+6	4,861.08	4,190,000	4.19E+6	5,388.34	4,600,000	4.60E+6	5,915.60
3,790,000	3.79E+6	4,873.94	4,200,000	4.20E+6	5,401.20	4,610,000	4.61E+6	5,928.46
3,800,000	3.80E+6	4,886.80	4,210,000	4.21E+6	5,414.06	4,620,000	4.62E+6	5,941.32
3,810,000	3.81E+6	4,899.66	4,220,000	4.22E+6	5,426.92	4,630,000	4.63E+6	5,954.18
3,820,000	3.82E+6	4,912.52	4,230,000	4.23E+6	5,439.78	4,640,000	4.64E+6	5,967.04
3,830,000	3.83E+6	4,925.38	4,240,000	4.24E+6	5,452.64	4,650,000	4.65E+6	5,979.90
3,840,000	3.84E+6	4,938.24	4,250,000	4.25E+6	5,465.50	4,660,000	4.66E+6	5,992.76
3,850,000	3.85E+6	4,951.10	4,260,000	4.26E+6	5,478.36	4,670,000	4.67E+6	6,005.62
3,860,000	3.86E+6	4,963.96	4,270,000	4.27E+6	5,491.22	4,680,000	4.68E+6	6,018.48
3,870,000	3.87E+6	4,976.82	4,280,000	4.28E+6	5,504.08	4,690,000	4.69E+6	6,031.34
3,880,000	3.88E+6	4,989.68	4,290,000	4.29E+6	5,516.94	4,700,000	4.70E+6	6,044.20
3,890,000	3.89E+6	5,002.54	4,300,000	4.30E+6	5,529.80	4,710,000	4.71E+6	6,057.06
3,900,000	3.90E+6	5,015.40	4,310,000	4.31E+6	5,542.66	4,720,000	4.72E+6	6,069.92
3,910,000	3.91E+6	5,028.26	4,320,000	4.32E+6	5,555.52	4,730,000	4.73E+6	6,082.78
3,920,000	3.92E+6	5,041.12	4,330,000	4.33E+6	5,568.38	4,740,000	4.74E+6	6,095.64
3,930,000	3.93E+6	5,053.98	4,340,000	4.34E+6	5,581.24	4,750,000	4.75E+6	6,108.50
3,940,000	3.94E+6	5,066.84	4,350,000	4.35E+6	5,594.10	4,760,000	4.76E+6	6,121.36
3,950,000	3.95E+6	5,079.70	4,360,000	4.36E+6	5,606.96	4,770,000	4.77E+6	6,134.22
3,960,000	3.96E+6	5,092.56	4,370,000	4.37E+6	5,619.82	4,780,000	4.78E+6	6,147.08
3,970,000	3.97E+6	5,105.42	4,380,000	4.38E+6	5,632.68	4,790,000	4.79E+6	6,159.94
3,980,000	3.98E+6	5,118.28	4,390,000	4.39E+6	5,645.54	4,800,000	4.80E+6	6,172.80
3,990,000	3.99E+6	5,131.14	4,400,000	4.40E+6	5,658.40	4,810,000	4.81E+6	6,185.66
4,000,000	4.00E+6	5,144.00	4,410,000	4.41E+6	5,671.26	4,820,000	4.82E+6	6,198.52
4,010,000	4.01E+6	5,156.86	4,420,000	4.42E+6	5,684.12	4,830,000	4.83E+6	6,211.38
4,020,000	4.02E+6	5,169.72	4,430,000	4.43E+6	5,696.98	4,840,000	4.84E+6	6,224.24
4,030,000	4.03E+6	5,182.58	4,440,000	4.44E+6	5,709.84	4,850,000	4.85E+6	6,237.10
4,040,000	4.04E+6	5,195.44	4,450,000	4.45E+6	5,722.70	4,860,000	4.86E+6	6,249.96
4,050,000	4.05E+6	5,208.30	4,460,000	4.46E+6	5,735.56	4,870,000	4.87E+6	6,262.82
4,060,000	4.06E+6	5,221.16	4,470,000	4.47E+6	5,748.42	4,880,000	4.88E+6	6,275.68
4,070,000	4.07E+6	5,234.02	4,480,000	4.48E+6	5,761.28	4,890,000	4.89E+6	6,288.54
4,080,000	4.08E+6	5,246.88	4,490,000	4.49E+6	5,774.14	4,900,000	4.90E+6	6,301.40
4,090,000	4.09E+6	5,259.74	4,500,000	4.50E+6	5,787.00	4,910,000	4.91E+6	6,314.26
4,100,000	4.10E+6	5,272.60	4,510,000	4.51E+6	5,799.86	4,920,000	4.92E+6	6,327.12

## ENERGY CONVERSION TABLE

Foot-Lbs		Btu	Foot-Lbs		Btu	Foot-Lbs		Btu
4,930,000	4.93E+6	6,339.98	5,340,000	5.34E+6	6,867.24	5,750,000	5.75E+6	7,394.50
4,940,000	4.94E+6	6,352.84	5,350,000	5.35E+6	6,880.10	5,760,000	5.76E+6	7,407.36
4,950,000	4.95E+6	6,365.70	5,360,000	5.36E+6	6,892.96	5,770,000	5.77E+6	7,420.22
4,960,000	4.96E+6	6,378.56	5,370,000	5.37E+6	6,905.82	5,780,000	5.78E+6	7,433.08
4,970,000	4.97E+6	6,391.42	5,380,000	5.38E+6	6,918.68	5,790,000	5.79E+6	7,445.94
4,980,000	4.98E+6	6,404.28	5,390,000	5.39E+6	6,931.54	5,800,000	5.80E+6	7,458.80
4,990,000	4.99E+6	6,417.14	5,400,000	5.40E+6	6,944.40	5,810,000	5.81E+6	7,471.66
5,000,000	5.00E+6	6,430.00	5,410,000	5.41E+6	6,957.26	5,820,000	5.82E+6	7,484.52
5,010,000	5.01E+6	6,442.86	5,420,000	5.42E+6	6,970.12	5,830,000	5.83E+6	7,497.38
5,020,000	5.02E+6	6,455.72	5,430,000	5.43E+6	6,982.98	5,840,000	5.84E+6	7,510.24
5,030,000	5.03E+6	6,468.58	5,440,000	5.44E+6	6,995.84	5,850,000	5.85E+6	7,523.10
5,040,000	5.04E+6	6,481.44	5,450,000	5.45E+6	7,008.70	5,860,000	5.86E+6	7,535.96
5,050,000	5.05E+6	6,494.30	5,460,000	5.46E+6	7,021.56	5,870,000	5.87E+6	7,548.82
5,060,000	5.06E+6	6,507.16	5,470,000	5.47E+6	7,034.42	5,880,000	5.88E+6	7,561.68
5,070,000	5.07E+6	6,520.02	5,480,000	5.48E+6	7,047.28	5,890,000	5.89E+6	7,574.54
5,080,000	5.08E+6	6,532.88	5,490,000	5.49E+6	7,060.14	5,900,000	5.90E+6	7,587.40
5,090,000	5.09E+6	6,545.74	5,500,000	5.50E+6	7,073.00	5,910,000	5.91E+6	7,600.26
5,100,000	5.10E+6	6,558.60	5,510,000	5.51E+6	7,085.86	5,920,000	5.92E+6	7,613.12
5,110,000	5.11E+6	6,571.46	5,520,000	5.52E+6	7,098.72	5,930,000	5.93E+6	7,625.98
5,120,000	5.12E+6	6,584.32	5,530,000	5.53E+6	7,111.58	5,940,000	5.94E+6	7,638.84
5,130,000	5.13E+6	6,597.18	5,540,000	5.54E+6	7,124.44	5,950,000	5.95E+6	7,651.70
5,140,000	5.14E+6	6,610.04	5,550,000	5.55E+6	7,137.30	5,960,000	5.96E+6	7,664.56
5,150,000	5.15E+6	6,622.90	5,560,000	5.56E+6	7,150.16	5,970,000	5.97E+6	7,677.42
5,160,000	5.16E+6	6,635.76	5,570,000	5.57E+6	7,163.02	5,980,000	5.98E+6	7,690.28
5,170,000	5.17E+6	6,648.62	5,580,000	5.58E+6	7,175.88	5,990,000	5.99E+6	7,703.14
5,180,000	5.18E+6	6,661.48	5,590,000	5.59E+6	7,188.74	6,000,000	6.00E+6	7,716.00
5,190,000	5.19E+6	6,674.34	5,600,000	5.60E+6	7,201.60	6,010,000	6.01E+6	7,728.86
5,200,000	5.20E+6	6,687.20	5,610,000	5.61E+6	7,214.46	6,020,000	6.02E+6	7,741.72
5,210,000	5.21E+6	6,700.06	5,620,000	5.62E+6	7,227.32	6,030,000	6.03E+6	7,754.58
5,220,000	5.22E+6	6,712.92	5,630,000	5.63E+6	7,240.18	6,040,000	6.04E+6	7,767.44
5,230,000	5.23E+6	6,725.78	5,640,000	5.64E+6	7,253.04	6,050,000	6.05E+6	7,780.30
5,240,000	5.24E+6	6,738.64	5,650,000	5.65E+6	7,265.90	6,060,000	6.06E+6	7,793.16
5,250,000	5.25E+6	6,751.50	5,660,000	5.66E+6	7,278.76	6,070,000	6.07E+6	7,806.02
5,260,000	5.26E+6	6,764.36	5,670,000	5.67E+6	7,291.62	6,080,000	6.08E+6	7,818.88
5,270,000	5.27E+6	6,777.22	5,680,000	5.68E+6	7,304.48	6,090,000	6.09E+6	7,831.74
5,280,000	5.28E+6	6,790.08	5,690,000	5.69E+6	7,317.34	6,100,000	6.10E+6	7,844.60
5,290,000	5.29E+6	6,802.94	5,700,000	5.70E+6	7,330.20	6,110,000	6.11E+6	7,857.46
5,300,000	5.30E+6	6,815.80	5,710,000	5.71E+6	7,343.06	6,120,000	6.12E+6	7,870.32
5,310,000	5.31E+6	6,828.66	5,720,000	5.72E+6	7,355.92	6,130,000	6.13E+6	7,883.18
5,320,000	5.32E+6	6,841.52	5,730,000	5.73E+6	7,368.78	6,140,000	6.14E+6	7,896.04
5,330,000	5.33E+6	6,854.38	5,740,000	5.74E+6	7,381.64	6,150,000	6.15E+6	7,908.90

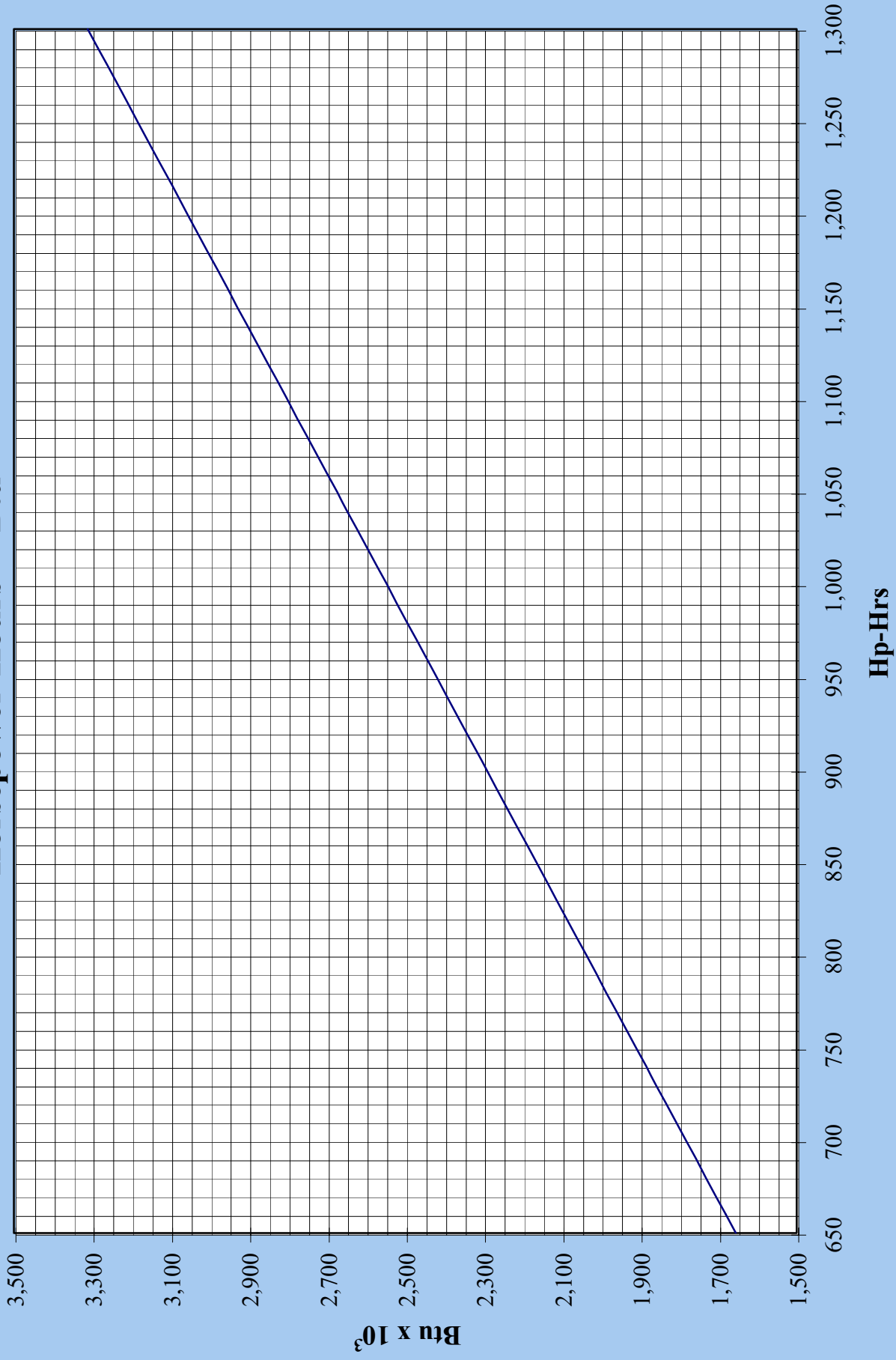
# ENERGY CONVERSION

Horsepower-Hours - Btu



# ENERGY CONVERSION

Horsepower-Hours - Btu



## ENERGY CONVERSION TABLE

Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu
2	5.09	5,094	84	213.95	213,948	166	422.80	422,802
4	10.19	10,188	86	219.04	219,042	168	427.90	427,896
6	15.28	15,282	88	224.14	224,136	170	432.99	432,990
8	20.38	20,376	90	229.23	229,230	172	438.08	438,084
10	25.47	25,470	92	234.32	234,324	174	443.18	443,178
12	30.56	30,564	94	239.42	239,418	176	448.27	448,272
14	35.66	35,658	96	244.51	244,512	178	453.37	453,366
16	40.75	40,752	98	249.61	249,606	180	458.46	458,460
18	45.85	45,846	100	254.70	254,700	182	463.55	463,554
20	50.94	50,940	102	259.79	259,794	184	468.65	468,648
22	56.03	56,034	104	264.89	264,888	186	473.74	473,742
24	61.13	61,128	106	269.98	269,982	188	478.84	478,836
26	66.22	66,222	108	275.08	275,076	190	483.93	483,930
28	71.32	71,316	110	280.17	280,170	192	489.02	489,024
30	76.41	76,410	112	285.26	285,264	194	494.12	494,118
32	81.50	81,504	114	290.36	290,358	196	499.21	499,212
34	86.60	86,598	116	295.45	295,452	198	504.31	504,306
36	91.69	91,692	118	300.55	300,546	200	509.40	509,400
38	96.79	96,786	120	305.64	305,640	202	514.49	514,494
40	101.88	101,880	122	310.73	310,734	204	519.59	519,588
42	106.97	106,974	124	315.83	315,828	206	524.68	524,682
44	112.07	112,068	126	320.92	320,922	208	529.78	529,776
46	117.16	117,162	128	326.02	326,016	210	534.87	534,870
48	122.26	122,256	130	331.11	331,110	212	539.96	539,964
50	127.35	127,350	132	336.20	336,204	214	545.06	545,058
52	132.44	132,444	134	341.30	341,298	216	550.15	550,152
54	137.54	137,538	136	346.39	346,392	218	555.25	555,246
56	142.63	142,632	138	351.49	351,486	220	560.34	560,340
58	147.73	147,726	140	356.58	356,580	222	565.43	565,434
60	152.82	152,820	142	361.67	361,674	224	570.53	570,528
62	157.91	157,914	144	366.77	366,768	226	575.62	575,622
64	163.01	163,008	146	371.86	371,862	228	580.72	580,716
66	168.10	168,102	148	376.96	376,956	230	585.81	585,810
68	173.20	173,196	150	382.05	382,050	232	590.90	590,904
70	178.29	178,290	152	387.14	387,144	234	596.00	595,998
72	183.38	183,384	154	392.24	392,238	236	601.09	601,092
74	188.48	188,478	156	397.33	397,332	238	606.19	606,186
76	193.57	193,572	158	402.43	402,426	240	611.28	611,280
78	198.67	198,666	160	407.52	407,520	242	616.37	616,374
80	203.76	203,760	162	412.61	412,614	244	621.47	621,468
82	208.85	208,854	164	417.71	417,708	246	626.56	626,562

## ENERGY CONVERSION TABLE

Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu
248	631.66	631,656	330	840.51	840,510	412	1049.36	1,049,364
250	636.75	636,750	332	845.60	845,604	414	1054.46	1,054,458
252	641.84	641,844	334	850.70	850,698	416	1059.55	1,059,552
254	646.94	646,938	336	855.79	855,792	418	1064.65	1,064,646
256	652.03	652,032	338	860.89	860,886	420	1069.74	1,069,740
258	657.13	657,126	340	865.98	865,980	422	1074.83	1,074,834
260	662.22	662,220	342	871.07	871,074	424	1079.93	1,079,928
262	667.31	667,314	344	876.17	876,168	426	1085.02	1,085,022
264	672.41	672,408	346	881.26	881,262	428	1090.12	1,090,116
266	677.50	677,502	348	886.36	886,356	430	1095.21	1,095,210
268	682.60	682,596	350	891.45	891,450	432	1100.30	1,100,304
270	687.69	687,690	352	896.54	896,544	434	1105.40	1,105,398
272	692.78	692,784	354	901.64	901,638	436	1110.49	1,110,492
274	697.88	697,878	356	906.73	906,732	438	1115.59	1,115,586
276	702.97	702,972	358	911.83	911,826	440	1120.68	1,120,680
278	708.07	708,066	360	916.92	916,920	442	1125.77	1,125,774
280	713.16	713,160	362	922.01	922,014	444	1130.87	1,130,868
282	718.25	718,254	364	927.11	927,108	446	1135.96	1,135,962
284	723.35	723,348	366	932.20	932,202	448	1141.06	1,141,056
286	728.44	728,442	368	937.30	937,296	450	1146.15	1,146,150
288	733.54	733,536	370	942.39	942,390	452	1151.24	1,151,244
290	738.63	738,630	372	947.48	947,484	454	1156.34	1,156,338
292	743.72	743,724	374	952.58	952,578	456	1161.43	1,161,432
294	748.82	748,818	376	957.67	957,672	458	1166.53	1,166,526
296	753.91	753,912	378	962.77	962,766	460	1171.62	1,171,620
298	759.01	759,006	380	967.86	967,860	462	1176.71	1,176,714
300	764.10	764,100	382	972.95	972,954	464	1181.81	1,181,808
302	769.19	769,194	384	978.05	978,048	466	1186.90	1,186,902
304	774.29	774,288	386	983.14	983,142	468	1192.00	1,191,996
306	779.38	779,382	388	988.24	988,236	470	1197.09	1,197,090
308	784.48	784,476	390	993.33	993,330	472	1202.18	1,202,184
310	789.57	789,570	392	998.42	998,424	474	1207.28	1,207,278
312	794.66	794,664	394	1003.52	1,003,518	476	1212.37	1,212,372
314	799.76	799,758	396	1008.61	1,008,612	478	1217.47	1,217,466
316	804.85	804,852	398	1013.71	1,013,706	480	1222.56	1,222,560
318	809.95	809,946	400	1018.80	1,018,800	482	1227.65	1,227,654
320	815.04	815,040	402	1023.89	1,023,894	484	1232.75	1,232,748
322	820.13	820,134	404	1028.99	1,028,988	486	1237.84	1,237,842
324	825.23	825,228	406	1034.08	1,034,082	488	1242.94	1,242,936
326	830.32	830,322	408	1039.18	1,039,176	490	1248.03	1,248,030
328	835.42	835,416	410	1044.27	1,044,270	492	1253.12	1,253,124

## ENERGY CONVERSION TABLE

Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu
494	1258.22	1,258,218	576	1467.07	1,467,072	658	1675.93	1,675,926
496	1263.31	1,263,312	578	1472.17	1,472,166	660	1681.02	1,681,020
498	1268.41	1,268,406	580	1477.26	1,477,260	662	1686.11	1,686,114
500	1273.50	1,273,500	582	1482.35	1,482,354	664	1691.21	1,691,208
502	1278.59	1,278,594	584	1487.45	1,487,448	666	1696.30	1,696,302
504	1283.69	1,283,688	586	1492.54	1,492,542	668	1701.40	1,701,396
506	1288.78	1,288,782	588	1497.64	1,497,636	670	1706.49	1,706,490
508	1293.88	1,293,876	590	1502.73	1,502,730	672	1711.58	1,711,584
510	1298.97	1,298,970	592	1507.82	1,507,824	674	1716.68	1,716,678
512	1304.06	1,304,064	594	1512.92	1,512,918	676	1721.77	1,721,772
514	1309.16	1,309,158	596	1518.01	1,518,012	678	1726.87	1,726,866
516	1314.25	1,314,252	598	1523.11	1,523,106	680	1731.96	1,731,960
518	1319.35	1,319,346	600	1528.20	1,528,200	682	1737.05	1,737,054
520	1324.44	1,324,440	602	1533.29	1,533,294	684	1742.15	1,742,148
522	1329.53	1,329,534	604	1538.39	1,538,388	686	1747.24	1,747,242
524	1334.63	1,334,628	606	1543.48	1,543,482	688	1752.34	1,752,336
526	1339.72	1,339,722	608	1548.58	1,548,576	690	1757.43	1,757,430
528	1344.82	1,344,816	610	1553.67	1,553,670	692	1762.52	1,762,524
530	1349.91	1,349,910	612	1558.76	1,558,764	694	1767.62	1,767,618
532	1355.00	1,355,004	614	1563.86	1,563,858	696	1772.71	1,772,712
534	1360.10	1,360,098	616	1568.95	1,568,952	698	1777.81	1,777,806
536	1365.19	1,365,192	618	1574.05	1,574,046	700	1782.90	1,782,900
538	1370.29	1,370,286	620	1579.14	1,579,140	702	1787.99	1,787,994
540	1375.38	1,375,380	622	1584.23	1,584,234	704	1793.09	1,793,088
542	1380.47	1,380,474	624	1589.33	1,589,328	706	1798.18	1,798,182
544	1385.57	1,385,568	626	1594.42	1,594,422	708	1803.28	1,803,276
546	1390.66	1,390,662	628	1599.52	1,599,516	710	1808.37	1,808,370
548	1395.76	1,395,756	630	1604.61	1,604,610	712	1813.46	1,813,464
550	1400.85	1,400,850	632	1609.70	1,609,704	714	1818.56	1,818,558
552	1405.94	1,405,944	634	1614.80	1,614,798	716	1823.65	1,823,652
554	1411.04	1,411,038	636	1619.89	1,619,892	718	1828.75	1,828,746
556	1416.13	1,416,132	638	1624.99	1,624,986	720	1833.84	1,833,840
558	1421.23	1,421,226	640	1630.08	1,630,080	722	1838.93	1,838,934
560	1426.32	1,426,320	642	1635.17	1,635,174	724	1844.03	1,844,028
562	1431.41	1,431,414	644	1640.27	1,640,268	726	1849.12	1,849,122
564	1436.51	1,436,508	646	1645.36	1,645,362	728	1854.22	1,854,216
566	1441.60	1,441,602	648	1650.46	1,650,456	730	1859.31	1,859,310
568	1446.70	1,446,696	650	1655.55	1,655,550	732	1864.40	1,864,404
570	1451.79	1,451,790	652	1660.64	1,660,644	734	1869.50	1,869,498
572	1456.88	1,456,884	654	1665.74	1,665,738	736	1874.59	1,874,592
574	1461.98	1,461,978	656	1670.83	1,670,832	738	1879.69	1,879,686

## ENERGY CONVERSION TABLE

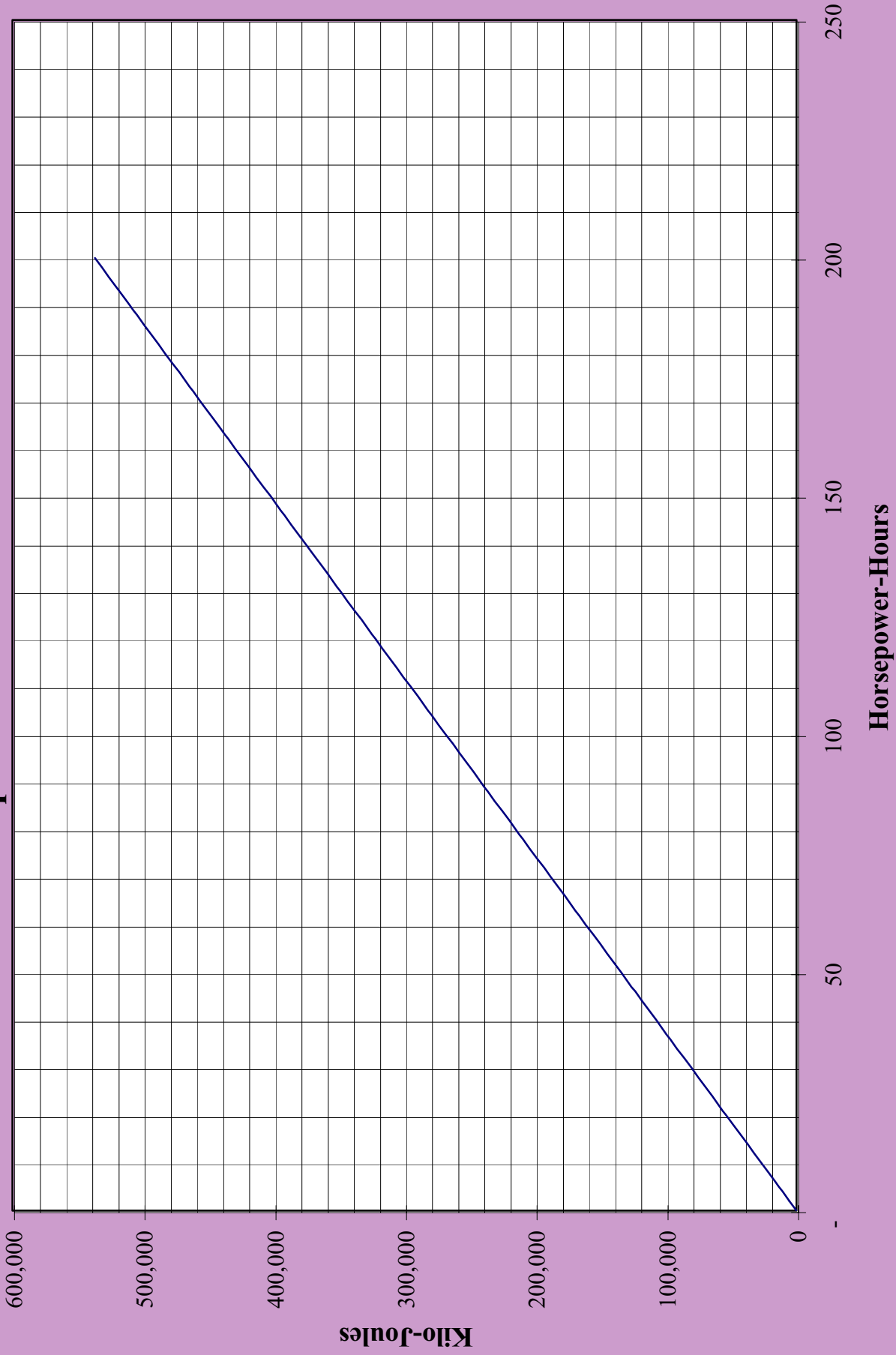
Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu
740	1884.78	1,884,780	822	2093.63	2,093,634	904	2302.49	2,302,488
742	1889.87	1,889,874	824	2098.73	2,098,728	906	2307.58	2,307,582
744	1894.97	1,894,968	826	2103.82	2,103,822	908	2312.68	2,312,676
746	1900.06	1,900,062	828	2108.92	2,108,916	910	2317.77	2,317,770
748	1905.16	1,905,156	830	2114.01	2,114,010	912	2322.86	2,322,864
750	1910.25	1,910,250	832	2119.10	2,119,104	914	2327.96	2,327,958
752	1915.34	1,915,344	834	2124.20	2,124,198	916	2333.05	2,333,052
754	1920.44	1,920,438	836	2129.29	2,129,292	918	2338.15	2,338,146
756	1925.53	1,925,532	838	2134.39	2,134,386	920	2343.24	2,343,240
758	1930.63	1,930,626	840	2139.48	2,139,480	922	2348.33	2,348,334
760	1935.72	1,935,720	842	2144.57	2,144,574	924	2353.43	2,353,428
762	1940.81	1,940,814	844	2149.67	2,149,668	926	2358.52	2,358,522
764	1945.91	1,945,908	846	2154.76	2,154,762	928	2363.62	2,363,616
766	1951.00	1,951,002	848	2159.86	2,159,856	930	2368.71	2,368,710
768	1956.10	1,956,096	850	2164.95	2,164,950	932	2373.80	2,373,804
770	1961.19	1,961,190	852	2170.04	2,170,044	934	2378.90	2,378,898
772	1966.28	1,966,284	854	2175.14	2,175,138	936	2383.99	2,383,992
774	1971.38	1,971,378	856	2180.23	2,180,232	938	2389.09	2,389,086
776	1976.47	1,976,472	858	2185.33	2,185,326	940	2394.18	2,394,180
778	1981.57	1,981,566	860	2190.42	2,190,420	942	2399.27	2,399,274
780	1986.66	1,986,660	862	2195.51	2,195,514	944	2404.37	2,404,368
782	1991.75	1,991,754	864	2200.61	2,200,608	946	2409.46	2,409,462
784	1996.85	1,996,848	866	2205.70	2,205,702	948	2414.56	2,414,556
786	2001.94	2,001,942	868	2210.80	2,210,796	950	2419.65	2,419,650
788	2007.04	2,007,036	870	2215.89	2,215,890	952	2424.74	2,424,744
790	2012.13	2,012,130	872	2220.98	2,220,984	954	2429.84	2,429,838
792	2017.22	2,017,224	874	2226.08	2,226,078	956	2434.93	2,434,932
794	2022.32	2,022,318	876	2231.17	2,231,172	958	2440.03	2,440,026
796	2027.41	2,027,412	878	2236.27	2,236,266	960	2445.12	2,445,120
798	2032.51	2,032,506	880	2241.36	2,241,360	962	2450.21	2,450,214
800	2037.60	2,037,600	882	2246.45	2,246,454	964	2455.31	2,455,308
802	2042.69	2,042,694	884	2251.55	2,251,548	966	2460.40	2,460,402
804	2047.79	2,047,788	886	2256.64	2,256,642	968	2465.50	2,465,496
806	2052.88	2,052,882	888	2261.74	2,261,736	970	2470.59	2,470,590
808	2057.98	2,057,976	890	2266.83	2,266,830	972	2475.68	2,475,684
810	2063.07	2,063,070	892	2271.92	2,271,924	974	2480.78	2,480,778
812	2068.16	2,068,164	894	2277.02	2,277,018	976	2485.87	2,485,872
814	2073.26	2,073,258	896	2282.11	2,282,112	978	2490.97	2,490,966
816	2078.35	2,078,352	898	2287.21	2,287,206	980	2496.06	2,496,060
818	2083.45	2,083,446	900	2292.30	2,292,300	982	2501.15	2,501,154
820	2088.54	2,088,540	902	2297.39	2,297,394	984	2506.25	2,506,248

## ENERGY CONVERSION TABLE

Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu	Hp-Hour	Btu x 10 <sup>3</sup>	Btu
986	2511.34	2,511,342	1,068	2720.20	2,720,196	1,150	2929.05	2,929,050
988	2516.44	2,516,436	1,070	2725.29	2,725,290	1,152	2934.14	2,934,144
990	2521.53	2,521,530	1,072	2730.38	2,730,384	1,154	2939.24	2,939,238
992	2526.62	2,526,624	1,074	2735.48	2,735,478	1,156	2944.33	2,944,332
994	2531.72	2,531,718	1,076	2740.57	2,740,572	1,158	2949.43	2,949,426
996	2536.81	2,536,812	1,078	2745.67	2,745,666	1,160	2954.52	2,954,520
998	2541.91	2,541,906	1,080	2750.76	2,750,760	1,162	2959.61	2,959,614
1,000	2547.00	2,547,000	1,082	2755.85	2,755,854	1,164	2964.71	2,964,708
1,002	2552.09	2,552,094	1,084	2760.95	2,760,948	1,166	2969.80	2,969,802
1,004	2557.19	2,557,188	1,086	2766.04	2,766,042	1,168	2974.90	2,974,896
1,006	2562.28	2,562,282	1,088	2771.14	2,771,136	1,170	2979.99	2,979,990
1,008	2567.38	2,567,376	1,090	2776.23	2,776,230	1,172	2985.08	2,985,084
1,010	2572.47	2,572,470	1,092	2781.32	2,781,324	1,174	2990.18	2,990,178
1,012	2577.56	2,577,564	1,094	2786.42	2,786,418	1,176	2995.27	2,995,272
1,014	2582.66	2,582,658	1,096	2791.51	2,791,512	1,178	3000.37	3,000,366
1,016	2587.75	2,587,752	1,098	2796.61	2,796,606	1,180	3005.46	3,005,460
1,018	2592.85	2,592,846	1,100	2801.70	2,801,700	1,182	3010.55	3,010,554
1,020	2597.94	2,597,940	1,102	2806.79	2,806,794	1,184	3015.65	3,015,648
1,022	2603.03	2,603,034	1,104	2811.89	2,811,888	1,186	3020.74	3,020,742
1,024	2608.13	2,608,128	1,106	2816.98	2,816,982	1,188	3025.84	3,025,836
1,026	2613.22	2,613,222	1,108	2822.08	2,822,076	1,190	3030.93	3,030,930
1,028	2618.32	2,618,316	1,110	2827.17	2,827,170	1,192	3036.02	3,036,024
1,030	2623.41	2,623,410	1,112	2832.26	2,832,264	1,194	3041.12	3,041,118
1,032	2628.50	2,628,504	1,114	2837.36	2,837,358	1,196	3046.21	3,046,212
1,034	2633.60	2,633,598	1,116	2842.45	2,842,452	1,198	3051.31	3,051,306
1,036	2638.69	2,638,692	1,118	2847.55	2,847,546	1,200	3056.40	3,056,400
1,038	2643.79	2,643,786	1,120	2852.64	2,852,640	1,202	3061.49	3,061,494
1,040	2648.88	2,648,880	1,122	2857.73	2,857,734	1,204	3066.59	3,066,588
1,042	2653.97	2,653,974	1,124	2862.83	2,862,828	1,206	3071.68	3,071,682
1,044	2659.07	2,659,068	1,126	2867.92	2,867,922	1,208	3076.78	3,076,776
1,046	2664.16	2,664,162	1,128	2873.02	2,873,016	1,210	3081.87	3,081,870
1,048	2669.26	2,669,256	1,130	2878.11	2,878,110	1,212	3086.96	3,086,964
1,050	2674.35	2,674,350	1,132	2883.20	2,883,204	1,214	3092.06	3,092,058
1,052	2679.44	2,679,444	1,134	2888.30	2,888,298	1,216	3097.15	3,097,152
1,054	2684.54	2,684,538	1,136	2893.39	2,893,392	1,218	3102.25	3,102,246
1,056	2689.63	2,689,632	1,138	2898.49	2,898,486	1,220	3107.34	3,107,340
1,058	2694.73	2,694,726	1,140	2903.58	2,903,580	1,222	3112.43	3,112,434
1,060	2699.82	2,699,820	1,142	2908.67	2,908,674	1,224	3117.53	3,117,528
1,062	2704.91	2,704,914	1,144	2913.77	2,913,768	1,226	3122.62	3,122,622
1,064	2710.01	2,710,008	1,146	2918.86	2,918,862	1,228	3127.72	3,127,716
1,066	2715.10	2,715,102	1,148	2923.96	2,923,956	1,230	3132.81	3,132,810

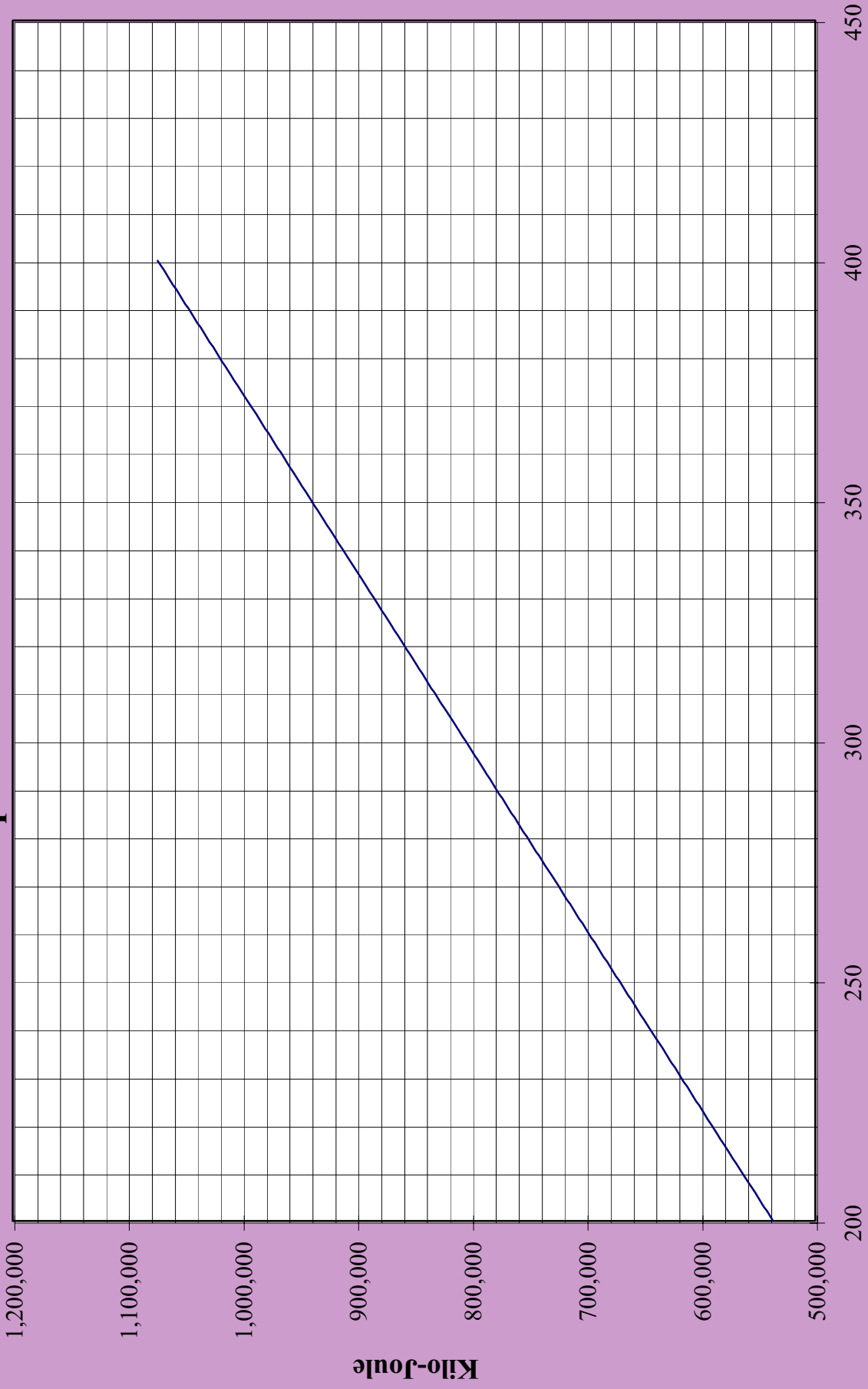
# ENERGY CONVERSION

## Horsepower-Hours - Joules



# ENERGY CONVERSION

Horsepower-Hours - Joules



## ENERGY CONVERSION TABLE

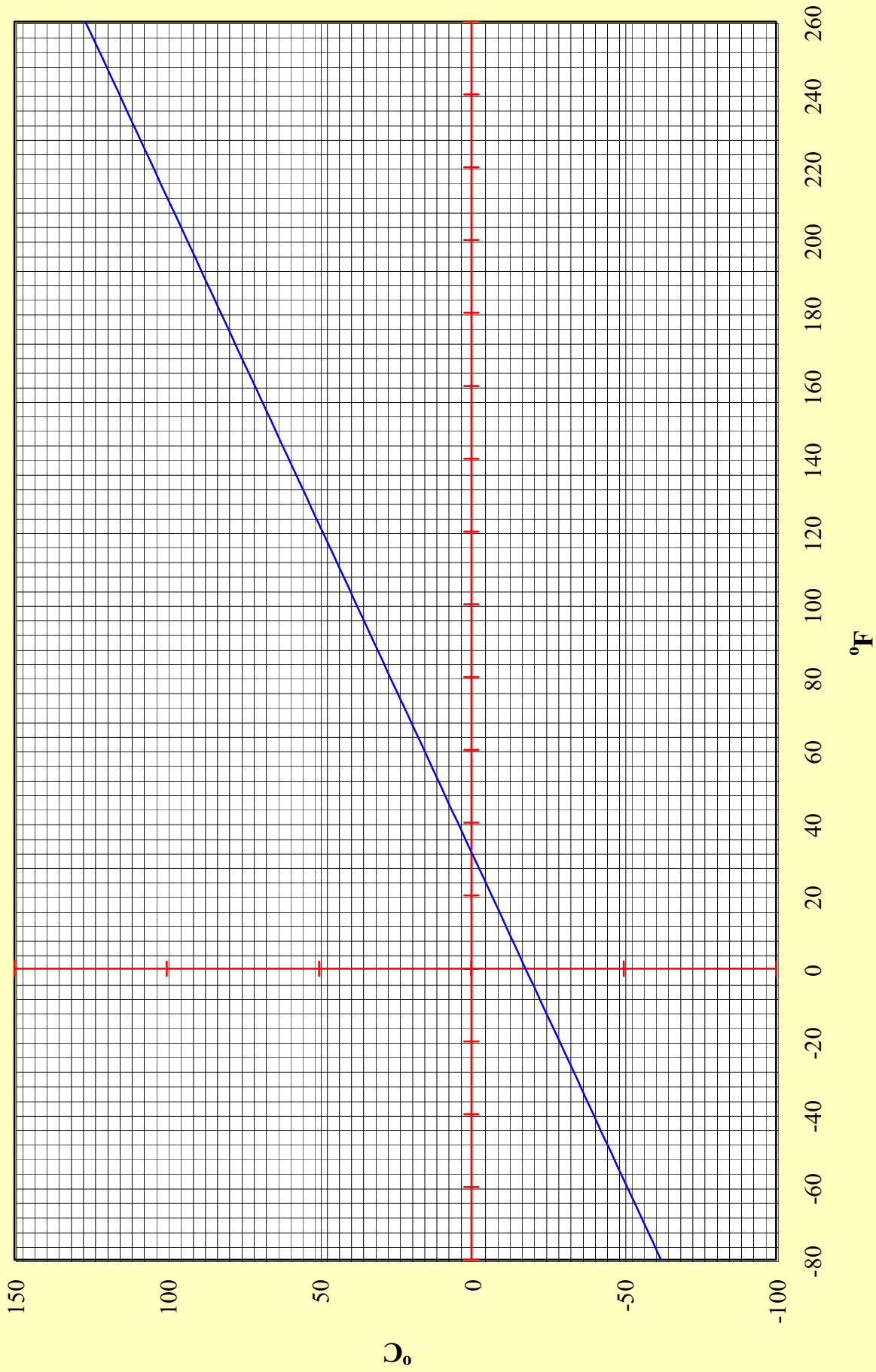
Hp-Hr	Joule		Hp-Hr	Joule		Hp-Hr	Joule	
2	5.37E+6	5,368,000	84	2.25E+8	225,456,000	166	4.46E+8	445,544,000
4	1.07E+7	10,736,000	86	2.31E+8	230,824,000	168	4.51E+8	450,912,000
6	1.61E+7	16,104,000	88	2.36E+8	236,192,000	170	4.56E+8	456,280,000
8	2.15E+7	21,472,000	90	2.42E+8	241,560,000	172	4.62E+8	461,648,000
10	2.68E+7	26,840,000	92	2.47E+8	246,928,000	174	4.67E+8	467,016,000
12	3.22E+7	32,208,000	94	2.52E+8	252,296,000	176	4.72E+8	472,384,000
14	3.76E+7	37,576,000	96	2.58E+8	257,664,000	178	4.78E+8	477,752,000
16	4.29E+7	42,944,000	98	2.63E+8	263,032,000	180	4.83E+8	483,120,000
18	4.83E+7	48,312,000	100	2.68E+8	268,400,000	182	4.88E+8	488,488,000
20	5.37E+7	53,680,000	102	2.74E+8	273,768,000	184	4.94E+8	493,856,000
22	5.90E+7	59,048,000	104	2.79E+8	279,136,000	186	4.99E+8	499,224,000
24	6.44E+7	64,416,000	106	2.85E+8	284,504,000	188	5.05E+8	504,592,000
26	6.98E+7	69,784,000	108	2.90E+8	289,872,000	190	5.10E+8	509,960,000
28	7.52E+7	75,152,000	110	2.95E+8	295,240,000	192	5.15E+8	515,328,000
30	8.05E+7	80,520,000	112	3.01E+8	300,608,000	194	5.21E+8	520,696,000
32	8.59E+7	85,888,000	114	3.06E+8	305,976,000	196	5.26E+8	526,064,000
34	9.13E+7	91,256,000	116	3.11E+8	311,344,000	198	5.31E+8	531,432,000
36	9.66E+7	96,624,000	118	3.17E+8	316,712,000	200	5.37E+8	536,800,000
38	1.02E+8	101,992,000	120	3.22E+8	322,080,000	202	5.42E+8	542,168,000
40	1.07E+8	107,360,000	122	3.27E+8	327,448,000	204	5.48E+8	547,536,000
42	1.13E+8	112,728,000	124	3.33E+8	332,816,000	206	5.53E+8	552,904,000
44	1.18E+8	118,096,000	126	3.38E+8	338,184,000	208	5.58E+8	558,272,000
46	1.23E+8	123,464,000	128	3.44E+8	343,552,000	210	5.64E+8	563,640,000
48	1.29E+8	128,832,000	130	3.49E+8	348,920,000	212	5.69E+8	569,008,000
50	1.34E+8	134,200,000	132	3.54E+8	354,288,000	214	5.74E+8	574,376,000
52	1.40E+8	139,568,000	134	3.60E+8	359,656,000	216	5.80E+8	579,744,000
54	1.45E+8	144,936,000	136	3.65E+8	365,024,000	218	5.85E+8	585,112,000
56	1.50E+8	150,304,000	138	3.70E+8	370,392,000	220	5.90E+8	590,480,000
58	1.56E+8	155,672,000	140	3.76E+8	375,760,000	222	5.96E+8	595,848,000
60	1.61E+8	161,040,000	142	3.81E+8	381,128,000	224	6.01E+8	601,216,000
62	1.66E+8	166,408,000	144	3.86E+8	386,496,000	226	6.07E+8	606,584,000
64	1.72E+8	171,776,000	146	3.92E+8	391,864,000	228	6.12E+8	611,952,000
66	1.77E+8	177,144,000	148	3.97E+8	397,232,000	230	6.17E+8	617,320,000
68	1.83E+8	182,512,000	150	4.03E+8	402,600,000	232	6.23E+8	622,688,000
70	1.88E+8	187,880,000	152	4.08E+8	407,968,000	234	6.28E+8	628,056,000
72	1.93E+8	193,248,000	154	4.13E+8	413,336,000	236	6.33E+8	633,424,000
74	1.99E+8	198,616,000	156	4.19E+8	418,704,000	238	6.39E+8	638,792,000
76	2.04E+8	203,984,000	158	4.24E+8	424,072,000	240	6.44E+8	644,160,000
78	2.09E+8	209,352,000	160	4.29E+8	429,440,000	242	6.50E+8	649,528,000
80	2.15E+8	214,720,000	162	4.35E+8	434,808,000	244	6.55E+8	654,896,000
82	2.20E+8	220,088,000	164	4.40E+8	440,176,000	246	6.60E+8	660,264,000
84	2.25E+8	225,456,000	166	4.46E+8	445,544,000	248	6.66E+8	665,632,000

## ENERGY CONVERSION TABLE

Hp-Hr	Joule		Hp-Hr	Joule		Hp-Hr	Joule	
250	6.71E+8	671,000,000	334	8.96E+8	896,456,000	418	1.12E+9	1,121,912,000
252	6.76E+8	676,368,000	336	9.02E+8	901,824,000	420	1.13E+9	1,127,280,000
254	6.82E+8	681,736,000	338	9.07E+8	907,192,000	422	1.13E+9	1,132,648,000
256	6.87E+8	687,104,000	340	9.13E+8	912,560,000	424	1.14E+9	1,138,016,000
258	6.92E+8	692,472,000	342	9.18E+8	917,928,000	426	1.14E+9	1,143,384,000
260	6.98E+8	697,840,000	344	9.23E+8	923,296,000	428	1.15E+9	1,148,752,000
262	7.03E+8	703,208,000	346	9.29E+8	928,664,000	430	1.15E+9	1,154,120,000
264	7.09E+8	708,576,000	348	9.34E+8	934,032,000	432	1.16E+9	1,159,488,000
266	7.14E+8	713,944,000	350	9.39E+8	939,400,000	434	1.16E+9	1,164,856,000
268	7.19E+8	719,312,000	352	9.45E+8	944,768,000	436	1.17E+9	1,170,224,000
270	7.25E+8	724,680,000	354	9.50E+8	950,136,000	438	1.18E+9	1,175,592,000
272	7.30E+8	730,048,000	356	9.56E+8	955,504,000	440	1.18E+9	1,180,960,000
274	7.35E+8	735,416,000	358	9.61E+8	960,872,000	442	1.19E+9	1,186,328,000
276	7.41E+8	740,784,000	360	9.66E+8	966,240,000	444	1.19E+9	1,191,696,000
278	7.46E+8	746,152,000	362	9.72E+8	971,608,000	446	1.20E+9	1,197,064,000
280	7.52E+8	751,520,000	364	9.77E+8	976,976,000	448	1.20E+9	1,202,432,000
282	7.57E+8	756,888,000	366	9.82E+8	982,344,000	450	1.21E+9	1,207,800,000
284	7.62E+8	762,256,000	368	9.88E+8	987,712,000	452	1.21E+9	1,213,168,000
286	7.68E+8	767,624,000	370	9.93E+8	993,080,000	454	1.22E+9	1,218,536,000
288	7.73E+8	772,992,000	372	9.98E+8	998,448,000	456	1.22E+9	1,223,904,000
290	7.78E+8	778,360,000	374	1.00E+9	1,003,816,000	458	1.23E+9	1,229,272,000
292	7.84E+8	783,728,000	376	1.01E+9	1,009,184,000	460	1.23E+9	1,234,640,000
294	7.89E+8	789,096,000	378	1.01E+9	1,014,552,000	462	1.24E+9	1,240,008,000
296	7.94E+8	794,464,000	380	1.02E+9	1,019,920,000	464	1.25E+9	1,245,376,000
298	8.00E+8	799,832,000	382	1.03E+9	1,025,288,000	466	1.25E+9	1,250,744,000
300	8.05E+8	805,200,000	384	1.03E+9	1,030,656,000	468	1.26E+9	1,256,112,000
302	8.11E+8	810,568,000	386	1.04E+9	1,036,024,000	470	1.26E+9	1,261,480,000
304	8.16E+8	815,936,000	388	1.04E+9	1,041,392,000	472	1.27E+9	1,266,848,000
306	8.21E+8	821,304,000	390	1.05E+9	1,046,760,000	474	1.27E+9	1,272,216,000
308	8.27E+8	826,672,000	392	1.05E+9	1,052,128,000	476	1.28E+9	1,277,584,000
310	8.32E+8	832,040,000	394	1.06E+9	1,057,496,000	478	1.28E+9	1,282,952,000
312	8.37E+8	837,408,000	396	1.06E+9	1,062,864,000	480	1.29E+9	1,288,320,000
314	8.43E+8	842,776,000	398	1.07E+9	1,068,232,000	482	1.29E+9	1,293,688,000
316	8.48E+8	848,144,000	400	1.07E+9	1,073,600,000	484	1.30E+9	1,299,056,000
318	8.54E+8	853,512,000	402	1.08E+9	1,078,968,000	486	1.30E+9	1,304,424,000
320	8.59E+8	858,880,000	404	1.08E+9	1,084,336,000	488	1.31E+9	1,309,792,000
322	8.64E+8	864,248,000	406	1.09E+9	1,089,704,000	490	1.32E+9	1,315,160,000
324	8.70E+8	869,616,000	408	1.10E+9	1,095,072,000	492	1.32E+9	1,320,528,000
326	8.75E+8	874,984,000	410	1.10E+9	1,100,440,000	494	1.33E+9	1,325,896,000
328	8.80E+8	880,352,000	412	1.11E+9	1,105,808,000	496	1.33E+9	1,331,264,000
330	8.86E+8	885,720,000	414	1.11E+9	1,111,176,000	498	1.34E+9	1,336,632,000
332	8.91E+8	891,088,000	416	1.12E+9	1,116,544,000	500	1.34E+9	1,342,000,000

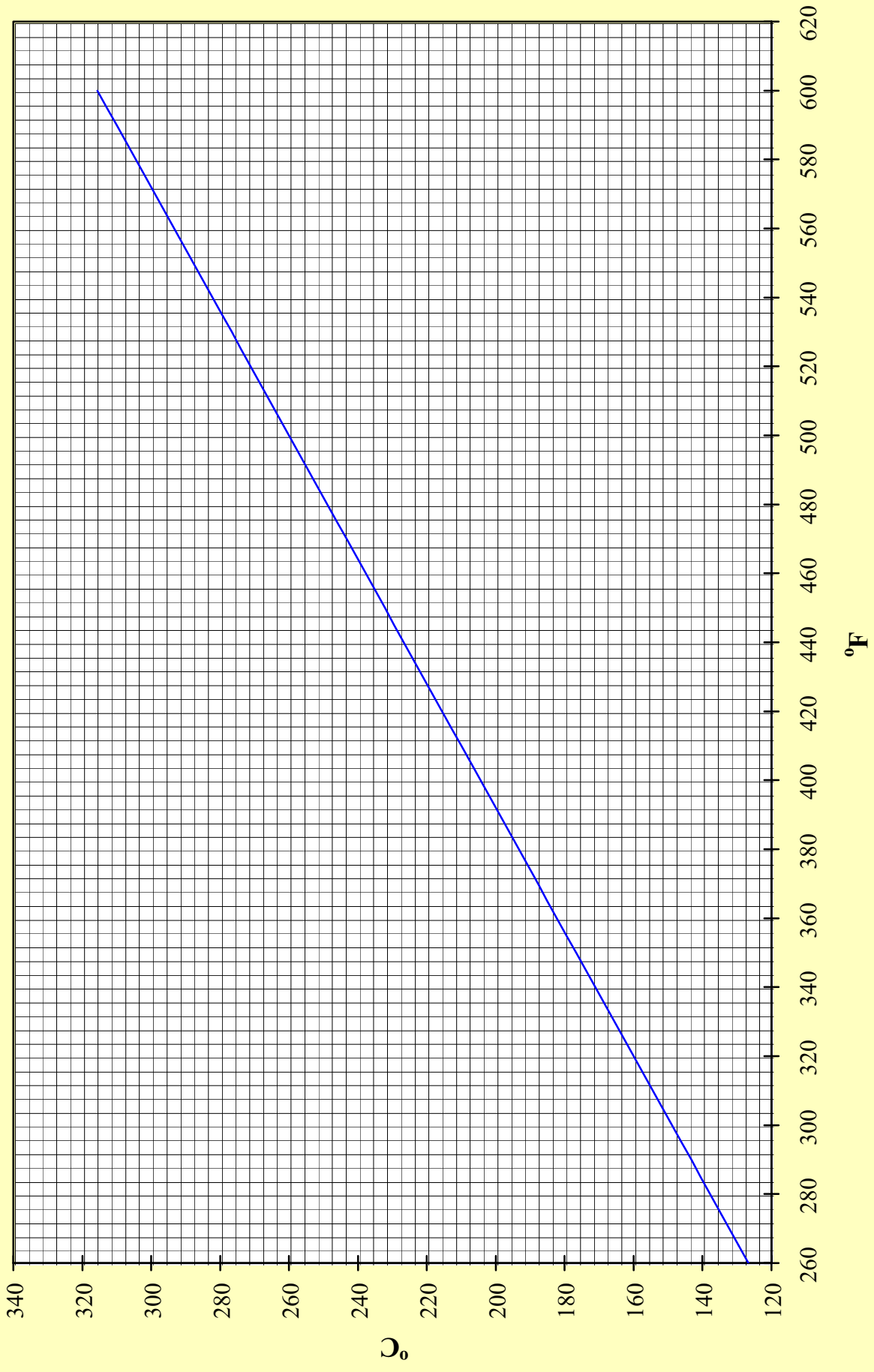
# TEMPERATURE CONVERSION

$^{\circ}\text{F} - ^{\circ}\text{C}$



# TEMPERATURE CONVERSION

$^{\circ}\text{F} - ^{\circ}\text{C}$



## TEMPERATURE CONVERSION TABLE

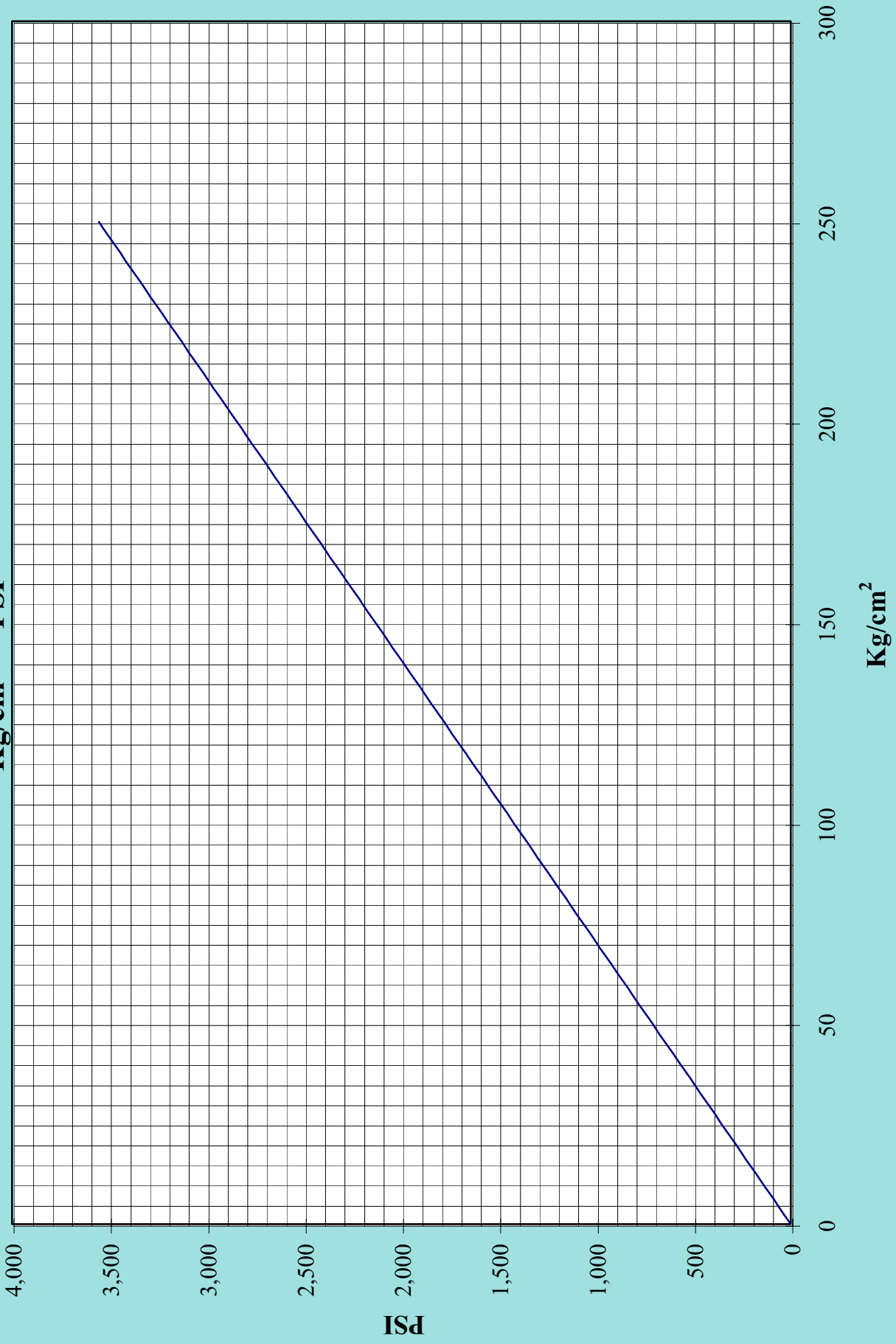
°F	°C	°F	°C	°F	°C	°F	°C
-80	-62.22	2	-16.67	84	28.89	166	74.44
-78	-61.11	4	-15.56	86	30.00	168	75.56
-76	-60.00	6	-14.44	88	31.11	170	76.67
-74	-58.89	8	-13.33	90	32.22	172	77.78
-72	-57.78	10	-12.22	92	33.33	174	78.89
-70	-56.67	12	-11.11	94	34.44	176	80.00
-68	-55.56	14	-10.00	96	35.56	178	81.11
-66	-54.44	16	-8.89	98	36.67	180	82.22
-64	-53.33	18	-7.78	100	37.78	182	83.33
-62	-52.22	20	-6.67	102	38.89	184	84.44
-60	-51.11	22	-5.56	104	40.00	186	85.56
-58	-50.00	24	-4.44	106	41.11	188	86.67
-56	-48.89	26	-3.33	108	42.22	190	87.78
-54	-47.78	28	-2.22	110	43.33	192	88.89
-52	-46.67	30	-1.11	112	44.44	194	90.00
-50	-45.56	32	0.00	114	45.56	196	91.11
-48	-44.44	34	1.11	116	46.67	198	92.22
-46	-43.33	36	2.22	118	47.78	200	93.33
-44	-42.22	38	3.33	120	48.89	202	94.44
-42	-41.11	40	4.44	122	50.00	204	95.56
-40	-40.00	42	5.56	124	51.11	206	96.67
-38	-38.89	44	6.67	126	52.22	208	97.78
-36	-37.78	46	7.78	128	53.33	210	98.89
-34	-36.67	48	8.89	130	54.44	212	100.00
-32	-35.56	50	10.00	132	55.56	214	101.11
-30	-34.44	52	11.11	134	56.67	216	102.22
-28	-33.33	54	12.22	136	57.78	218	103.33
-26	-32.22	56	13.33	138	58.89	220	104.44
-24	-31.11	58	14.44	140	60.00	222	105.56
-22	-30.00	60	15.56	142	61.11	224	106.67
-20	-28.89	62	16.67	144	62.22	226	107.78
-18	-27.78	64	17.78	146	63.33	228	108.89
-16	-26.67	66	18.89	148	64.44	230	110.00
-14	-25.56	68	20.00	150	65.56	232	111.11
-12	-24.44	70	21.11	152	66.67	234	112.22
-10	-23.33	72	22.22	154	67.78	236	113.33
-8	-22.22	74	23.33	156	68.89	238	114.44
-6	-21.11	76	24.44	158	70.00	240	115.56
-4	-20.00	78	25.56	160	71.11	242	116.67
-2	-18.89	80	26.67	162	72.22	244	117.78
0	-17.78	82	27.78	164	73.33	246	118.89

## TEMPERATURE CONVERSION TABLE

°F	°C	°F	°C	°F	°C	°F	°C
248	120.00	330	165.56	412	211.11	494	256.67
250	121.11	332	166.67	414	212.22	496	257.78
252	122.22	334	167.78	416	213.33	498	258.89
254	123.33	336	168.89	418	214.44	500	260.00
256	124.44	338	170.00	420	215.56	502	261.11
258	125.56	340	171.11	422	216.67	504	262.22
260	126.67	342	172.22	424	217.78	506	263.33
262	127.78	344	173.33	426	218.89	508	264.44
264	128.89	346	174.44	428	220.00	510	265.56
266	130.00	348	175.56	430	221.11	512	266.67
268	131.11	350	176.67	432	222.22	514	267.78
270	132.22	352	177.78	434	223.33	516	268.89
272	133.33	354	178.89	436	224.44	518	270.00
274	134.44	356	180.00	438	225.56	520	271.11
276	135.56	358	181.11	440	226.67	522	272.22
278	136.67	360	182.22	442	227.78	524	273.33
280	137.78	362	183.33	444	228.89	526	274.44
282	138.89	364	184.44	446	230.00	528	275.56
284	140.00	366	185.56	448	231.11	530	276.67
286	141.11	368	186.67	450	232.22	532	277.78
288	142.22	370	187.78	452	233.33	534	278.89
290	143.33	372	188.89	454	234.44	536	280.00
292	144.44	374	190.00	456	235.56	538	281.11
294	145.56	376	191.11	458	236.67	540	282.22
296	146.67	378	192.22	460	237.78	542	283.33
298	147.78	380	193.33	462	238.89	544	284.44
300	148.89	382	194.44	464	240.00	546	285.56
302	150.00	384	195.56	466	241.11	548	286.67
304	151.11	386	196.67	468	242.22	550	287.78
306	152.22	388	197.78	470	243.33	552	288.89
308	153.33	390	198.89	472	244.44	554	290.00
310	154.44	392	200.00	474	245.56	556	291.11
312	155.56	394	201.11	476	246.67	558	292.22
314	156.67	396	202.22	478	247.78	560	293.33
316	157.78	398	203.33	480	248.89	562	294.44
318	158.89	400	204.44	482	250.00	564	295.56
320	160.00	402	205.56	484	251.11	566	296.67
322	161.11	404	206.67	486	252.22	568	297.78
324	162.22	406	207.78	488	253.33	570	298.89
326	163.33	408	208.89	490	254.44	572	300.00
328	164.44	410	210.00	492	255.56	574	301.11

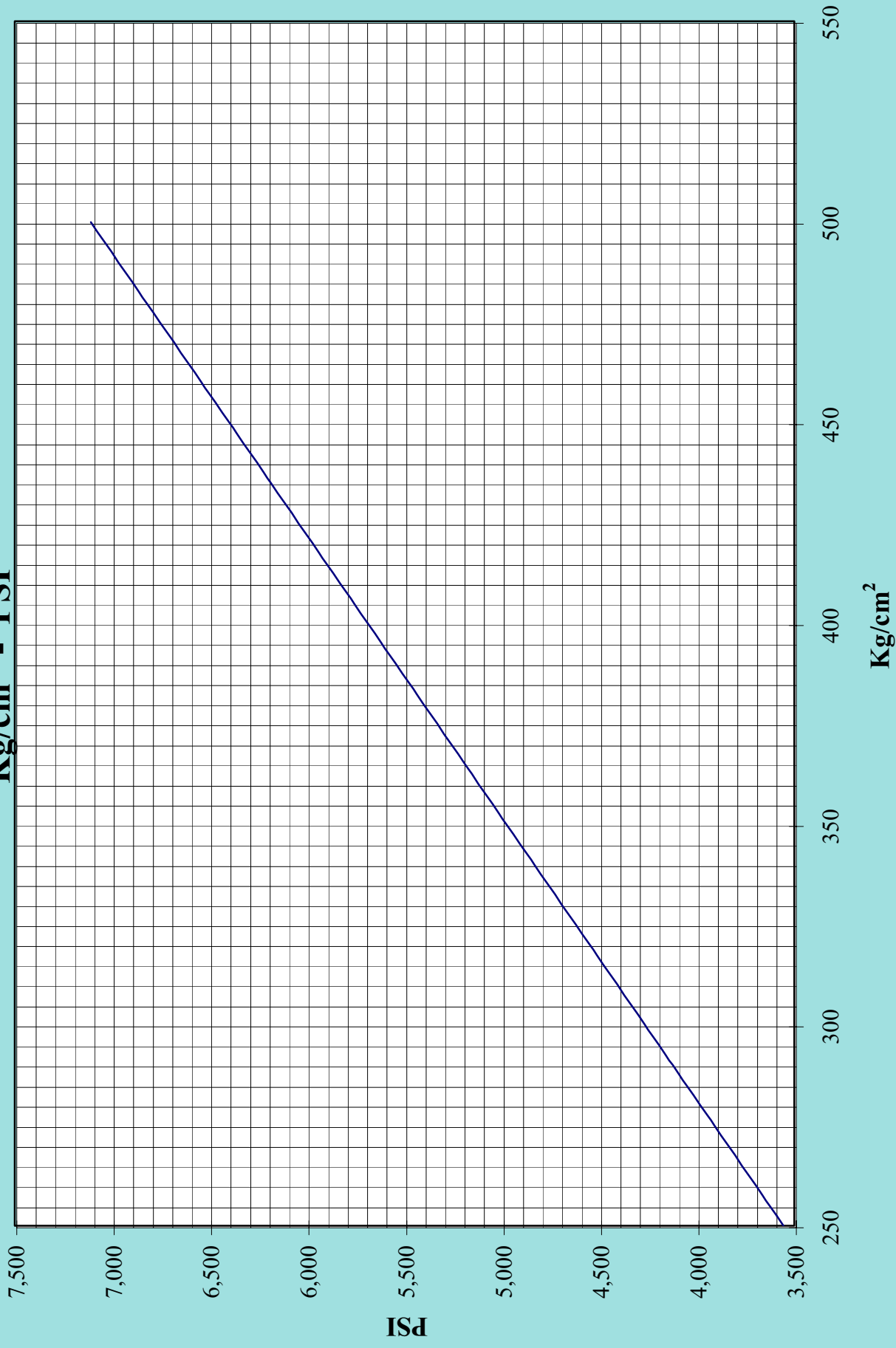
# PRESSURE CONVERSION

$\text{Kg/cm}^2$  - PSI



# PRESSURE CONVERSION

**Kg/cm<sup>2</sup> - PSI**



## PRESSURE CONVERSION TABLE

Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI
1	14.22	43	611.46	85	1,208.70	127	1,805.94
2	28.44	44	625.68	86	1,222.92	128	1,820.16
3	42.66	45	639.90	87	1,237.14	129	1,834.38
4	56.88	46	654.12	88	1,251.36	130	1,848.60
5	71.10	47	668.34	89	1,265.58	131	1,862.82
6	85.32	48	682.56	90	1,279.80	132	1,877.04
7	99.54	49	696.78	91	1,294.02	133	1,891.26
8	113.76	50	711.00	92	1,308.24	134	1,905.48
9	127.98	51	725.22	93	1,322.46	135	1,919.70
10	142.20	52	739.44	94	1,336.68	136	1,933.92
11	156.42	53	753.66	95	1,350.90	137	1,948.14
12	170.64	54	767.88	96	1,365.12	138	1,962.36
13	184.86	55	782.10	97	1,379.34	139	1,976.58
14	199.08	56	796.32	98	1,393.56	140	1,990.80
15	213.30	57	810.54	99	1,407.78	141	2,005.02
16	227.52	58	824.76	100	1,422.00	142	2,019.24
17	241.74	59	838.98	101	1,436.22	143	2,033.46
18	255.96	60	853.20	102	1,450.44	144	2,047.68
19	270.18	61	867.42	103	1,464.66	145	2,061.90
20	284.40	62	881.64	104	1,478.88	146	2,076.12
21	298.62	63	895.86	105	1,493.10	147	2,090.34
22	312.84	64	910.08	106	1,507.32	148	2,104.56
23	327.06	65	924.30	107	1,521.54	149	2,118.78
24	341.28	66	938.52	108	1,535.76	150	2,133.00
25	355.50	67	952.74	109	1,549.98	151	2,147.22
26	369.72	68	966.96	110	1,564.20	152	2,161.44
27	383.94	69	981.18	111	1,578.42	153	2,175.66
28	398.16	70	995.40	112	1,592.64	154	2,189.88
29	412.38	71	1,009.62	113	1,606.86	155	2,204.10
30	426.60	72	1,023.84	114	1,621.08	156	2,218.32
31	440.82	73	1,038.06	115	1,635.30	157	2,232.54
32	455.04	74	1,052.28	116	1,649.52	158	2,246.76
33	469.26	75	1,066.50	117	1,663.74	159	2,260.98
34	483.48	76	1,080.72	118	1,677.96	160	2,275.20
35	497.70	77	1,094.94	119	1,692.18	161	2,289.42
36	511.92	78	1,109.16	120	1,706.40	162	2,303.64
37	526.14	79	1,123.38	121	1,720.62	163	2,317.86
38	540.36	80	1,137.60	122	1,734.84	164	2,332.08
39	554.58	81	1,151.82	123	1,749.06	165	2,346.30
40	568.80	82	1,166.04	124	1,763.28	166	2,360.52
41	583.02	83	1,180.26	125	1,777.50	167	2,374.74
42	597.24	84	1,194.48	126	1,791.72	168	2,388.96

## PRESSURE CONVERSION TABLE

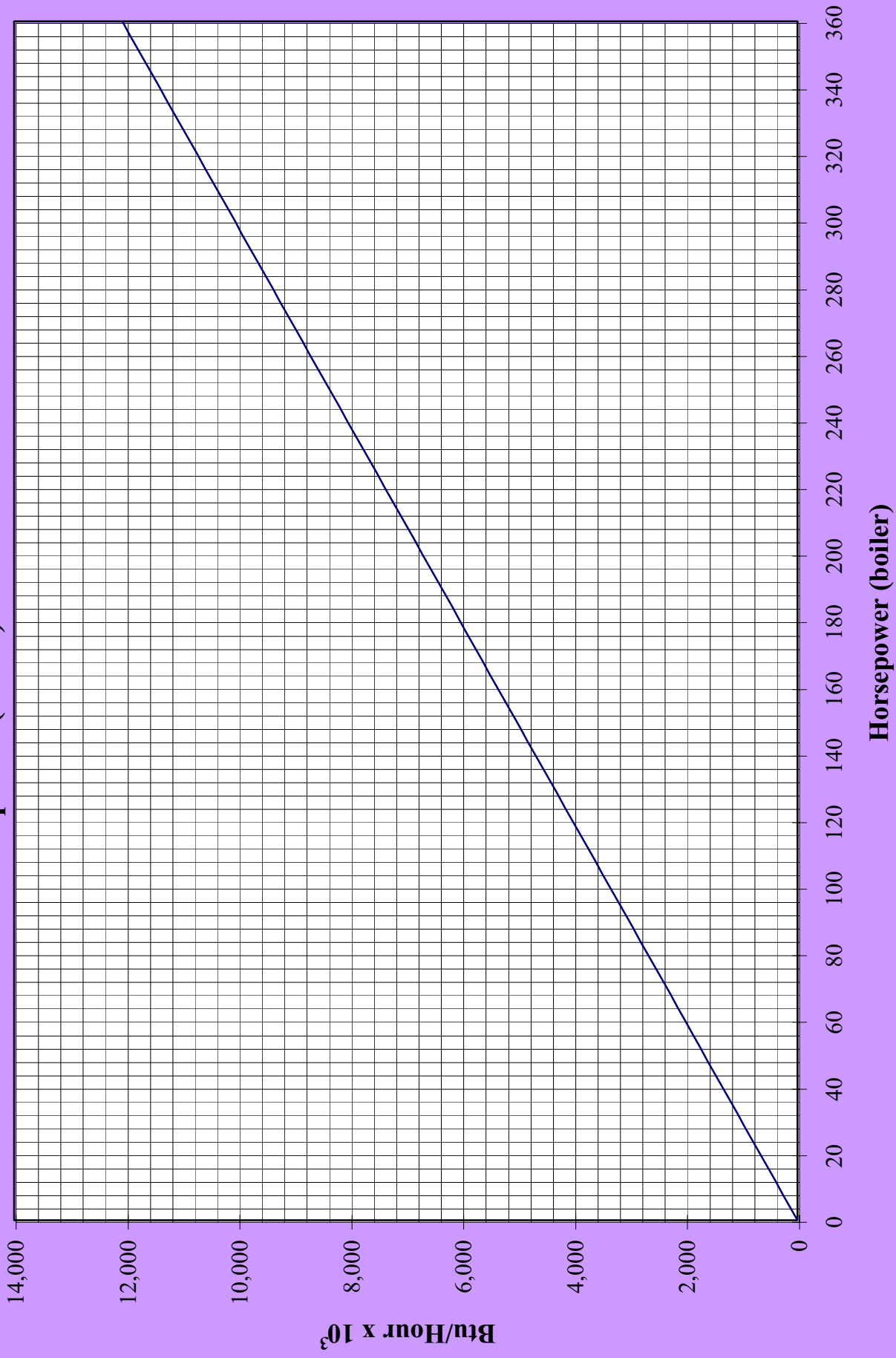
Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI
169	2,403.18	211	3,000.42	253	3,597.66	295	4,194.90
170	2,417.40	212	3,014.64	254	3,611.88	296	4,209.12
171	2,431.62	213	3,028.86	255	3,626.10	297	4,223.34
172	2,445.84	214	3,043.08	256	3,640.32	298	4,237.56
173	2,460.06	215	3,057.30	257	3,654.54	299	4,251.78
174	2,474.28	216	3,071.52	258	3,668.76	300	4,266.00
175	2,488.50	217	3,085.74	259	3,682.98	301	4,280.22
176	2,502.72	218	3,099.96	260	3,697.20	302	4,294.44
177	2,516.94	219	3,114.18	261	3,711.42	303	4,308.66
178	2,531.16	220	3,128.40	262	3,725.64	304	4,322.88
179	2,545.38	221	3,142.62	263	3,739.86	305	4,337.10
180	2,559.60	222	3,156.84	264	3,754.08	306	4,351.32
181	2,573.82	223	3,171.06	265	3,768.30	307	4,365.54
182	2,588.04	224	3,185.28	266	3,782.52	308	4,379.76
183	2,602.26	225	3,199.50	267	3,796.74	309	4,393.98
184	2,616.48	226	3,213.72	268	3,810.96	310	4,408.20
185	2,630.70	227	3,227.94	269	3,825.18	311	4,422.42
186	2,644.92	228	3,242.16	270	3,839.40	312	4,436.64
187	2,659.14	229	3,256.38	271	3,853.62	313	4,450.86
188	2,673.36	230	3,270.60	272	3,867.84	314	4,465.08
189	2,687.58	231	3,284.82	273	3,882.06	315	4,479.30
190	2,701.80	232	3,299.04	274	3,896.28	316	4,493.52
191	2,716.02	233	3,313.26	275	3,910.50	317	4,507.74
192	2,730.24	234	3,327.48	276	3,924.72	318	4,521.96
193	2,744.46	235	3,341.70	277	3,938.94	319	4,536.18
194	2,758.68	236	3,355.92	278	3,953.16	320	4,550.40
195	2,772.90	237	3,370.14	279	3,967.38	321	4,564.62
196	2,787.12	238	3,384.36	280	3,981.60	322	4,578.84
197	2,801.34	239	3,398.58	281	3,995.82	323	4,593.06
198	2,815.56	240	3,412.80	282	4,010.04	324	4,607.28
199	2,829.78	241	3,427.02	283	4,024.26	325	4,621.50
200	2,844.00	242	3,441.24	284	4,038.48	326	4,635.72
201	2,858.22	243	3,455.46	285	4,052.70	327	4,649.94
202	2,872.44	244	3,469.68	286	4,066.92	328	4,664.16
203	2,886.66	245	3,483.90	287	4,081.14	329	4,678.38
204	2,900.88	246	3,498.12	288	4,095.36	330	4,692.60
205	2,915.10	247	3,512.34	289	4,109.58	331	4,706.82
206	2,929.32	248	3,526.56	290	4,123.80	332	4,721.04
207	2,943.54	249	3,540.78	291	4,138.02	333	4,735.26
208	2,957.76	250	3,555.00	292	4,152.24	334	4,749.48
209	2,971.98	251	3,569.22	293	4,166.46	335	4,763.70
210	2,986.20	252	3,583.44	294	4,180.68	336	4,777.92

## PRESSURE CONVERSION TABLE

Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI	Kg/cm <sup>2</sup>	PSI
337	4,792.14	379	5,389.38	421	5,986.62	463	6,583.86
338	4,806.36	380	5,403.60	422	6,000.84	464	6,598.08
339	4,820.58	381	5,417.82	423	6,015.06	465	6,612.30
340	4,834.80	382	5,432.04	424	6,029.28	466	6,626.52
341	4,849.02	383	5,446.26	425	6,043.50	467	6,640.74
342	4,863.24	384	5,460.48	426	6,057.72	468	6,654.96
343	4,877.46	385	5,474.70	427	6,071.94	469	6,669.18
344	4,891.68	386	5,488.92	428	6,086.16	470	6,683.40
345	4,905.90	387	5,503.14	429	6,100.38	471	6,697.62
346	4,920.12	388	5,517.36	430	6,114.60	472	6,711.84
347	4,934.34	389	5,531.58	431	6,128.82	473	6,726.06
348	4,948.56	390	5,545.80	432	6,143.04	474	6,740.28
349	4,962.78	391	5,560.02	433	6,157.26	475	6,754.50
350	4,977.00	392	5,574.24	434	6,171.48	476	6,768.72
351	4,991.22	393	5,588.46	435	6,185.70	477	6,782.94
352	5,005.44	394	5,602.68	436	6,199.92	478	6,797.16
353	5,019.66	395	5,616.90	437	6,214.14	479	6,811.38
354	5,033.88	396	5,631.12	438	6,228.36	480	6,825.60
355	5,048.10	397	5,645.34	439	6,242.58	481	6,839.82
356	5,062.32	398	5,659.56	440	6,256.80	482	6,854.04
357	5,076.54	399	5,673.78	441	6,271.02	483	6,868.26
358	5,090.76	400	5,688.00	442	6,285.24	484	6,882.48
359	5,104.98	401	5,702.22	443	6,299.46	485	6,896.70
360	5,119.20	402	5,716.44	444	6,313.68	486	6,910.92
361	5,133.42	403	5,730.66	445	6,327.90	487	6,925.14
362	5,147.64	404	5,744.88	446	6,342.12	488	6,939.36
363	5,161.86	405	5,759.10	447	6,356.34	489	6,953.58
364	5,176.08	406	5,773.32	448	6,370.56	490	6,967.80
365	5,190.30	407	5,787.54	449	6,384.78	491	6,982.02
366	5,204.52	408	5,801.76	450	6,399.00	492	6,996.24
367	5,218.74	409	5,815.98	451	6,413.22	493	7,010.46
368	5,232.96	410	5,830.20	452	6,427.44	494	7,024.68
369	5,247.18	411	5,844.42	453	6,441.66	495	7,038.90
370	5,261.40	412	5,858.64	454	6,455.88	496	7,053.12
371	5,275.62	413	5,872.86	455	6,470.10	497	7,067.34
372	5,289.84	414	5,887.08	456	6,484.32	498	7,081.56
373	5,304.06	415	5,901.30	457	6,498.54	499	7,095.78
374	5,318.28	416	5,915.52	458	6,512.76	500	7,110.00
375	5,332.50	417	5,929.74	459	6,526.98		
376	5,346.72	418	5,943.96	460	6,541.20		
377	5,360.94	419	5,958.18	461	6,555.42		
378	5,375.16	420	5,972.40	462	6,569.64		

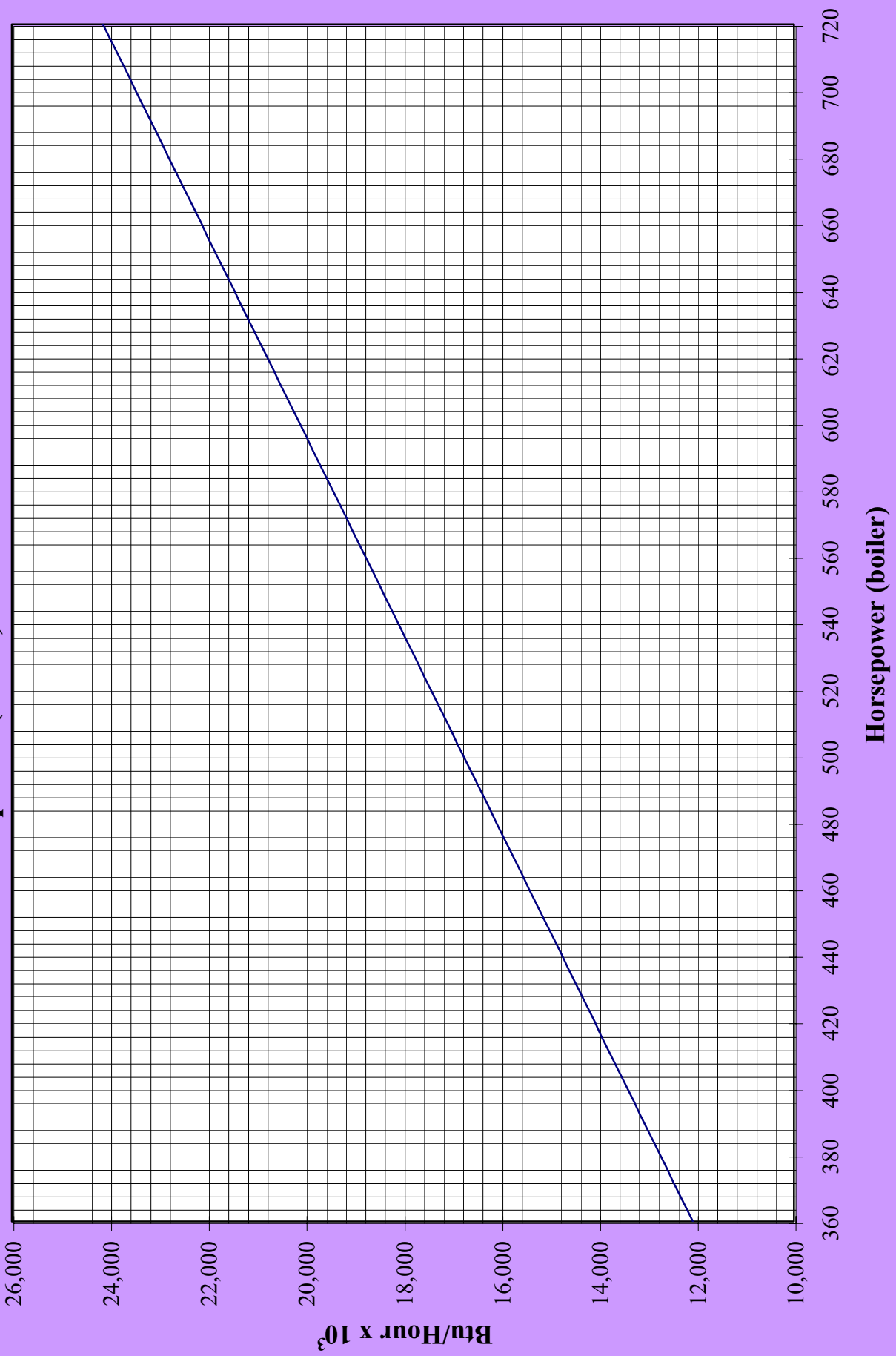
# POWER CONVERSION

Horsepower (boiler) - Btu/Hour



# POWER CONVERSION

Horsepower (boiler) - Btu/Hour



## POWER CONVERSION TABLE

Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr
1	34	33,520	42	1,408	1,407,840	83	2,782	2,782,160
2	67	67,040	43	1,441	1,441,360	84	2,816	2,815,680
3	101	100,560	44	1,475	1,474,880	85	2,849	2,849,200
4	134	134,080	45	1,508	1,508,400	86	2,883	2,882,720
5	168	167,600	46	1,542	1,541,920	87	2,916	2,916,240
6	201	201,120	47	1,575	1,575,440	88	2,950	2,949,760
7	235	234,640	48	1,609	1,608,960	89	2,983	2,983,280
8	268	268,160	49	1,642	1,642,480	90	3,017	3,016,800
9	302	301,680	50	1,676	1,676,000	91	3,050	3,050,320
10	335	335,200	51	1,710	1,709,520	92	3,084	3,083,840
11	369	368,720	52	1,743	1,743,040	93	3,117	3,117,360
12	402	402,240	53	1,777	1,776,560	94	3,151	3,150,880
13	436	435,760	54	1,810	1,810,080	95	3,184	3,184,400
14	469	469,280	55	1,844	1,843,600	96	3,218	3,217,920
15	503	502,800	56	1,877	1,877,120	97	3,251	3,251,440
16	536	536,320	57	1,911	1,910,640	98	3,285	3,284,960
17	570	569,840	58	1,944	1,944,160	99	3,318	3,318,480
18	603	603,360	59	1,978	1,977,680	100	3,352	3,352,000
19	637	636,880	60	2,011	2,011,200	101	3,386	3,385,520
20	670	670,400	61	2,045	2,044,720	102	3,419	3,419,040
21	704	703,920	62	2,078	2,078,240	103	3,453	3,452,560
22	737	737,440	63	2,112	2,111,760	104	3,486	3,486,080
23	771	770,960	64	2,145	2,145,280	105	3,520	3,519,600
24	804	804,480	65	2,179	2,178,800	106	3,553	3,553,120
25	838	838,000	66	2,212	2,212,320	107	3,587	3,586,640
26	872	871,520	67	2,246	2,245,840	108	3,620	3,620,160
27	905	905,040	68	2,279	2,279,360	109	3,654	3,653,680
28	939	938,560	69	2,313	2,312,880	110	3,687	3,687,200
29	972	972,080	70	2,346	2,346,400	111	3,721	3,720,720
30	1,006	1,005,600	71	2,380	2,379,920	112	3,754	3,754,240
31	1,039	1,039,120	72	2,413	2,413,440	113	3,788	3,787,760
32	1,073	1,072,640	73	2,447	2,446,960	114	3,821	3,821,280
33	1,106	1,106,160	74	2,480	2,480,480	115	3,855	3,854,800
34	1,140	1,139,680	75	2,514	2,514,000	116	3,888	3,888,320
35	1,173	1,173,200	76	2,548	2,547,520	117	3,922	3,921,840
36	1,207	1,206,720	77	2,581	2,581,040	118	3,955	3,955,360
37	1,240	1,240,240	78	2,615	2,614,560	119	3,989	3,988,880
38	1,274	1,273,760	79	2,648	2,648,080	120	4,022	4,022,400
39	1,307	1,307,280	80	2,682	2,681,600	121	4,056	4,055,920
40	1,341	1,340,800	81	2,715	2,715,120	122	4,089	4,089,440
41	1,374	1,374,320	82	2,749	2,748,640	123	4,123	4,122,960

## POWER CONVERSION TABLE

Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr
124	4,156	4,156,480	165	5,531	5,530,800	206	6,905	6,905,120
125	4,190	4,190,000	166	5,564	5,564,320	207	6,939	6,938,640
126	4,224	4,223,520	167	5,598	5,597,840	208	6,972	6,972,160
127	4,257	4,257,040	168	5,631	5,631,360	209	7,006	7,005,680
128	4,291	4,290,560	169	5,665	5,664,880	210	7,039	7,039,200
129	4,324	4,324,080	170	5,698	5,698,400	211	7,073	7,072,720
130	4,358	4,357,600	171	5,732	5,731,920	212	7,106	7,106,240
131	4,391	4,391,120	172	5,765	5,765,440	213	7,140	7,139,760
132	4,425	4,424,640	173	5,799	5,798,960	214	7,173	7,173,280
133	4,458	4,458,160	174	5,832	5,832,480	215	7,207	7,206,800
134	4,492	4,491,680	175	5,866	5,866,000	216	7,240	7,240,320
135	4,525	4,525,200	176	5,900	5,899,520	217	7,274	7,273,840
136	4,559	4,558,720	177	5,933	5,933,040	218	7,307	7,307,360
137	4,592	4,592,240	178	5,967	5,966,560	219	7,341	7,340,880
138	4,626	4,625,760	179	6,000	6,000,080	220	7,374	7,374,400
139	4,659	4,659,280	180	6,034	6,033,600	221	7,408	7,407,920
140	4,693	4,692,800	181	6,067	6,067,120	222	7,441	7,441,440
141	4,726	4,726,320	182	6,101	6,100,640	223	7,475	7,474,960
142	4,760	4,759,840	183	6,134	6,134,160	224	7,508	7,508,480
143	4,793	4,793,360	184	6,168	6,167,680	225	7,542	7,542,000
144	4,827	4,826,880	185	6,201	6,201,200	226	7,576	7,575,520
145	4,860	4,860,400	186	6,235	6,234,720	227	7,609	7,609,040
146	4,894	4,893,920	187	6,268	6,268,240	228	7,643	7,642,560
147	4,927	4,927,440	188	6,302	6,301,760	229	7,676	7,676,080
148	4,961	4,960,960	189	6,335	6,335,280	230	7,710	7,709,600
149	4,994	4,994,480	190	6,369	6,368,800	231	7,743	7,743,120
150	5,028	5,028,000	191	6,402	6,402,320	232	7,777	7,776,640
151	5,062	5,061,520	192	6,436	6,435,840	233	7,810	7,810,160
152	5,095	5,095,040	193	6,469	6,469,360	234	7,844	7,843,680
153	5,129	5,128,560	194	6,503	6,502,880	235	7,877	7,877,200
154	5,162	5,162,080	195	6,536	6,536,400	236	7,911	7,910,720
155	5,196	5,195,600	196	6,570	6,569,920	237	7,944	7,944,240
156	5,229	5,229,120	197	6,603	6,603,440	238	7,978	7,977,760
157	5,263	5,262,640	198	6,637	6,636,960	239	8,011	8,011,280
158	5,296	5,296,160	199	6,670	6,670,480	240	8,045	8,044,800
159	5,330	5,329,680	200	6,704	6,704,000	241	8,078	8,078,320
160	5,363	5,363,200	201	6,738	6,737,520	242	8,112	8,111,840
161	5,397	5,396,720	202	6,771	6,771,040	243	8,145	8,145,360
162	5,430	5,430,240	203	6,805	6,804,560	244	8,179	8,178,880
163	5,464	5,463,760	204	6,838	6,838,080	245	8,212	8,212,400
164	5,497	5,497,280	205	6,872	6,871,600	246	8,246	8,245,920

## POWER CONVERSION TABLE

Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr
247	8,279	8,279,440	288	9,654	9,653,760	329	11,028	11,028,080
248	8,313	8,312,960	289	9,687	9,687,280	330	11,062	11,061,600
249	8,346	8,346,480	290	9,721	9,720,800	331	11,095	11,095,120
250	8,380	8,380,000	291	9,754	9,754,320	332	11,129	11,128,640
251	8,414	8,413,520	292	9,788	9,787,840	333	11,162	11,162,160
252	8,447	8,447,040	293	9,821	9,821,360	334	11,196	11,195,680
253	8,481	8,480,560	294	9,855	9,854,880	335	11,229	11,229,200
254	8,514	8,514,080	295	9,888	9,888,400	336	11,263	11,262,720
255	8,548	8,547,600	296	9,922	9,921,920	337	11,296	11,296,240
256	8,581	8,581,120	297	9,955	9,955,440	338	11,330	11,329,760
257	8,615	8,614,640	298	9,989	9,988,960	339	11,363	11,363,280
258	8,648	8,648,160	299	10,022	10,022,480	340	11,397	11,396,800
259	8,682	8,681,680	300	10,056	10,056,000	341	11,430	11,430,320
260	8,715	8,715,200	301	10,090	10,089,520	342	11,464	11,463,840
261	8,749	8,748,720	302	10,123	10,123,040	343	11,497	11,497,360
262	8,782	8,782,240	303	10,157	10,156,560	344	11,531	11,530,880
263	8,816	8,815,760	304	10,190	10,190,080	345	11,564	11,564,400
264	8,849	8,849,280	305	10,224	10,223,600	346	11,598	11,597,920
265	8,883	8,882,800	306	10,257	10,257,120	347	11,631	11,631,440
266	8,916	8,916,320	307	10,291	10,290,640	348	11,665	11,664,960
267	8,950	8,949,840	308	10,324	10,324,160	349	11,698	11,698,480
268	8,983	8,983,360	309	10,358	10,357,680	350	11,732	11,732,000
269	9,017	9,016,880	310	10,391	10,391,200	351	11,766	11,765,520
270	9,050	9,050,400	311	10,425	10,424,720	352	11,799	11,799,040
271	9,084	9,083,920	312	10,458	10,458,240	353	11,833	11,832,560
272	9,117	9,117,440	313	10,492	10,491,760	354	11,866	11,866,080
273	9,151	9,150,960	314	10,525	10,525,280	355	11,900	11,899,600
274	9,184	9,184,480	315	10,559	10,558,800	356	11,933	11,933,120
275	9,218	9,218,000	316	10,592	10,592,320	357	11,967	11,966,640
276	9,252	9,251,520	317	10,626	10,625,840	358	12,000	12,000,160
277	9,285	9,285,040	318	10,659	10,659,360	359	12,034	12,033,680
278	9,319	9,318,560	319	10,693	10,692,880	360	12,067	12,067,200
279	9,352	9,352,080	320	10,726	10,726,400	361	12,101	12,100,720
280	9,386	9,385,600	321	10,760	10,759,920	362	12,134	12,134,240
281	9,419	9,419,120	322	10,793	10,793,440	363	12,168	12,167,760
282	9,453	9,452,640	323	10,827	10,826,960	364	12,201	12,201,280
283	9,486	9,486,160	324	10,860	10,860,480	365	12,235	12,234,800
284	9,520	9,519,680	325	10,894	10,894,000	366	12,268	12,268,320
285	9,553	9,553,200	326	10,928	10,927,520	367	12,302	12,301,840
286	9,587	9,586,720	327	10,961	10,961,040	368	12,335	12,335,360
287	9,620	9,620,240	328	10,995	10,994,560	369	12,369	12,368,880

## POWER CONVERSION TABLE

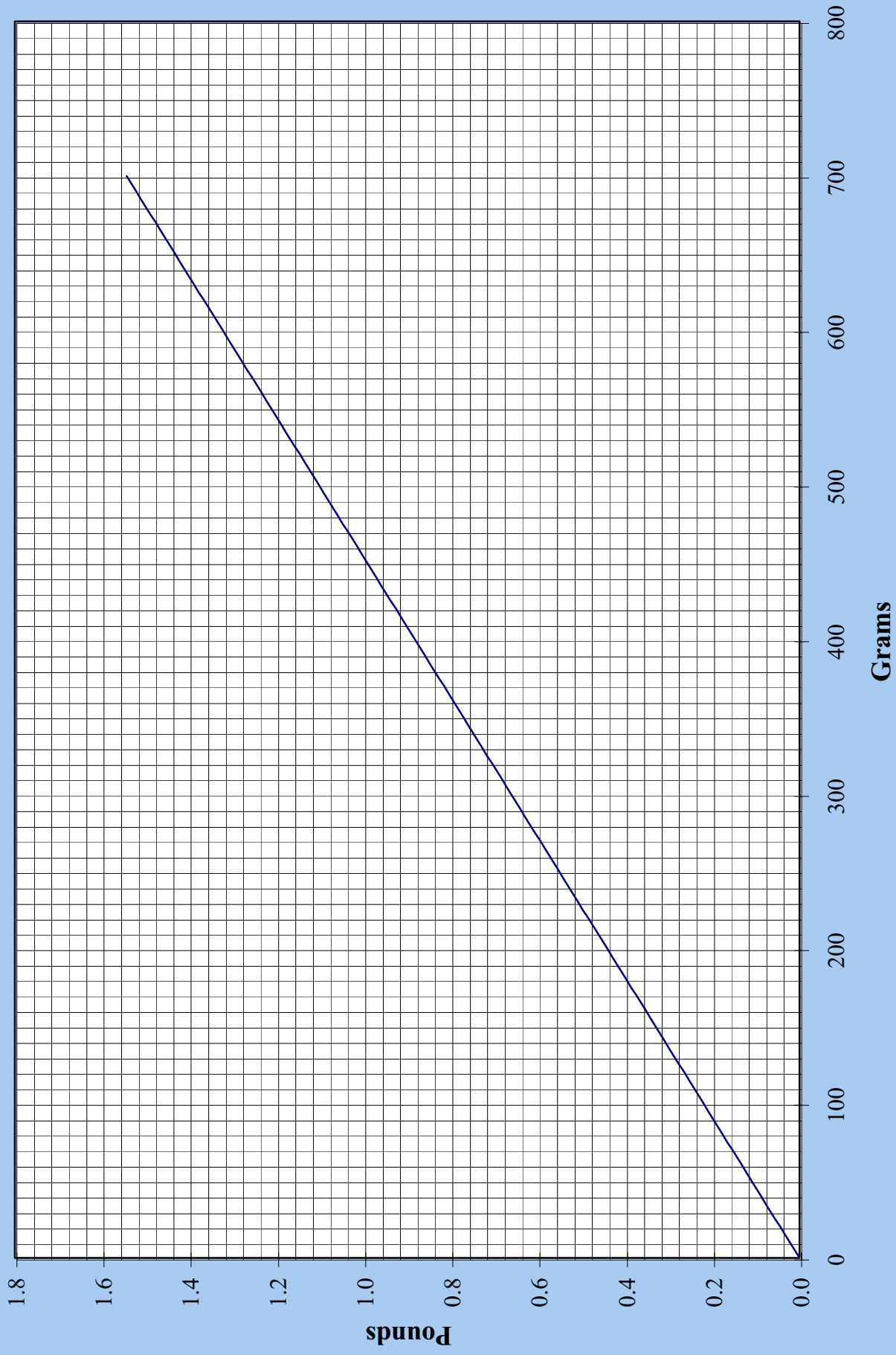
Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr
370	12,402	12,402,400	411	13,777	13,776,720	452	15,151	15,151,040
371	12,436	12,435,920	412	13,810	13,810,240	453	15,185	15,184,560
372	12,469	12,469,440	413	13,844	13,843,760	454	15,218	15,218,080
373	12,503	12,502,960	414	13,877	13,877,280	455	15,252	15,251,600
374	12,536	12,536,480	415	13,911	13,910,800	456	15,285	15,285,120
375	12,570	12,570,000	416	13,944	13,944,320	457	15,319	15,318,640
376	12,604	12,603,520	417	13,978	13,977,840	458	15,352	15,352,160
377	12,637	12,637,040	418	14,011	14,011,360	459	15,386	15,385,680
378	12,671	12,670,560	419	14,045	14,044,880	460	15,419	15,419,200
379	12,704	12,704,080	420	14,078	14,078,400	461	15,453	15,452,720
380	12,738	12,737,600	421	14,112	14,111,920	462	15,486	15,486,240
381	12,771	12,771,120	422	14,145	14,145,440	463	15,520	15,519,760
382	12,805	12,804,640	423	14,179	14,178,960	464	15,553	15,553,280
383	12,838	12,838,160	424	14,212	14,212,480	465	15,587	15,586,800
384	12,872	12,871,680	425	14,246	14,246,000	466	15,620	15,620,320
385	12,905	12,905,200	426	14,280	14,279,520	467	15,654	15,653,840
386	12,939	12,938,720	427	14,313	14,313,040	468	15,687	15,687,360
387	12,972	12,972,240	428	14,347	14,346,560	469	15,721	15,720,880
388	13,006	13,005,760	429	14,380	14,380,080	470	15,754	15,754,400
389	13,039	13,039,280	430	14,414	14,413,600	471	15,788	15,787,920
390	13,073	13,072,800	431	14,447	14,447,120	472	15,821	15,821,440
391	13,106	13,106,320	432	14,481	14,480,640	473	15,855	15,854,960
392	13,140	13,139,840	433	14,514	14,514,160	474	15,888	15,888,480
393	13,173	13,173,360	434	14,548	14,547,680	475	15,922	15,922,000
394	13,207	13,206,880	435	14,581	14,581,200	476	15,956	15,955,520
395	13,240	13,240,400	436	14,615	14,614,720	477	15,989	15,989,040
396	13,274	13,273,920	437	14,648	14,648,240	478	16,023	16,022,560
397	13,307	13,307,440	438	14,682	14,681,760	479	16,056	16,056,080
398	13,341	13,340,960	439	14,715	14,715,280	480	16,090	16,089,600
399	13,374	13,374,480	440	14,749	14,748,800	481	16,123	16,123,120
400	13,408	13,408,000	441	14,782	14,782,320	482	16,157	16,156,640
401	13,442	13,441,520	442	14,816	14,815,840	483	16,190	16,190,160
402	13,475	13,475,040	443	14,849	14,849,360	484	16,224	16,223,680
403	13,509	13,508,560	444	14,883	14,882,880	485	16,257	16,257,200
404	13,542	13,542,080	445	14,916	14,916,400	486	16,291	16,290,720
405	13,576	13,575,600	446	14,950	14,949,920	487	16,324	16,324,240
406	13,609	13,609,120	447	14,983	14,983,440	488	16,358	16,357,760
407	13,643	13,642,640	448	15,017	15,016,960	489	16,391	16,391,280
408	13,676	13,676,160	449	15,050	15,050,480	490	16,425	16,424,800
409	13,710	13,709,680	450	15,084	15,084,000	491	16,458	16,458,320
410	13,743	13,743,200	451	15,118	15,117,520	492	16,492	16,491,840

## POWER CONVERSION TABLE

Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr	Hp (boiler)	Btu/Hr x 10 <sup>3</sup>	Btu/Hr
493	16,525	16,525,360	534	17,900	17,899,680	575	19,274	19,274,000
494	16,559	16,558,880	535	17,933	17,933,200	576	19,308	19,307,520
495	16,592	16,592,400	536	17,967	17,966,720	577	19,341	19,341,040
496	16,626	16,625,920	537	18,000	18,000,240	578	19,375	19,374,560
497	16,659	16,659,440	538	18,034	18,033,760	579	19,408	19,408,080
498	16,693	16,692,960	539	18,067	18,067,280	580	19,442	19,441,600
499	16,726	16,726,480	540	18,101	18,100,800	581	19,475	19,475,120
500	16,760	16,760,000	541	18,134	18,134,320	582	19,509	19,508,640
501	16,794	16,793,520	542	18,168	18,167,840	583	19,542	19,542,160
502	16,827	16,827,040	543	18,201	18,201,360	584	19,576	19,575,680
503	16,861	16,860,560	544	18,235	18,234,880	585	19,609	19,609,200
504	16,894	16,894,080	545	18,268	18,268,400	586	19,643	19,642,720
505	16,928	16,927,600	546	18,302	18,301,920	587	19,676	19,676,240
506	16,961	16,961,120	547	18,335	18,335,440	588	19,710	19,709,760
507	16,995	16,994,640	548	18,369	18,368,960	589	19,743	19,743,280
508	17,028	17,028,160	549	18,402	18,402,480	590	19,777	19,776,800
509	17,062	17,061,680	550	18,436	18,436,000	591	19,810	19,810,320
510	17,095	17,095,200	551	18,470	18,469,520	592	19,844	19,843,840
511	17,129	17,128,720	552	18,503	18,503,040	593	19,877	19,877,360
512	17,162	17,162,240	553	18,537	18,536,560	594	19,911	19,910,880
513	17,196	17,195,760	554	18,570	18,570,080	595	19,944	19,944,400
514	17,229	17,229,280	555	18,604	18,603,600	596	19,978	19,977,920
515	17,263	17,262,800	556	18,637	18,637,120	597	20,011	20,011,440
516	17,296	17,296,320	557	18,671	18,670,640	598	20,045	20,044,960
517	17,330	17,329,840	558	18,704	18,704,160	599	20,078	20,078,480
518	17,363	17,363,360	559	18,738	18,737,680	600	20,112	20,112,000
519	17,397	17,396,880	560	18,771	18,771,200	601	20,146	20,145,520
520	17,430	17,430,400	561	18,805	18,804,720	602	20,179	20,179,040
521	17,464	17,463,920	562	18,838	18,838,240	603	20,213	20,212,560
522	17,497	17,497,440	563	18,872	18,871,760	604	20,246	20,246,080
523	17,531	17,530,960	564	18,905	18,905,280	605	20,280	20,279,600
524	17,564	17,564,480	565	18,939	18,938,800	606	20,313	20,313,120
525	17,598	17,598,000	566	18,972	18,972,320	607	20,347	20,346,640
526	17,632	17,631,520	567	19,006	19,005,840	608	20,380	20,380,160
527	17,665	17,665,040	568	19,039	19,039,360	609	20,414	20,413,680
528	17,699	17,698,560	569	19,073	19,072,880	610	20,447	20,447,200
529	17,732	17,732,080	570	19,106	19,106,400	611	20,481	20,480,720
530	17,766	17,765,600	571	19,140	19,139,920	612	20,514	20,514,240
531	17,799	17,799,120	572	19,173	19,173,440	613	20,548	20,547,760
532	17,833	17,832,640	573	19,207	19,206,960	614	20,581	20,581,280
533	17,866	17,866,160	574	19,240	19,240,480	615	20,615	20,614,800

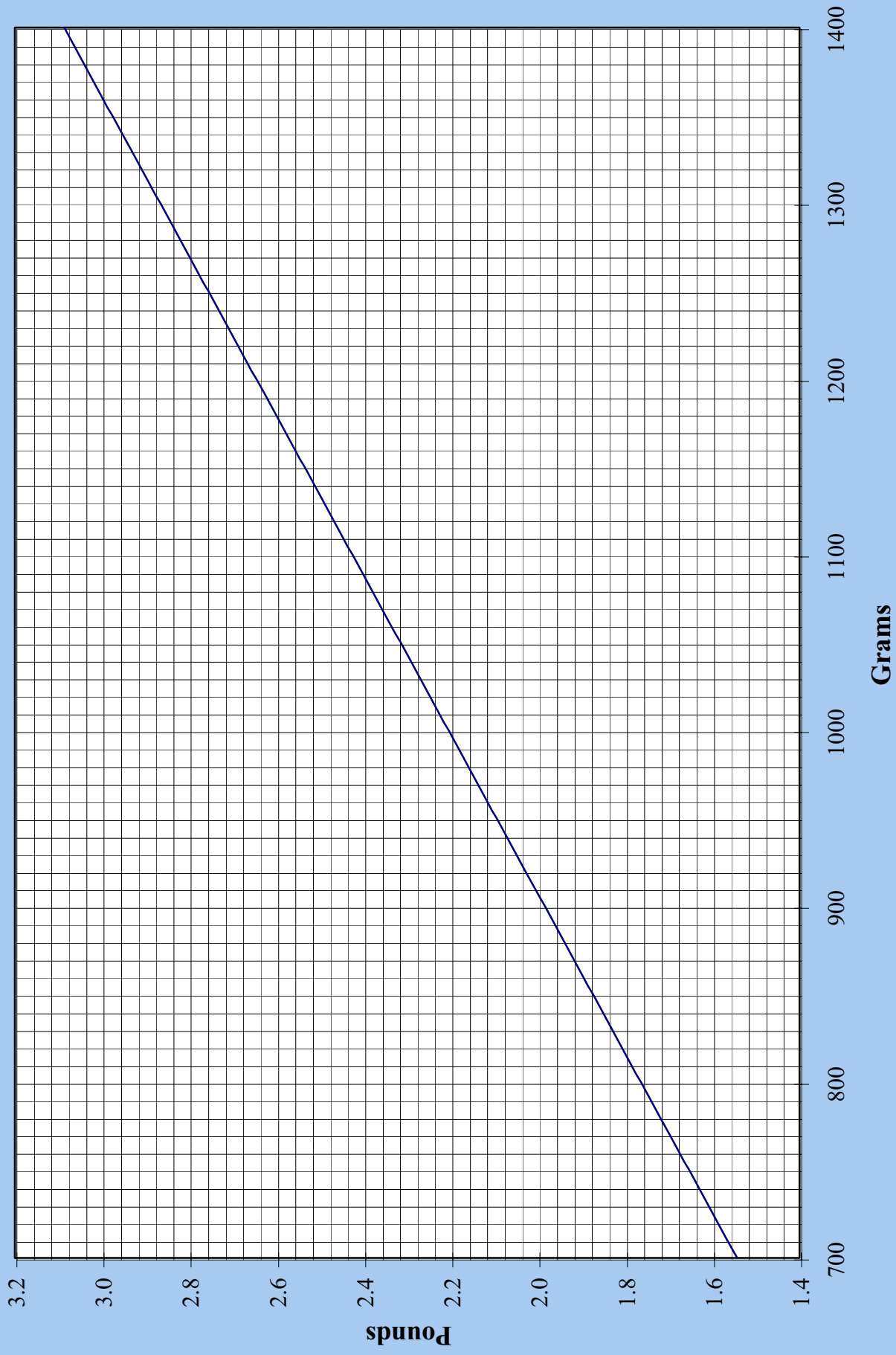
# MASS CONVERSION

Grams - Pounds



# MASS CONVERSION

Grams - Pounds



## MASS CONVERSION TABLE

Grams	Pounds	Grams	Pounds	Grams	Pounds
2	0.0044	84	0.1852	166	0.3660
4	0.0088	86	0.1896	168	0.3704
6	0.0132	88	0.1940	170	0.3749
8	0.0176	90	0.1985	172	0.3793
10	0.0221	92	0.2029	174	0.3837
12	0.0265	94	0.2073	176	0.3881
14	0.0309	96	0.2117	178	0.3925
16	0.0353	98	0.2161	180	0.3969
18	0.0397	100	0.2205	182	0.4013
20	0.0441	102	0.2249	184	0.4057
22	0.0485	104	0.2293	186	0.4101
24	0.0529	106	0.2337	188	0.4145
26	0.0573	108	0.2381	190	0.4190
28	0.0617	110	0.2426	192	0.4234
30	0.0662	112	0.2470	194	0.4278
32	0.0706	114	0.2514	196	0.4322
34	0.0750	116	0.2558	198	0.4366
36	0.0794	118	0.2602	200	0.4410
38	0.0838	120	0.2646	202	0.4454
40	0.0882	122	0.2690	204	0.4498
42	0.0926	124	0.2734	206	0.4542
44	0.0970	126	0.2778	208	0.4586
46	0.1014	128	0.2822	210	0.4631
48	0.1058	130	0.2867	212	0.4675
50	0.1103	132	0.2911	214	0.4719
52	0.1147	134	0.2955	216	0.4763
54	0.1191	136	0.2999	218	0.4807
56	0.1235	138	0.3043	220	0.4851
58	0.1279	140	0.3087	222	0.4895
60	0.1323	142	0.3131	224	0.4939
62	0.1367	144	0.3175	226	0.4983
64	0.1411	146	0.3219	228	0.5027
66	0.1455	148	0.3263	230	0.5072
68	0.1499	150	0.3308	232	0.5116
70	0.1544	152	0.3352	234	0.5160
72	0.1588	154	0.3396	236	0.5204
74	0.1632	156	0.3440	238	0.5248
76	0.1676	158	0.3484	240	0.5292
78	0.1720	160	0.3528	242	0.5336
80	0.1764	162	0.3572	244	0.5380
82	0.1808	164	0.3616	246	0.5424

## MASS CONVERSION TABLE

Grams	Pounds	Grams	Pounds	Grams	Pounds
248	0.5468	330	0.7277	412	0.9085
250	0.5513	332	0.7321	414	0.9129
252	0.5557	334	0.7365	416	0.9173
254	0.5601	336	0.7409	418	0.9217
256	0.5645	338	0.7453	420	0.9261
258	0.5689	340	0.7497	422	0.9305
260	0.5733	342	0.7541	424	0.9349
262	0.5777	344	0.7585	426	0.9393
264	0.5821	346	0.7629	428	0.9437
266	0.5865	348	0.7673	430	0.9482
268	0.5909	350	0.7718	432	0.9526
270	0.5954	352	0.7762	434	0.9570
272	0.5998	354	0.7806	436	0.9614
274	0.6042	356	0.7850	438	0.9658
276	0.6086	358	0.7894	440	0.9702
278	0.6130	360	0.7938	442	0.9746
280	0.6174	362	0.7982	444	0.9790
282	0.6218	364	0.8026	446	0.9834
284	0.6262	366	0.8070	448	0.9878
286	0.6306	368	0.8114	450	0.9923
288	0.6350	370	0.8159	452	0.9967
290	0.6395	372	0.8203	454	1.0011
292	0.6439	374	0.8247	456	1.0055
294	0.6483	376	0.8291	458	1.0099
296	0.6527	378	0.8335	460	1.0143
298	0.6571	380	0.8379	462	1.0187
300	0.6615	382	0.8423	464	1.0231
302	0.6659	384	0.8467	466	1.0275
304	0.6703	386	0.8511	468	1.0319
306	0.6747	388	0.8555	470	1.0364
308	0.6791	390	0.8600	472	1.0408
310	0.6836	392	0.8644	474	1.0452
312	0.6880	394	0.8688	476	1.0496
314	0.6924	396	0.8732	478	1.0540
316	0.6968	398	0.8776	480	1.0584
318	0.7012	400	0.8820	482	1.0628
320	0.7056	402	0.8864	484	1.0672
322	0.7100	404	0.8908	486	1.0716
324	0.7144	406	0.8952	488	1.0760
326	0.7188	408	0.8996	490	1.0805
328	0.7232	410	0.9041	492	1.0849

## MASS CONVERSION TABLE

Grams	Pounds	Grams	Pounds	Grams	Pounds
494	1.0893	576	1.2701	658	1.4509
496	1.0937	578	1.2745	660	1.4553
498	1.0981	580	1.2789	662	1.4597
500	1.1025	582	1.2833	664	1.4641
502	1.1069	584	1.2877	666	1.4685
504	1.1113	586	1.2921	668	1.4729
506	1.1157	588	1.2965	670	1.4774
508	1.1201	590	1.3010	672	1.4818
510	1.1246	592	1.3054	674	1.4862
512	1.1290	594	1.3098	676	1.4906
514	1.1334	596	1.3142	678	1.4950
516	1.1378	598	1.3186	680	1.4994
518	1.1422	600	1.3230	682	1.5038
520	1.1466	602	1.3274	684	1.5082
522	1.1510	604	1.3318	686	1.5126
524	1.1554	606	1.3362	688	1.5170
526	1.1598	608	1.3406	690	1.5215
528	1.1642	610	1.3451	692	1.5259
530	1.1687	612	1.3495	694	1.5303
532	1.1731	614	1.3539	696	1.5347
534	1.1775	616	1.3583	698	1.5391
536	1.1819	618	1.3627	700	1.5435
538	1.1863	620	1.3671	702	1.5479
540	1.1907	622	1.3715	704	1.5523
542	1.1951	624	1.3759	706	1.5567
544	1.1995	626	1.3803	708	1.5611
546	1.2039	628	1.3847	710	1.5656
548	1.2083	630	1.3892	712	1.5700
550	1.2128	632	1.3936	714	1.5744
552	1.2172	634	1.3980	716	1.5788
554	1.2216	636	1.4024	718	1.5832
556	1.2260	638	1.4068	720	1.5876
558	1.2304	640	1.4112	722	1.5920
560	1.2348	642	1.4156	724	1.5964
562	1.2392	644	1.4200	726	1.6008
564	1.2436	646	1.4244	728	1.6052
566	1.2480	648	1.4288	730	1.6097
568	1.2524	650	1.4333	732	1.6141
570	1.2569	652	1.4377	734	1.6185
572	1.2613	654	1.4421	736	1.6229
574	1.2657	656	1.4465	738	1.6273

## MASS CONVERSION TABLE

Grams	Pounds	Grams	Pounds	Grams	Pounds
740	1.6317	822	1.8125	904	1.9933
742	1.6361	824	1.8169	906	1.9977
744	1.6405	826	1.8213	908	2.0021
746	1.6449	828	1.8257	910	2.0066
748	1.6493	830	1.8302	912	2.0110
750	1.6538	832	1.8346	914	2.0154
752	1.6582	834	1.8390	916	2.0198
754	1.6626	836	1.8434	918	2.0242
756	1.6670	838	1.8478	920	2.0286
758	1.6714	840	1.8522	922	2.0330
760	1.6758	842	1.8566	924	2.0374
762	1.6802	844	1.8610	926	2.0418
764	1.6846	846	1.8654	928	2.0462
766	1.6890	848	1.8698	930	2.0507
768	1.6934	850	1.8743	932	2.0551
770	1.6979	852	1.8787	934	2.0595
772	1.7023	854	1.8831	936	2.0639
774	1.7067	856	1.8875	938	2.0683
776	1.7111	858	1.8919	940	2.0727
778	1.7155	860	1.8963	942	2.0771
780	1.7199	862	1.9007	944	2.0815
782	1.7243	864	1.9051	946	2.0859
784	1.7287	866	1.9095	948	2.0903
786	1.7331	868	1.9139	950	2.0948
788	1.7375	870	1.9184	952	2.0992
790	1.7420	872	1.9228	954	2.1036
792	1.7464	874	1.9272	956	2.1080
794	1.7508	876	1.9316	958	2.1124
796	1.7552	878	1.9360	960	2.1168
798	1.7596	880	1.9404	962	2.1212
800	1.7640	882	1.9448	964	2.1256
802	1.7684	884	1.9492	966	2.1300
804	1.7728	886	1.9536	968	2.1344
806	1.7772	888	1.9580	970	2.1389
808	1.7816	890	1.9625	972	2.1433
810	1.7861	892	1.9669	974	2.1477
812	1.7905	894	1.9713	976	2.1521
814	1.7949	896	1.9757	978	2.1565
816	1.7993	898	1.9801	980	2.1609
818	1.8037	900	1.9845	982	2.1653
820	1.8081	902	1.9889	984	2.1697

## MASS CONVERSION TABLE

Grams	Pounds	Grams	Pounds	Grams	Pounds
986	2.1741	1,068	2.3549	1,150	2.5358
988	2.1785	1,070	2.3594	1,152	2.5402
990	2.1830	1,072	2.3638	1,154	2.5446
992	2.1874	1,074	2.3682	1,156	2.5490
994	2.1918	1,076	2.3726	1,158	2.5534
996	2.1962	1,078	2.3770	1,160	2.5578
998	2.2006	1,080	2.3814	1,162	2.5622
1,000	2.2050	1,082	2.3858	1,164	2.5666
1,002	2.2094	1,084	2.3902	1,166	2.5710
1,004	2.2138	1,086	2.3946	1,168	2.5754
1,006	2.2182	1,088	2.3990	1,170	2.5799
1,008	2.2226	1,090	2.4035	1,172	2.5843
1,010	2.2271	1,092	2.4079	1,174	2.5887
1,012	2.2315	1,094	2.4123	1,176	2.5931
1,014	2.2359	1,096	2.4167	1,178	2.5975
1,016	2.2403	1,098	2.4211	1,180	2.6019
1,018	2.2447	1,100	2.4255	1,182	2.6063
1,020	2.2491	1,102	2.4299	1,184	2.6107
1,022	2.2535	1,104	2.4343	1,186	2.6151
1,024	2.2579	1,106	2.4387	1,188	2.6195
1,026	2.2623	1,108	2.4431	1,190	2.6240
1,028	2.2667	1,110	2.4476	1,192	2.6284
1,030	2.2712	1,112	2.4520	1,194	2.6328
1,032	2.2756	1,114	2.4564	1,196	2.6372
1,034	2.2800	1,116	2.4608	1,198	2.6416
1,036	2.2844	1,118	2.4652	1,200	2.6460
1,038	2.2888	1,120	2.4696	1,202	2.6504
1,040	2.2932	1,122	2.4740	1,204	2.6548
1,042	2.2976	1,124	2.4784	1,206	2.6592
1,044	2.3020	1,126	2.4828	1,208	2.6636
1,046	2.3064	1,128	2.4872	1,210	2.6681
1,048	2.3108	1,130	2.4917	1,212	2.6725
1,050	2.3153	1,132	2.4961	1,214	2.6769
1,052	2.3197	1,134	2.5005	1,216	2.6813
1,054	2.3241	1,136	2.5049	1,218	2.6857
1,056	2.3285	1,138	2.5093	1,220	2.6901
1,058	2.3329	1,140	2.5137	1,222	2.6945
1,060	2.3373	1,142	2.5181	1,224	2.6989
1,062	2.3417	1,144	2.5225	1,226	2.7033
1,064	2.3461	1,146	2.5269	1,228	2.7077
1,066	2.3505	1,148	2.5313	1,230	2.7122