Performance Estimate - a guide

The Performance Task in Heatpunk was updated on 17 March 2025 to be compliant with the new version MCS calculation methods outlined in the updated **MCS 031: Heat Pump Pre-sale information and performance calculation** standards.

Full details of the MCS standard can be found here: mcscertified.com/an-update-to-mcs-031-the-heat-pump-pre-sale-information-and-performance-calculation.

> **Compliance with this update is mandatory from 18 March 2025.**

How this update affects existing projects

Any existing Heatpunk projects with completed MCS performance estimates prior to this date will remain unchanged within Heatpunk, with the option to switch to the new version:

Performance Estimate

IMPORTANT NOTE: Due to an update to the heat pump performance estimate by MCS, this performance task is deprecated and will be retired in several months time. New projects will automatically use the new performance task.

If you would like to switch to the new performance task, please click here.

> It's recommended that completed project reports are downloaded as PDFs and copies are kept for your records.

How the new task works:

Enter the performance task in your project:

Step 1 - Proposed system:

- Set the **purpose of the system:** Heatpunk will set the default based on your project settings. If you have added a DHW cylinder then it will assume "space heating and hot water" but this can be overridden if the estimate is being performed prior to the full design being completed.

- Set the **Emitter type(s):** Again [...] to your design but if you are comp [...] esign you can adjust this as needed:

Proposed System

Purpose of proposed system

> Space heating and hot water ⌄

Emitter type(s)

> Approx. 50% radiators and 50%... ⌄

Based on your project we would recommend "Approx. 50% radiators and 50% underfloor".

- If UFH is selected you will then need to select a type:

Type of underfloor heating

> Flooring on screed ⌃

No underfloor heating

Flooring on screed

Flooring on chipboard on aluminium

Flooring on high conductivity panel on aluminium

Step 2 - Property Details:

> For MCS compliance this step needs to be completed using EPC data

Fill out the energy demand for space heating, hot water and total property floor-space from a valid EPC:

Property Details

⬤ Use project data ⓘ

Energy demand for space heating

| ❗ kWh / year |

Energy demand for hot water

| ❗ kWh / year |

Total property floorspace (not footprint)

| ❗ m² |

Step 2 / 2   Back   Confirm

> You may choose to switch to project data, doing this will populate the fields from Heatpunk, with a degree day calculation used to give the kWh "energy demand for space heating" figure, and the "energy demand for hot water" coming from the DHW storage selection. To comply with MCS, users must use EPC data to complete the performance calculation. You may then provide a subsequent performance estimate using project data, but you must explain the difference between the two estimates to the customer.

Step 3 - MCS Performance Results:

Heatpunk will do the rest!

Your Energy Requirements

Energy required for space heating	21218 kWh
Demand to be supplied by the heat pump	21218 kWh
Energy required for hot water	2296 kWh
Demand to be supplied by the heat pump	2296 kWh

The MCS performance estimate uses '**Outdoor Low Temperature**' from the CIBSE guide A 99.6th percentile. This may vary from the project ODT if it has been left on the default 99th percentile temperature. The **average watts per square metre** is calculated based on the kWh data provided (as per MCS 031) and so when using EPC data this will likely vary from the "project data" values calculated by Heatpunk.

Your Property	
Your postcode prefix	CB
Degree days per year	2033
Outdoor low temperature	-3 °C
Total property floorspace (not property footprint)	170.00 m^2
Average watts per square metre	61 W / m^2

The calculated **watts per square metre** is then used to give an indicative heat pump capacity, which again may be different than the from your Heatpunk project when using EPC data. If the full heat loss calcs have been done with Heatpunk and the project data has been used to give the estimate, then this value should be closer to the output power of the heat pump being used.

"System pasteurisation strategy" is pulled directly from the DHW storage settings in the heat pump task, and so can be adjust there. This also applies to the **proposed flow temperature,** with it being pulled from the flow temp slider in the same task.

Proposed System	
Indicative heat pump capacity	10.44 kW
Heat pump type	Air source heat pump
System is proposed to provide	Space heat and hot water
System pasteurisation strategy will be	Provided weekly by immersion
Proposed heating system will be	Approx. 50% radiators and 50% underfloor
The proposed flow temperature will be	45 °C

Rather than using SCOPs as per the previous MCS performance calculation, the new version uses SPF (seasonal performance factor) which is pulled from *Table 2: Heat emitter guide* of MCS 031 depending on the **property specific heat loss** (W/m2) and the **flow temperature.**

This SPF will then be used give an estimate of **electricity consumption for space heating.** A set performance factor of 1.7 is used for water heating, and the method for system pasteurisation is detailed in MCS 031. The combined estimate of electricity consumption is then converted into a **high** and **low** estimate of **+/- 10%**.

Performance		
The seasonal performance factor is calculated to be:	3.4	
Estimate of electricity consumption for space heating	6241 kWh / year	
Estimate of electricity consumption for water heating	1351 kWh / year	
Estimate of electricity consumption for system pasteurisation	182 kWh / year	
	High estimate	Low estimate
Estimate of the annual energy consumption of the proposed heat pump	8550 kWh	6996 kWh

The results of this calculation will be given in the "**MCS 031 Performance Calculation**" report when using EPC data, as well as the technical report and customer proposal. If the task has been completed using project data, it will not generate the separate MCS 031 report but it will give a performance estimate in the technical report and customer proposal.

Notes

The full table (*Table 2: heat emitter guide)* is given on page 16 of MCS 031 standard (

https://mcscertified.com/wp-content/uploads/2025/01/MCS-031-Heat-Pump-Pre-Sale-Information-and-Calculations-Issue-4.0.pdf).

On the right hand side of the performance task we will display any relevant notes about the system:

Notes:

⚠ **Warning**

The system can operate as designed for tiles. For wood and carpet floor coverings, additional measures to improve property energy efficiency are likely to be needed (such as improved insulation or draught proofing).

✔ **Note**

Screed on floors with UFH complies with BS1264 Type A construction laid on floor insulation - default pipe spacing 200mm cc.

❓ **Info**

Specialist UFH designers can provide more accurate information for heating performance with different systems.

Financial Task

You may need to adjust the proposed flow temp, heat emitters used, or the lower the watts per square metre heat loss (improve building fabric) in order to generate a viable proposal.