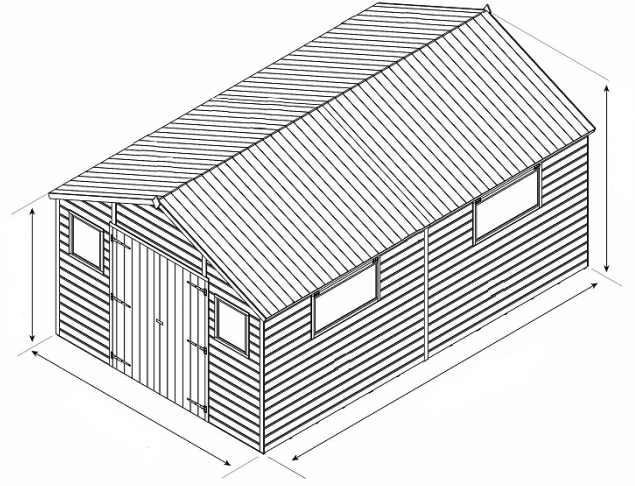# How Much Heat Do I Need?

A Comfortable working temperature is not only essential for people to work safely and productively, it is a legal requirement. The amount of heat required to give comfortable working conditions depends on several factors, the most important are; -

- The standard of insulation in your building
- How much warm air escapes through frequently opened doors
- The outside temperature
  15°C / 59°F is a comfortable temperature for people who are moving about and so generating some body heat
- Calculations are based on a Delta T Δt of 20°C, i.e. an ambient temperature of -5°C and is a required temperature of +15°C

## Which description best fits the building or area that you want to heat:

| A | No Insulation (e.g. corrugated sheet), doors frequently opened | 9 BTU/cu.ft |
|---|---|---|
| B | Poor insulation ( e.g. single skin brick or block), some single-glazed windows, doors opened fairly often | 6.8 BTU/cu.ft |
| C | Average insulation (e.g. Double skin brick or block), windows single-glazed, roof insulated; doors not opened much | 5 BTU/cu.ft |
| D | Good insulation (e.g. Blocks plus cladding with insulation between), double-glazed windows, doors rarely opened | 2.7 BTU/cu.ft |

**HERE IS YOUR STEP-BY-STEP GUIDE FOR WORKING OUT HOW MUCH HEAT YOU NEED**

A. **Length of area to be heated _____ feet Width _____ feet**
   **Average height _____ feet** (take your height to eaves & height to apex and divide by 2 )

B. **Multiply length x width x average height**
   **= Volume_____ cubic feet**

C. **Select the description which best suits the area to be heated from the table above and fill in the appropriate BTU/cu.ft figure here _____**

D. **Multiply the volume from B _____ cubic feet by the figure for C _____ BTU/cu.ft**
   **= total heat requirement _____ BTU/hr.**

The amount of BTU/cu.ft required is dependant on the insulation of the building and the average ambient temperature prevailing in the area where the building is situated. A building with no insulation in an area that experiences extremely adverse weather conditions may require up to 9 BTU per cu.ft. For general calculations, we recommend 5 BTU per cu.ft

## To convert BTU to KW simply divide by 3414