

How to Calculate the Wattage Requirement of Your Room

Step 1 - Measure your Room and Calculate the Total Volume

To calculate the wattage requirement for your room, you'll first need to calculate the volume of your room.

To do this, you'll need to multiply **Room Area x Room Height = Room Volume**.

- If you have a rectangular or square room, multiply the **Room Width x Room Length x Room Height** to calculate the room volume in cubic metres.
- If your room is an odd shape, you'll need to work out the total floor area of the space, then multiply **Room Area x Room Height** to calculate the room volume.

Example

- *Jim has a room that's 4 metres long, 5 metres wide and 2.4 metres high.*
- *Therefore the room volume is 4 metres x 5 metres x 2.4 metres = 48 cubic metres.*

Step 2 - Calculate the Wattage Requirement of Your Room

Next, you'll need to consult the table below to find the appropriate watts/cubic metre figure for your room, so that you can calculate the total wattage requirement.

1. Find the column with the house efficiency description that best matches your home.
2. Find the row with the room description that best matches your room.
3. Multiply **Room Volume x Watts/Cubic Metre** to calculate the wattage requirement for your room.
4. Select the radiator or combination of radiators that meets the wattage requirement of the room. Remember that it's always better to specify more heating than less. It won't cost more to run (because the radiators will only use the energy needed to keep the room at a stable temperature), but it will ensure the room stays warm and the heaters aren't working harder than they should.

Example

- Jim worked out in Step 1 that the volume of his room is 48 cubic metres.
- He has a Good Modern Home that's at least 7 star efficiency.
- The room he's trying to heat has large windows and more than 50% of the walls are external facing, so it best matches the Living Space Poor row. Therefore, he needs **25 Watts/Cubic Metre**.
- Jim multiplies the room volume x watts/cubic metre to calculate the wattage requirement for the room. $48 \times 25 = 1200 \text{ Watts}$
- Jim chooses a **1250W radiator** as this is the closest match to his requirements

	Passive or Highly Efficient Home Extremely well insulated & high-efficiency double glazing. 8 stars +	Good Modern Home Good insulation in most or all surfaces, double glazing. 7 stars+	Typical Modern Home Mass produced home from last 5 years. Meets energy efficiency standards (6 stars). Single-glazing or basic double glazing.	Slightly Older Home 5 to 20 years old, mass produced. Some insulation but not great. Single glazed windows.	Older, draughty home Pre-2000's - basic or no insulation. Draughty.
Living Space Poor Greater than 50% external walls, large windows	22.5 Watts/Cubic Metre	25 Watts/Cubic Metre	30 Watts/Cubic Metre	32.5 Watts/Cubic Metre	50+ Watts/Cubic Metre
Living Space Average Between 25% and 50% external wall, medium windows	20 Watts/Cubic Metre	22.5 Watts/Cubic Metre	27.5 Watts/Cubic Metre	30 Watts/Cubic Metre	42.5 Watts/Cubic Metre
Living Space Great Less than 25% external wall, small windows	20 Watts/Cubic Metre	20 Watts/Cubic Metre	25 Watts/Cubic Metre	27.5 Watts/Cubic Metre	35 Watts/Cubic Metre

Bedroom Poor Greater than 50% external walls, large windows	20 Watts/Cubic Metre	25 Watts/Cubic Metre	30 Watts/Cubic Metre	32.5 Watts/Cubic Metre	35 Watts/Cubic Metre
Bedroom Average Between 25% and 50% external wall, medium windows	20 Watts/Cubic Metre	22.5 Watts/Cubic Metre	27.5 Watts/Cubic Metre	30 Watts/Cubic Metre	32.5 Watts/Cubic Metre
Bedroom Great Less than 25% external wall, small windows	20 Watts/Cubic Metre	20 Watts/Cubic Metre	25 Watts/Cubic Metre	27.5 Watts/Cubic Metre	30 Watts/Cubic Metre
Bathroom Small or no window, 25% - 50% external wall	25 Watts/Cubic Metre	30 Watts/Cubic Metre	32.5 Watts/Cubic Metre	37.5 Watts/Cubic Metre	45 Watts/Cubic Metre
Hallway No windows, minimal external walls	20 Watts/Cubic Metre	20 Watts/Cubic Metre	25 Watts/Cubic Metre	27.5 Watts/Cubic Metre	30 Watts/Cubic Metre