## BTU'S Are a rate of usage

This is an all too common question, "What is the btu rating?"
Btu's are a rate of usage, the higher/ more you use, the more fuel/ btu usage.
The higher the pressure the more gas you can burn.
Here is a useful site with BTU ratings charts on burner rings:
http://www.daganind.com/resources.html
If you turn it up or turn it down your BTU usage will change.
We use 25,000 btu's per linear foot when calculate customs for $10 \sim 12 "$ flame. For standard burners we actually hook to meter
and measure at 800 ' elevation.
Burning 100,000 btu's $=1$ gallon (actually $91,600 \mathrm{btu}$ 's $=$ one gallon of propane, $103,000 \mathrm{btu}$ 's in one gallon of natural gas). If you have 5 gallons, you actually have 500,000 btu's to burn, 20 lb propane tank.
1 gallon = 100,00 btu's
5 gallons = 500,000 btu's
Burning at 100,000 btu's you will burn up one gallon an hour or 5 gallons in 5 hours
Burning at 20,000 btu's you will burn up 1 gallon in 5 hours and you will burn up 5 gallons in 20 hours.
Now for the long version:
Table 1 - Average Btu Content of Fuels
Electricity:
1 KW 3,412 Btu/hr
Natural Gas:
1 Cubic Foot of Natural Gas 1,030 Btu's
$1 \mathrm{CCF}=100 \mathrm{CuFt}=1$ Therm 103,000 Btu's
$1 \mathrm{MCF}=1,000 \mathrm{Cu} \mathrm{Ft}=10$ Therms 1,034,000 Btu's $=1.034 \mathrm{MMBtu}$ 's
Propane:
1 Gal Propane 91,600 Btu's
1 Cu Ft Propane 2,500 Btu's
Gasoline:
1 Gal of Gasoline (mid grade) 125,000 Btu's
Ethanol:
1 Gal of Ethanol 76,000 Btu's
Fuel Oil:
1 Gal of \#1 Kerosene 135,000 Btu's
1 Gal of \#2 Fuel Oil 138,000 Btu's
1 Gal of \#4 Fuel Oil 145,000 Btu's
1 Gal of \#6 Fuel Oil 150,000 Btu's
Other:
Wood (air dried) 20,000,000/cord or 8,000/pound
Pellets (for pellet stoves; premium) 16,500,000/ton
Coal 28,000,000/ton
1 Barrel of Oil = 42 Gallons
1 Btu = 252 calories
$1 \mathrm{Btu}=.293$ watt
1 ton of refrigeration $=12,000 \mathrm{Btu} / \mathrm{hr}$
1 lb residential garbage $=2,500 \mathrm{Btu}$
1 lb coal $=12,000 \mathrm{Btu}$
1 lb wood $=3,500 \mathrm{Btu}$
$1 \mathrm{hp}=746$ watts
$1 \mathrm{hp}=33,479 \mathrm{Btu} / \mathrm{hr}$ (boiler)
$1 \mathrm{hp}=33,000$ foot-lbs. $/ \mathrm{min}$
$1 \mathrm{hp}=42,440 \mathrm{Btu} / \mathrm{min}$.
1 watt $=3.412 \mathrm{Btu}$
1 kilowatt = 1,000 watts
1 kilowatt = 1.341 horsepower
1,000 kilowatts $=1$ Megawatt
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