

ideal
HEATING

Heat Pump selection tools



idealheating.com

Introduction.

Choosing the correct size heat pump is critical to the success of the system design and installation.

The Ideal heat pump sizing app is a tool specifically designed to help the installer or specifier select the right size heat pump and plan their install. The Ideal heat pump sizing app has 2 sections with access dependent on the role of the user:

- 1. Heat pump Estimator – a quick sizing tool designed to give a quick and simple estimate for initial heat pump specification**
- 2. Heat pump Designer – a detailed room by room heat loss calculator designed in accordance with EN12831 that also includes a radiator sizing tool and sound assessment tool inline with MCS 020**

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Heat pump Estimator.

The heat pump Estimator is a fast and intuitive sales/specification tool:



Suitable for all user types



Estimates running costs and fuel comparison costs



Estimates a suitable heat pump from basic inputs



Estimates property heat loss



Enables selection of ancillary components to create a shopping list



Enables saving/printing of PDF result for future reference, customer communication or merchant pricing

The Ideal Heating Estimator is designed as a simple tool to help with initial heat pump specification on the majority of UK housing types.

It is important to note that an estimating tool is not a substitute for a full heat loss calculation and in most cases such a calculation should be carried out prior to purchase or installation.

The heat pump Estimator allows you to create a likely specification at initial customer contact, saving time both on site and in the office.

The Estimator should be used only with the certain building specifications (identified below). In cases where the specifications do not meet the scope of the application and there is no option to upgrade, then the Estimator is not an appropriate tool. In such cases a full heat loss survey and calculation should be made to ascertain the correct product and solution from the outset.

- Wall insulation (EWI, IWI or Cavity filled)
- Roof insulation (min 270mm, or "room in roof" with rafter insulation)
- Double or triple glazing

The following page details the inputs that are required for the Estimator to deliver an output.

Note the details here as you will need to have all this information to achieve a successful output.

Please do not attempt to guess any of the parameters as this will likely result in error.

E.g. if a 1970s house is "guessed" at 70m² when in fact it is 100m², the error could be over 2kW.

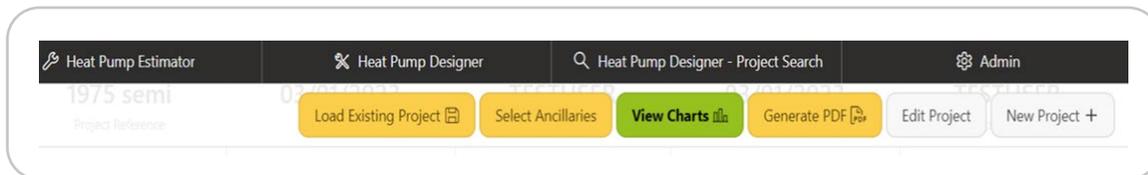


Heat pump Estimator inputs.

Parameter	Input detail
Project Reference (text)	Enter an alpha numeric value of your choice
Post Code (text)	Enter post code
Select House Age (drop down) ▼	Select approximate decade of build
No of Bedrooms (text numerical value)	Used for DHW cylinder sizing
Select Application Type (drop down) ▼	Heating only – Heating & DHW
Select Wall Construction (drop down) ▼	Important! – This must reflect the property accurately
Select Loft Insulation (drop down) ▼	Important! – This must reflect the property accurately
Total Floor Area (m ²) (text numerical value)	Enter the floor area in m ² . This must include all heated areas/floors
Select Emitter Type (drop down) ▼	Select radiators or underfloor
Select Design Flow Temperature	Options available will depend on house age/type selections
Select Window Type (drop down) ▼	Select window type
Select Glazing Coverage (drop down) ▼	Select high glazing if heavily glazed wall/conservatory
Select Comparison Fuel (drop down) ▼	Select the existing or alternative fuel type
Comparison Fuel Price (p/kWh)	Enter the current tariff of the comparison fuel

Heat pump Estimator summary.

When all inputs have been entered, click on the 'Calculate' tab.



You can now select any ancillary components for your project such as a hot water cylinder, heat pump mounting options, controls and buffer tank etc.

Click the 'Select Ancillaries' tab. From the options on the left, highlight the item and click the right arrow to populate the box on the right.

Now click on 'Save Changes'.

Note: the list of available ancillaries will be dependent on the selected heat pump.

Select Ancillaries
219434 - Heat Pump Cylinder 210
AH074232 - Navilink A59 INTER
AH700437 - Buffer Tank 50ltr
AH809536 - Rubber Antivibration Feet 600m (by 2)
AH809567 - KM1 7M 5/8"-3/8"

Heat pump Estimator output.

Your summary estimation will be saved and you can refer to it at any time using the 'Load Existing Project' option

You can now view the estimated performance by selecting 'View Charts'

You can now view and print the full summary detail by selecting 'Generate PDF'

To save the summary just select 'Download PDF'

The screenshot shows the 'Heat Pump Designer' interface. The navigation bar includes 'Home', 'Heat Pump Estimator', 'Heat Pump Designer', and 'Admin'. Below the navigation bar, there are buttons for 'Load Existing Project', 'Select Ancillaries', 'View Charts', 'Generate PDF', 'Edit Project', and 'New Project +'. The main content area displays the 'Alfea Extensa R32 - 10 kW' heat pump unit, a 'Summary' table with energy consumption and SCOP values, 'Selected Ancillaries' list, and 'DHW Details' table.

Summary	
Total Heat Loss	6.00 kW
Est Annual Energy Consumption	18,370.64 kWh
Est Annual Electricity Consumption	5,204.15 kWh
SCOP	3.53

DHW Details	
DHW	Ideal Heat Pump Cylinder DHW 250
Cylinder Size	250ltrs
Required Volume	225ltrs

Selected Ancillaries	
219434 - Heat pump Cylinder 250	
AH074232 - Navilink A59 INTER	
AH700437 - Buffer Tank 50ltr	
AH809536 - Rubber Antivibration Feet 600mm (by 2)	
AH809567 - KM1 7M 5/8"-3/8"	

Alfea Extensa R32 - 10 kW	
100% Heating Capacity @ Specific ODT/DFT	8.12 kW
Coverage	135.3%

Heat pump Designer.

The Heat pump Designer application is a detailed design tool, that enables a full room by room heat loss analysis of the property.

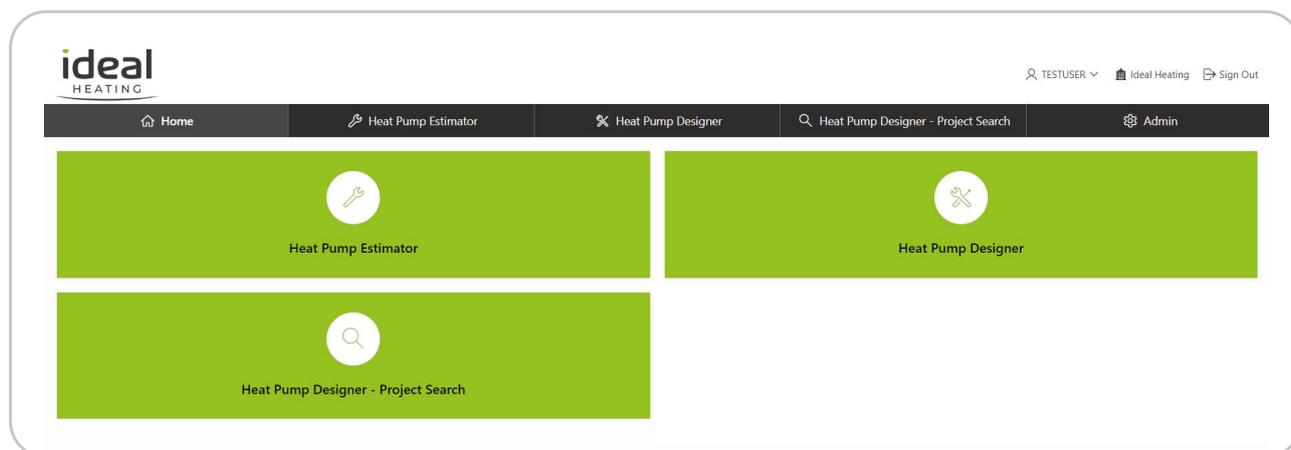
For use by:

- Developers
- Designers
- MCS design engineers
- Architects

Includes:

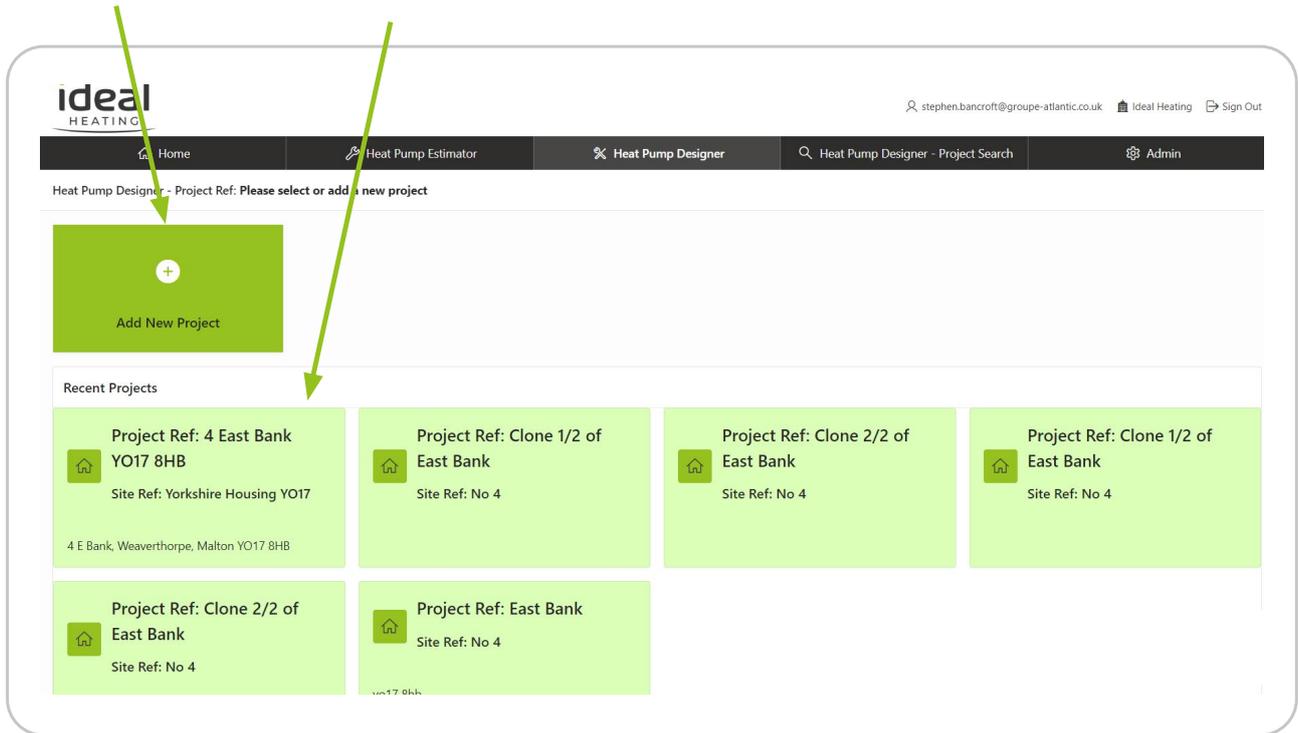
- Room by room heat loss calculator
- In accordance with EN12831
- Includes radiator sizing tool
- Includes sound assessment tool – MCS 020

Generates a specific product list including cylinder, accessories and a radiator schedule.

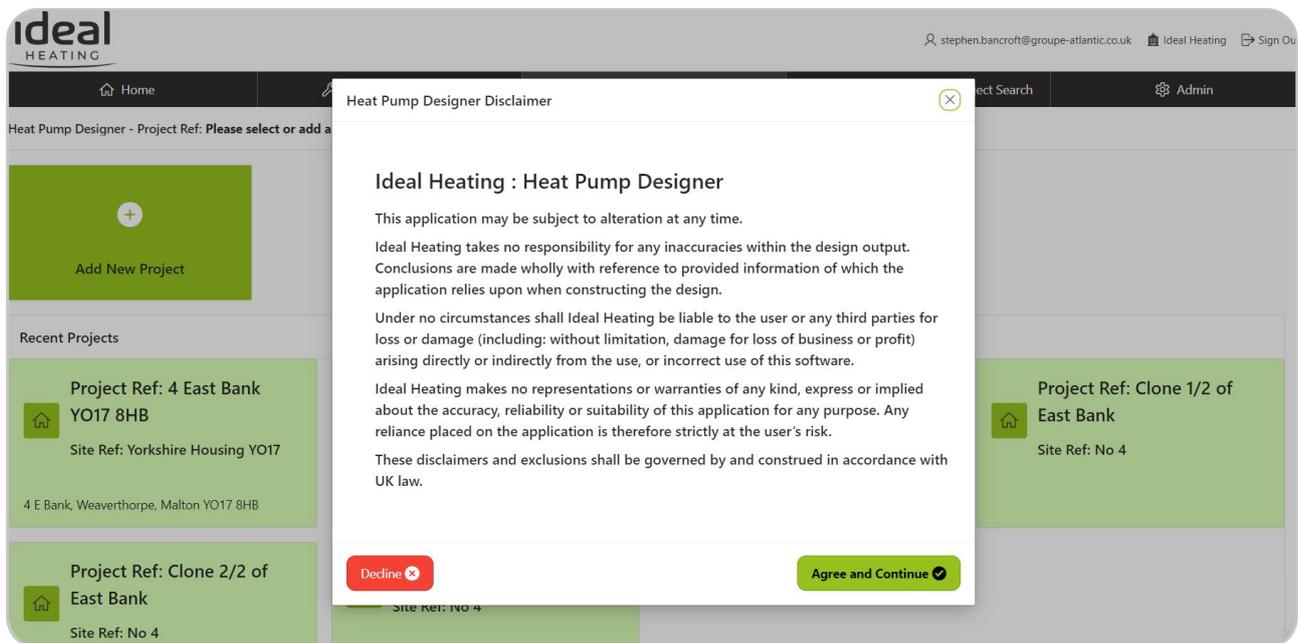


Click on the Heat pump Designer tab to open.

You can now 'Add a New Project' or open an existing project.



In order to create a project, the user must agree to the terms and conditions of use.



Opening an existing project will take you to the section where you last left that project.

The screenshot shows the 'Heat Pump Designer - Project Search' results page. The header includes the 'ideal HEATING' logo, user information (stephen.bancroft@groupe-atlantic.co.uk), and navigation links (Home, Heat Pump Estimator, Heat Pump Designer, Heat Pump Designer - Project Search, Admin). The main content area displays 'Heat Pump Designer - Project Ref: 4 East Bank YO17 8HB' with buttons for 'Back to Calculator Results' and 'Save & Generate Recommended HP'. Below this, there are sections for 'Design Conditions', 'Current System Details', and 'Room Details'. The 'Room Details' section lists four rooms: Kitchen, Bathroom, Master Bedroom, and Bedroom 2, each with its specific heat loss and design parameters.

Design Conditions				Current System Details		
Postcode YO	Design Flow Temp (°C) 50	Space Heating (kWh) 10,435.00	Immersion Energy (kWh) 63.68	Age of Existing System (years) 15	Fuel Efficiency % 80	Old Fuel Type Oil
Outside Design Temp (°C) -3.7	Heat Loss (kW) 6.28	DHW Demand (kWh) 1,782.96	Total Energy Usage (kWh) 12,281.64	4, 6, 8, 10, 12, 14, 16		

Room Details			
Kitchen Kitchen Heat Loss: 1,244W Length: 2.32m x Width: 4.08m x Height: 2.45m Design Temp: 18°C Air Changes: 2.00	Bathroom Bathroom Heat Loss: 696W Length: 2.37m x Width: 2.43m x Height: 2.42m Design Temp: 22°C Air Changes: 3.00	Master Bedroom Bedroom Heat Loss: 968W Length: 2.98m x Width: 5.44m x Height: 2.42m Design Temp: 18°C Air Changes: 1.00	Bedroom 2 Bedroom Heat Loss: 583W Length: 3.27m x Width: 2.88m x Height: 2.42m Design Temp: 18°C Air Changes: 1.00

Selecting 'Add New Project' will take you to the project details and initial entry screens.

The screenshot shows the 'Project Detail' form in the software. The header is similar to the previous screenshot, but the main content area is titled 'Heat Pump Designer - Project Ref: Please select or add a new project | Project Detail'. Below the title are three status indicators: 'All required fields complete' (green), 'Some required fields complete' (yellow), and 'No required fields complete' (red). The form is divided into two main sections: 'Project Details' and 'Project Designer'. The 'Project Details' section includes fields for Project Ref, Site Ref, Project Creation Date, and Address. The 'Project Designer' section includes a dropdown for Project Designer (Boiler Man), Affiliated Company (Ideal Heating), MCS No (MCS-12345678-U), Company Address (National Ave, Hull), and Project Designer Contact No (+44). A 'Save Project Details' button is located at the top right of the form.

Enter all details highlighted with a red tab.
Note: you can use any alpha/numeric array for the project and site refs.

Select your company/name from the Project Designer list on the right.

When completed, click on 'Save Project Details'

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Home Heat Pump Estimator Heat Pump Designer Heat Pump Designer - Project Search Admin

Heat Pump Designer - Project Ref: Please select or add a new project Project Detail

All required fields complete Some required fields complete No required fields complete

1. Project Details >>

Save Project Details

Project Details

Project Ref 1232

Site Ref 1232

Project Creation Date 22/03/2023

Address 12 Regent St., St. James's, London SW1Y 4PE + Enter Manually

Project Designer

Project Designer Boiler Man

If no Project Designers are available to select, please see your Administrator as your user does not have an engineer linked yet.

Affiliated Company Ideal Heating

MCS No MCS-12345678-U

Company Address National Ave, Hull

+44 Project Designer Contact No

When completed, select the 'Property Specification' tab.

If you wish to alter any information, click on 'Edit Project Details' and once amended, click on 'Save'.

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Home Heat Pump Estimator Heat Pump Designer Heat Pump Designer - Project Search Admin

Heat Pump Designer - Project Ref: Please select or add a new project Project Detail

All required fields complete Some required fields complete No required fields complete

1. Project Details >> 2. Property Specification >> 3. Additional Information >> 4. System Specification

Continue to Space Definitions >

Edit Project Details

Project Details

Project Ref 1232

Site Ref 1232

Project Creation Date 22/03/2023

Address 12 Regent St., St. James's, London SW1Y 4PE + Enter Manually

Project Designer

Project Designer Boiler Man

If no Project Designers are available to select, please see your Administrator as your user does not have an engineer linked yet.

Affiliated Company Ideal Heating

MCS No MCS-12345678-U

Company Address National Ave, Hull

+44 Project Designer Contact No

Select the details in the Cells marked with a red tab in the uppermost row. You can now enter the U-Values or fabric description for the building.

Tip: For new builds it is recommended to only use the values from the design and SAP documents:
 For existing buildings where no design or building detail is present – use the drop down menu and select the fabric description.

Select the appropriate description and U-value for all fabric types. Here are examples of drop down options:

Description	U Value
Plaster 13mm, block 10mm, cavity, block 100mm, plaster 13mm	1.02
Plaster 13mm, brick 102.5mm, plaster 13mm	1.76
Plaster 13mm, brick 215mm, plaster 13mm	1.33
Plaster 13mm, standard aerated block 100mm, plaster 13mm	1.66
Plaster 13mm, standard aerated block 125mm, plaster 13mm	1.53
Plaster, breeze block 100mm, plaster	1.58
Plasterboard 12.5mm, studding 75mm, plasterboard 12.5mm	1.72

Description	U Value
19mm Render, 75mm foam board, Brick 102mm, Plaster	0.30
19mm Render, 75mm foam board, Brick 228mm, Plaster	0.28
19mm Render, 75mm foam board, Brick 343mm, Plaster	0.27
19mm Render, 75mm foam board, concrete 102mm, Plaster	0.31
19mm Render, 75mm foam board, concrete 152mm, Plaster	0.30
19mm Render, 75mm foam board, concrete 204mm, Plaster	0.30
19mm Render, 75mm foam board, concrete 254mm, Plaster	0.30

Select 'Additional information' and click 'Edit'.

Click 'Apply Changes to Additional Info' when complete. Then select 'System Specification'.

Here you can enter the design details for the project.

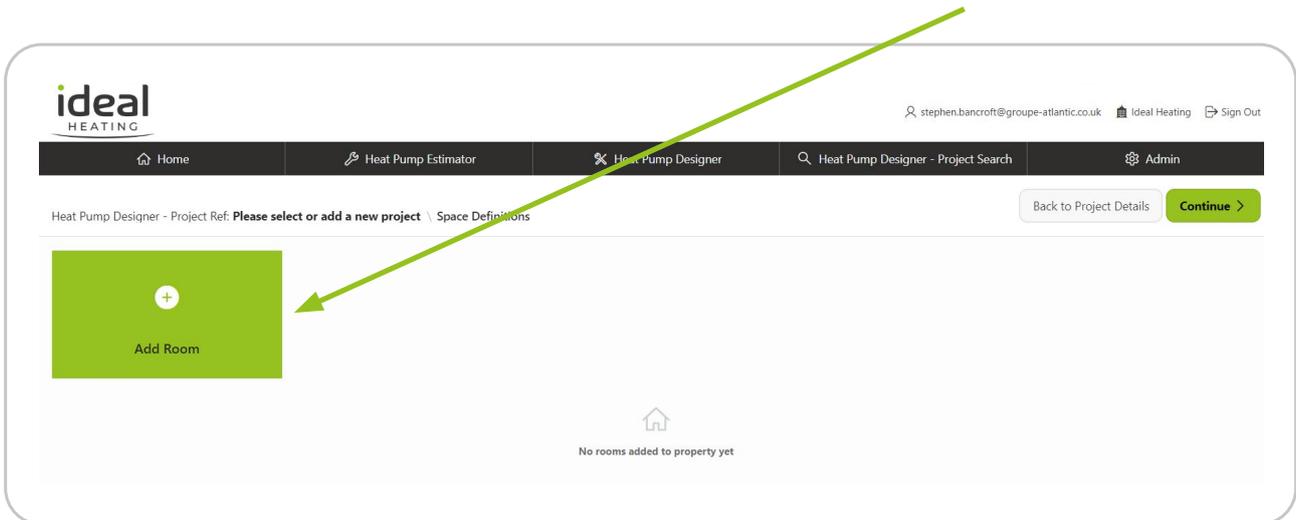
Please complete all cells with a red tab.

When completed – click on 'Apply Changes to System specification'.

When complete, select 'Continue' to Space Definitions.

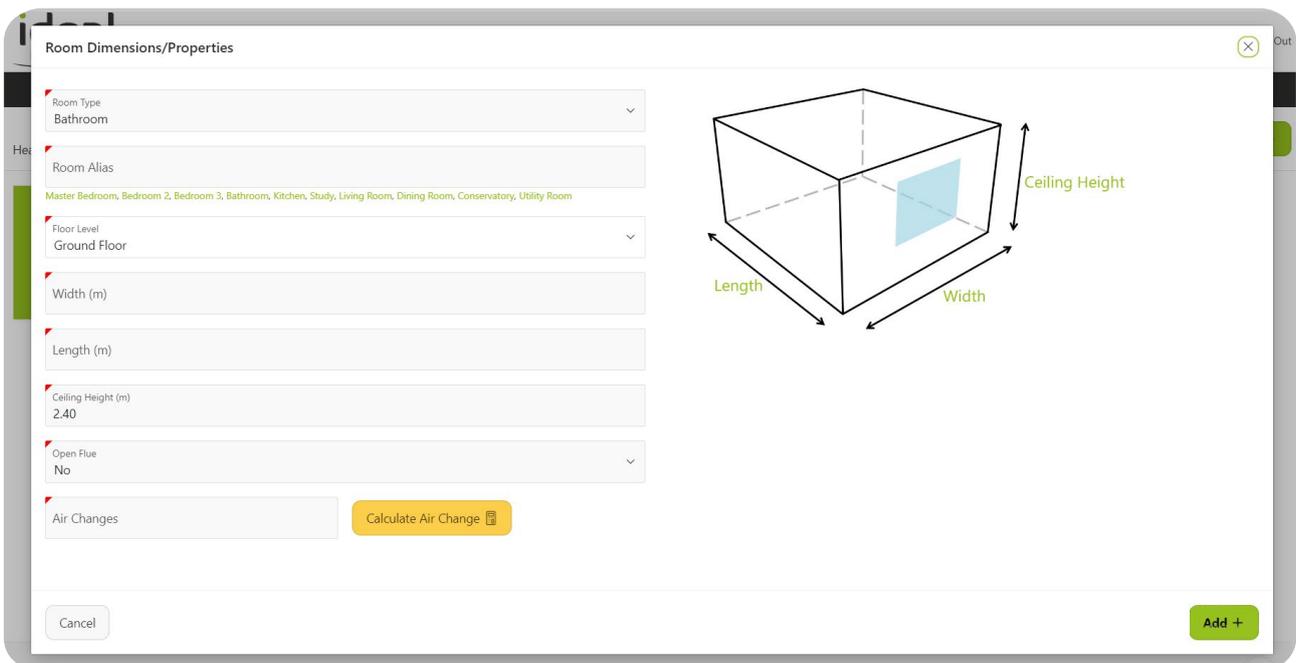
Tip: Remember you can select any of these entry cells and click on the Edit/Save tabs to amend any details

In 'Space Definitions' you can create the rooms within your project – start by clicking 'Add Room'!



Note: The Room Type is used for specific air change values and internal temperatures, so must reflect the 'type' of room

In Room Alias you can re-name the room appropriately, i.e Bedroom 3, Study, Jim's room etc.



Tip: If you know the air change rate value from the SAP report or building specification, it is recommended to enter that value. If a room is fully internal, manually enter 0.5. Otherwise you can use the "Calculate Air Change" tab.

Example of completed room details.

Room Dimensions/Properties

Room Type: Hall

Room Alias: Main Hallway

Floor Level: Ground Floor

Width (m): 2.50

Length (m): 5.50

Ceiling Height (m): 2.40

Open Flue: No

Air Changes: 2

Calculate Air Change

Now click on 'Add' to save the room details.

Cancel Add +

The recorded room reference will be displayed in tan below.

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Home Heat Pump Estimator Heat Pump Designer Heat Pump Designer - Project Search Admin

Heat Pump Designer - Project Ref: Please select or add a new project | Space Definitions

Back to Project Details Continue >

Add Room

Main Hallway
Ground Floor
Room Temp: 18°C
Air Change Rate: 2.00

L - 5.50m x W - 2.50m x H - 2.40m

Edit Dimensions Heat Loss Detail

To enter the thermal properties of the room, select 'Heat Loss Detail'.

The ground floor is pre populated – you can now add the relative fabric details.

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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

Heat Pump Designer - Project Ref: **Please select or add a new project** \ Space Definitions \ Add Heat Loss Details

Delete Room | Back to Space Definitions

Main Hallway

Fabric/Window/Door Detail			Ventilation Detail				Room Detail	
Total Fabric Loss	Total Window Loss	Total Door Loss	Air Changes	Width	Length	Height	Design Temp	Outdoor Design Temp
163.35 W	0.00 W	0.00 W	2.00 p/hr	2.50m	5.50m	2.40m	18°C	-1.8°C
			Volume	Air Change Factor	ΔT	Total Ventilation Loss	Total Energy Usage	Total Heat Loss
			33.00m ³	0.33	19.80°C	431.24 W	933.87 kWh	594.59 W

Fabric Details (Walls, Ceilings, Floors)

Ground Floor

Fabric Heat Loss: 163.35 W

U-Value: 0.60 W/m²K.
Length: 5.50m x Width: 2.50m

Add Fabric Details +

Select 'Add Fabric Details', select the fabric type and add the dimensions where appropriate. Then click 'Add Heat Loss'.

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Heat Pump Designer - Project Ref: **Please select or add a new project** \ Space Definitions \ Add Heat Loss Details

Delete Room | Back to Space Definitions

Main Hallway

Fabric/Window/Door Detail			Ventilation Detail				Room Detail	
Total Fabric Loss	Total Window Loss	Total Door Loss	Air Changes	Width	Length	Height	Design Temp	Outdoor Design Temp
163.35 W	0.00 W	0.00 W	2.00 p/hr	2.50m	5.50m	2.40m	18°C	-1.8°C
			Volume	Air Change Factor	ΔT	Total Ventilation Loss	Total Energy Usage	Total Heat Loss
			33.00m ³	0.33	19.80°C	431.24 W	933.87 kWh	594.59 W

Fabric Details (Walls, Ceilings, Floors)

Ground Floor

Fabric Heat Loss: 163.35 W

U-Value: 0.60 W/m²K.
Length: 5.50m x Width: 2.50m

Add Fabric Details +

Fabric Detail

Fabric Loss

- Select Fabric Loss Type -

- Select Fabric Loss Type -
- Internal Wall
- External Wall
- Ceiling
- Ground Floor
- Flat Roof
- Pitched Roof

U-Value (W/m²K)

Default Fabric U-Value

Cancel | Add and Open U Value Calculator | Add Heat Loss +

Here we see 4 walls, 1 ceiling and a floor have been selected – You will see a warning if this minimum criteria is not met.

Note: for upper floors select 'Roof & type', for a room below a room select 'Ceiling'!

The screenshot shows the 'Fabric Details (Walls, Ceilings, Floors)' section of the software. It contains six green cards with the following data:

Category	Fabric Heat Loss (W)	U-Value (W/m²K)	Length (m)	Width (m)	Height (m)
Ground Floor	163.35	0.60	5.50	2.50	-
External Wall	112.38	0.43	5.50	2.40	-
Ceiling	0	0.32	5.50	2.50	-
Internal Wall	0	1.33	5.50	2.40	-
External Wall	51.08	0.43	2.50	-	2.40
Internal Wall	-23.94	1.33	2.50	-	2.40

Buttons: 'Add Fabric Details +', 'Delete Room', 'Back to Space Definitions', 'Add Window Dimensions +'

Now enter the Window and External door dimensions by selecting the appropriate tabs.

The screenshot shows the 'Window Detail' and 'External Door Detail' sections. A green arrow points from the 'Back to Space Definitions' button to the text: 'When completed, click 'Back to Space Definitions!'.'

Window Detail:

- Wood/PVC Double Glazed, low-E glass, argon filled
- Window Heat Loss: 133.06 W
- U-Value: 2.10 W/m²K
- Length: 2.00m x Height: 1.60m

External Door Detail:

- Glazed wood or PVC-U door
- Metal Triple Glazed
- Door Heat Loss: 113.26 W
- U-Value: 2.6 W/m²K
- Width: 1.00m x Height: 2.20m

Buttons: 'Delete Room', 'Back to Space Definitions', 'Add Window Dimensions +', 'Add Door Dimensions +'

You can now see the created room has turned from Tan to Green. This indicates the room design is complete.

The screenshot shows the 'ideal HEATING' software interface. The top navigation bar includes 'Home', 'Heat Pump Estimator', 'Heat Pump Designer', 'Heat Pump Designer - Project Search', and 'Admin'. The current page is 'Heat Pump Designer - Project Ref: Please select or add a new project | Space Definitions'. A green arrow points to the 'Add Room' button, with the text: 'You can now add additional rooms, following the format.' Below this, a room card for 'Main Hallway Ground Floor' is displayed, showing 'Room Temp: 18°C' and 'Air Change Rate: 2.00'. The dimensions are 'L - 5.50m x W - 2.50m x H - 2.40m'. Buttons for 'Edit Dimensions' and 'Heat Loss Detail' are visible at the bottom of the card.

Note: Only ground floors will be pre-populated – first floors are covered by the ceiling below – Select the floor level in the 'Add Room' tab.

When all rooms have been designed, click 'Continue'!

The screenshot shows the 'ideal HEATING' software interface with the 'Add Rooms' tab selected. The top navigation bar is the same as in the previous screenshot. The current page is 'Heat Pump Designer - Project Ref: Field trial Paddock | Space Definitions'. A green arrow points to the 'Continue' button, with the text: 'When all rooms have been designed, click "Continue"!'. Below this, a grid of room cards is displayed. Each card shows a room name, floor level, room temperature, air change rate, and dimensions. Buttons for 'Edit Dimensions' and 'Heat Loss Detail' are visible at the bottom of each card.

Room Name	Floor Level	Room Temp	Air Change Rate	Dimensions (L x W x H)
Main Hall	Ground Floor	18°C	2.00	1.50m x 2.50m x 2.40m
Living Room	Ground Floor	21°C	1.50	4.40m x 5.80m x 2.40m
Dining Room	Ground Floor	21°C	1.50	6.00m x 3.50m x 2.40m
WC	Ground Floor	18°C	2.00	0.90m x 1.90m x 2.40m
Utility Room	Ground Floor	18°C	2.00	-
Hall 2	Ground Floor	18°C	2.00	-

You now have the option to select the radiators for the rooms.

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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

Heat Pump Designer - Project Ref: Field trial Paddock | Calculator Results | Back to Space Definitions | Save and View Results

Room	Design Temp	Required Output: (Room Heat Loss)	Total Output of Selected Emitter(s)	Variance
Main Hall	18°C	426 W	0 W	-426 W
Living Room	21°C	2,515 W	0 W	-2,515 W
Dining Room	21°C	2,221 W	0 W	-2,221 W
WC	18°C	203 W	0 W	-203 W

To select radiators, click 'Add/Edit Radiators'.

Note - if you do not require the radiator tool at this stage – click 'Save and View Results'

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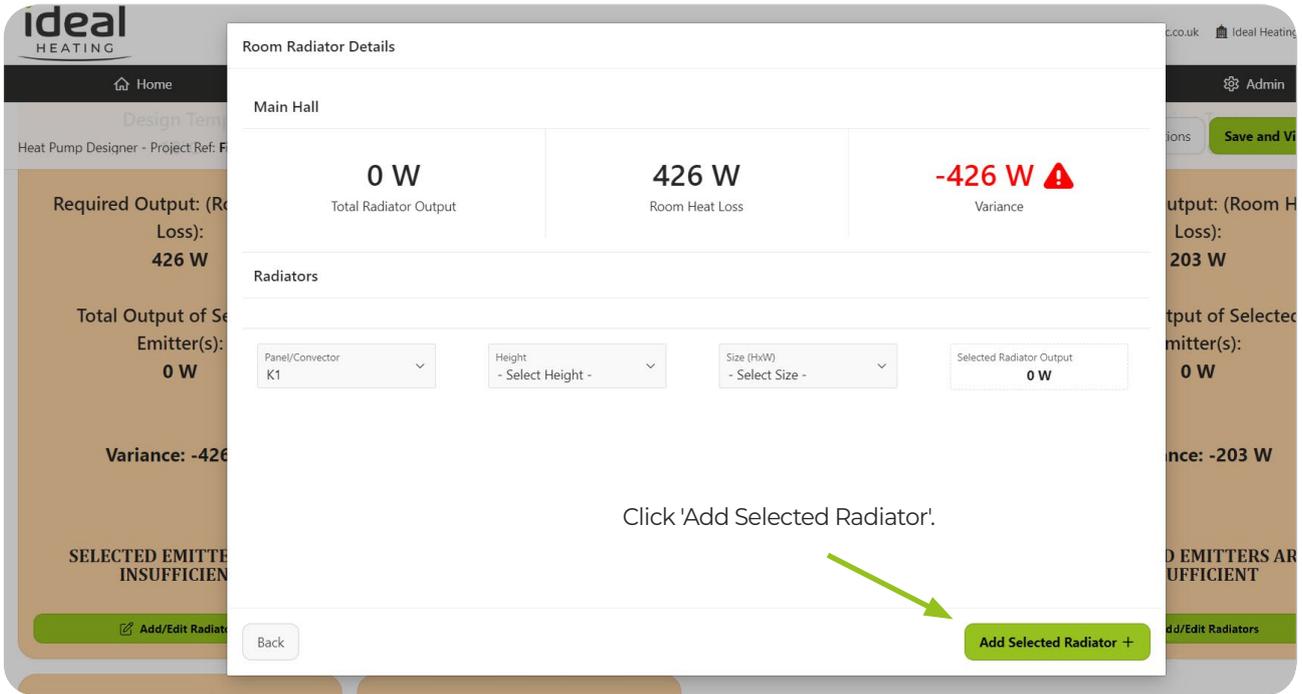
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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

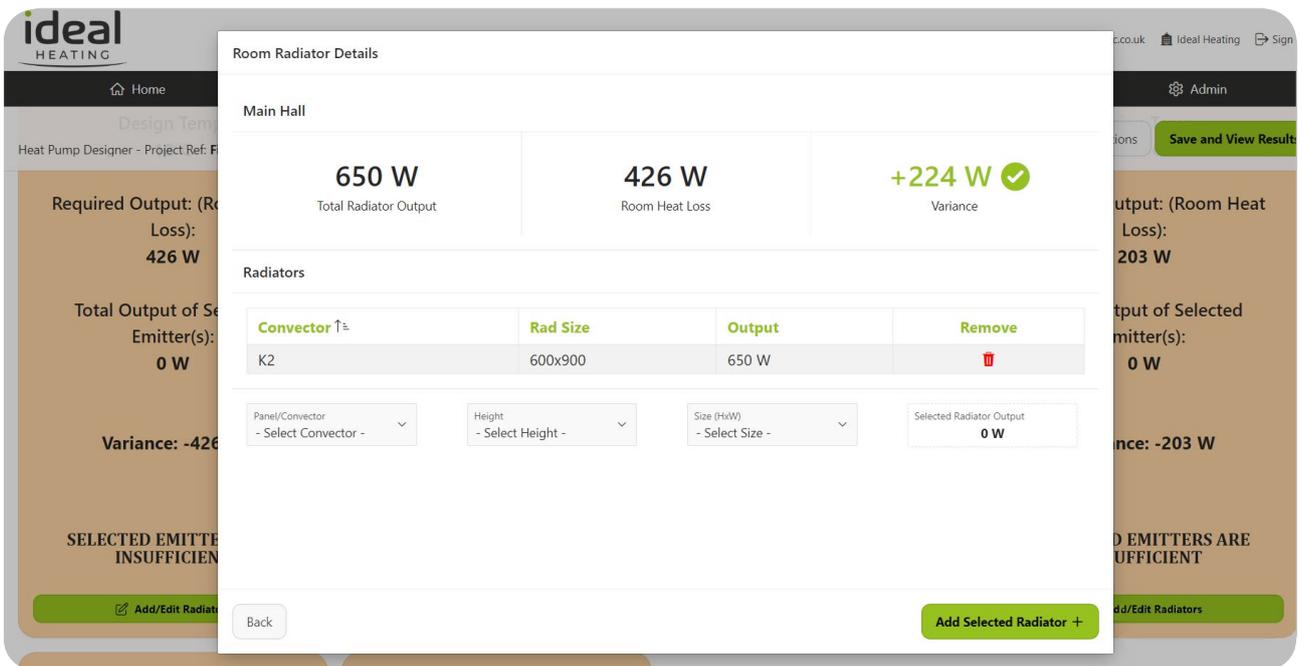
Heat Pump Designer - Project Ref: Field trial Paddock | Calculator Results | Design Temp: 21°C | Back to Space Definitions | Save and View Results

Room	Design Temp	Required Output: (Room Heat Loss)	Total Output of Selected Emitter(s)	Variance	Status
Main Hall	18°C	426 W	0 W	-426 W	SELECTED EMITTERS ARE INSUFFICIENT
Living Room	21°C	2,515 W	0 W	-2,515 W	SELECTED EMITTERS ARE INSUFFICIENT
Dining Room	21°C	2,221 W	0 W	-2,221 W	SELECTED EMITTERS ARE INSUFFICIENT
WC	18°C	203 W	0 W	-203 W	SELECTED EMITTERS ARE INSUFFICIENT

Select the radiator specification from the drop-down lists.



You can add additional radiators to suit. The variance shows the output surplus OR deficit with the selected radiator(s).



When completed – click 'Save and View Results'!

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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

Heat Pump Designer - Project Ref: **Field trial Paddock** \ Calculator Results

Back to Space Definitions | **Save and View Results**

Room	Design Temp	Required Output: (Room Heat Loss)	Total Output of Selected Emitter(s)	Variance
Main Hall	18°C	426 W	650 W	+224 W
Living Room	21°C	2,515 W	0 W	-2,515 W
Dining Room	21°C	2,221 W	0 W	-2,221 W
WC	18°C	203 W	0 W	-203 W

To generate a cost/carbon comparison, select the appropriate values in the upper cells with the red tabs: Then click 'Save and Generate Recommended HP'!

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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

Heat Pump Designer - Project Ref: **Field trial Paddock** \ Results

Back to Calculator Results | **Save & Generate Recommended HP**

Design Conditions				Current System Details		
Postcode HU	Design Flow Temp (°C) 50	Space Heating (kWh) 12,520.50	Immersion Energy (kWh) 53.06	Age of Existing System (years) 16	Fuel Efficiency % 90	Old Fuel Type Mains Gas Standard Rate
Outside Design Temp (°C) -3	Heat Loss (kW) 6.09	DHW Demand (kWh) 2,971.61	Total Energy Usage (kWh) 15,545.17	4, 6, 8, 10, 12, 14, 16		

Room Details

Room	Heat Loss	Length x Width x Height	Design Temp	Air Changes
WC Toilet	203W	0.9m x 1.9m x 2.4m	18°C	2.00
Utility Room Utility	526W	1.7m x 2.6m x 2.4m	18°C	2.00
Main Hall Hall	426W	1.5m x 2.5m x 2.4m	18°C	2.00
Hall 2 Hall	199W	2m x 1.5m x 2.4m	18°C	2.00

Here you can select the recommended HP or select an alternative from the dropdown on the right.

Confirm Heat Pump

6.09 kW
Property Total Heat Loss

Recommended Model
Recommended Heat Pump
Logic Air 8kW

	Logic Air 8kW Recommended Model
Design Flow Temperature	50°C
Heating Capacity @ ODT/DFT	6.23 kW
COP @ ODT/DFT	2.5
SCOP	3.99
HW SCOP	1.16

Recommended Model Coverage %

Selected Model
Selected Model
Logic Air 8kW

	Logic Air 8kW Selected Model
Design Flow Temperature	50°C
Heating Capacity @ ODT/DFT	6.23 kW
COP @ ODT/DFT	2.5
SCOP	3.99
HW SCOP	1.16

Selected Model Coverage %

Click 'Sound Power Level' for MCS020 calculation.

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Home | Heat Pump Estimator | Heat Pump Designer | Heat Pump Designer - Project Search | Admin

Heat Pump Designer - Project Ref: Field trial Paddock \ Results

Recommended Model

	Logic Air 8kW Recommended Model
Design Flow Temperature	50°C
Heating Capacity @ ODT/DFT	6.23 kW
Coverage	102.3%
COP @ ODT/DFT	2.5
SCOP	3.99
HW SCOP	1.16

Available Ancillaries for Recommended Heat Pump

Selected Model

	Logic Air 8kW Selected Model
Design Flow Temperature	50°C
Heating Capacity @ ODT/DFT	6.23 kW
Coverage	102.3%
COP @ ODT/DFT	2.5
SCOP	3.99
HW SCOP	1.16

Selected Ancillaries

Room Details

Back to Calculator Results | Edit Details | **Sound Power Level >**

Enter the appropriate details on the left and click 'Save and Get Result'!

The screenshot shows the 'Sound Power Level' configuration page. The top navigation bar includes the 'ideal HEATING' logo, user information (stephen.bancroft@groupe-atlantic.co.uk), and links for 'Home', 'Heat Pump Estimator', 'Heat Pump Designer', 'Heat Pump Designer - Project Search', and 'Admin'. The page title is 'Heat Pump Designer - Project Ref: Field trial Paddock \ Sound Power Level'. On the right, there are buttons for 'Back to Results' and 'Continue to Ancillary Selection >'. The main content area is titled 'Sound Power Level' and contains an 'Input Details' section with the following fields:

- Manufacturer Sound Power Level (dB): 55
- Sound Pressure Level: Q2 One Reflective Surface
- Distance from HP to Test Location (m): 5
- Barriers between HP and Test Location: Barrier (No View)
- Background Noise Level (dB): 40

A green button labeled 'Save and Get Result' is located in the bottom right corner of the form area. A green arrow points from the instruction text above to this button.

Remember you can click 'Edit' details if you wish to perform a re-design, such as moving the HP location or adding a barrier.

The screenshot shows the 'Sound Power Level' results page. The top navigation bar is identical to the previous screenshot. The page title is 'Heat Pump Designer - Project Ref: Field trial Paddock \ Sound Power Level'. On the right, there are buttons for 'Back to Results' and 'Continue to Ancillary Selection >'. The main content area is titled 'Sound Power Level' and contains two sections: 'Input Details' and 'Results'. The 'Input Details' section is identical to the previous screenshot. The 'Results' section displays the following values:

- Distance Reduction (dB): -21
- Sound Pressure at Test Location (dB): 24
- Differential (dB): 16
- Decibel Correction (dB): 40
- Final Result (dB): 40

A green box labeled 'Final Result' with a checkmark icon and the text 'Passed' is located at the bottom of the results section. An 'Edit Details' button is located in the top right corner of the main content area.

You can now add any ancillary components for your design.

Available Ancillaries

- AH700436 - Buffer Tank 25ltr
- AH700437 - Buffer Tank 50ltr
- AH809567 - KM1 7M 5/8"-3/8"
- AH809565 - KM1 5M 5/8"-3/8"
- AH809575 - KM1 25M 5/8"-3/8"
- 219437 - Heat pump Cylinder 180 SL
- 219438 - Heat pump Cylinder 210 SL
- 219435 - Heat pump Cylinder 250
- 219436 - Heat pump Cylinder 300
- 219433 - Heat pump cylinder 180

Selected Ancillaries

- AH074232 - Navilink A59 INTER
- AH809536 - Rubber Antivibration Feet 600mm (by 2)
- AH809570 - KM1 10M 5/8"-3/8"
- 219434 - Heat pump Cylinder 210

When complete – Click 'Continue to Financials'

Enter the relative tariff cost for electricity and the existing or competing fuel type.

Example 30p/kWh for electricity and 10p/kWh for mains gas.

Fuel Price for Calculations

Electricity 0.29 KGCo2 p/kWh	14.50 >
Gas 0.21 KGCo2 p/kWh	4.15 >
Oil 0.32 KGCo2 p/kWh	6.00 >
LPG 0.24 KGCo2 p/kWh	7.00 >
Smokeless fuel 0.40 KGCo2 p/kWh	8.00 >
Coal 0.40 KGCo2 p/kWh	8.00 >

Select 'Generate PDF' – Then click 'Download' PDF if you wish to save/print a copy.

The screenshot shows the Ideal Heating web application interface. At the top, there is a navigation bar with the Ideal Heating logo on the left and user information (stephen.bancroft@groupe-atlantico.co.uk, Ideal Heating, Sign Out) on the right. Below the navigation bar, there are tabs for 'Home', 'Heat Pump Estimator', 'Heat Pump Designer', 'Heat Pump Designer - Project Search', and 'Admin'. The main content area features a 'Generate Project PDF' button and a 'Back to Financials' button. The central part of the page displays the Ideal Heating logo and the title 'PROJECT REFERENCE & PROPERTY DETAILS'. Below this, there are three sections: 'PROJECT', 'PROPERTY DETAILS', and 'FUEL TARIFF INFORMATION', each with a list of attributes and values.

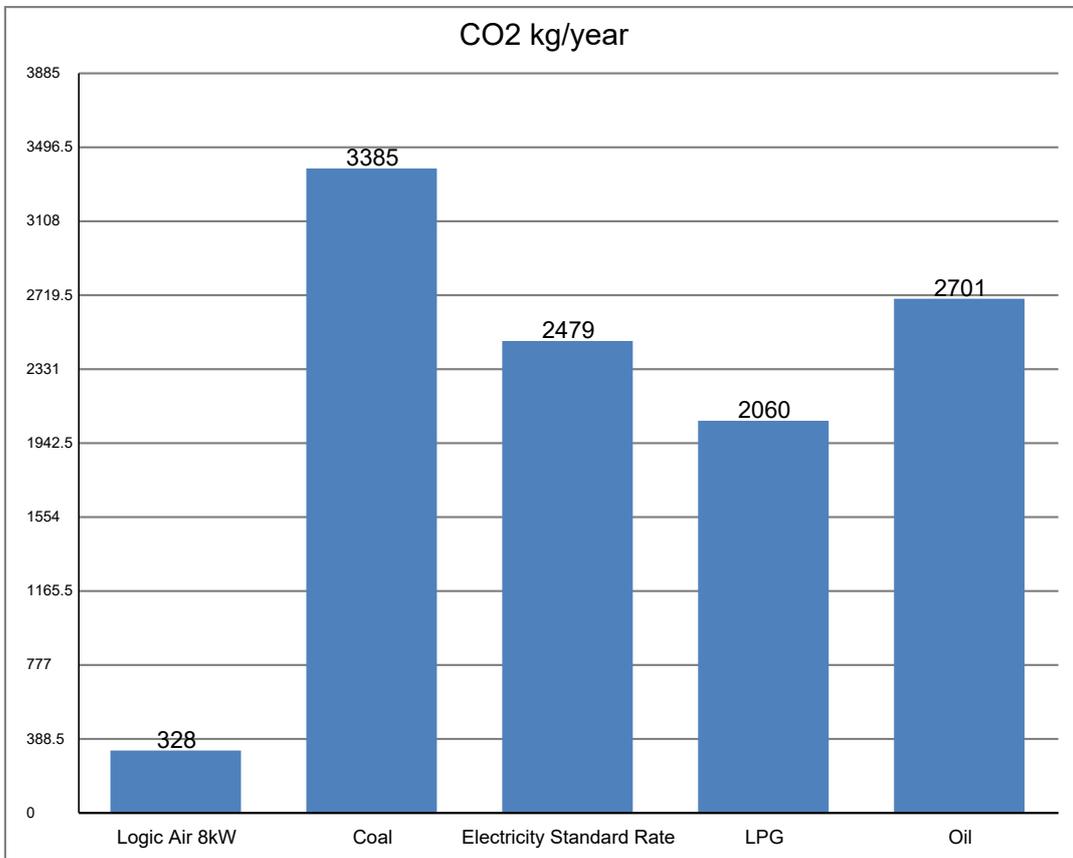
PROJECT	
Project Reference	
Address	
Project Designer	
Company	
MCS Number	

PROPERTY DETAILS	
Total heated area	46.7428 m ²
Average heat loss	103.15 W/m ²
Annual energy (Heating)	7337.4 kWh
Annual Energy (DHW)	1188.64 kWh
Total heat loss	4.8217 kW
Outdoor design temperature	-3.5°C - E Pennines (Finningley)
Degree days	2307
Heating design flow temperature	55°C
Hot water storage temperature	55°C

FUEL TARIFF INFORMATION	
Electricity tariff	29 p/kWh
Existing/alternate fuel tariff	10.3 p/kWh - Gas

PROPOSED SYSTEM DETAILS

PROPOSED SYSTEM DETAILS	
Heat pump type	Air Source
Manufacturer	Ideal Heating
Model	Logic Air 8kW
Heating SCOP	3.63
DHW SCOP	1.16
DHW cylinder and capacity	Pre-plumbed cylinder 2 zone Low Loss Header 250
Anti-legionella days	7
ESTIMATED RUNNING COST	
Estimate:	£586.18



COST COMPARISON

CURRENT OR ALTERNATE SYSTEM	
Fuel type	Gas
Age (Years)	16
ESTIMATED RUNNING COST	
Estimate:	£755.75

ROOM BY ROOM RESULTS

ROOM	HEAT LOSS (KW)	HEAT LOSS (W/m ²)	DESIGN TEMP	AREA (M ²)	VOLUME (M ³)	FLOOR (LEVEL)	EMITTER	EMITTER OUTPUT @ DT (KW)
Kitchen	1.12	117.42	18°C	9.51	23.29068	Ground Floor	K3	1.43
Living Room	2.12	124.43	21°C	17.01	41.66274	Ground Floor	K2 & K2	2.72
Bathroom	0.80	114.72	22°C	7	17.01	First Floor	P+	0.85
Bed1	0.79	59.44	18°C	13.23	32.151816	First Floor	P+	0.85

Disclaimer

The performance of microgeneration heat pump systems is impossible to predict with certainty due to the variability of the climate and its subsequent effect on both heat supply and demand. This estimate is given as guidance only and should not be considered a guarantee.

SELECTED PRODUCT DETAILS



SELECTED PRODUCTS	TYPE	CODE
Logic Air 8kW		
SELECTED ANCILLARIES	TYPE	CODE
Pre-plumbed cylinder 2 zone Low Loss Header 250	DHW Cylinder	236201
Anti vibration feet (X2) 600mm	ODU Mounting System	220477
Filter Ball valve (1")	ODU Mounting System	?236738
Flexible hose 750mm	ODU Mounting System	?236910
Halo Air Wi-Fi 2 zone	PRT	234792

MCS 020 SOUND CALCULATION RESULTS

Measure	Result
Distance Reduction	-19 dB
Sound Pressure at Test Location	31 dB
Differential	9 dB
Decibel Corrections	40.5 dB
Final Result	41 dB
Pass/Fail	PASS

RADIATOR SCHEDULE

ROOM	RADIATOR DIMENSIONS HxL	TYPE	OUTPUT	ROOM HEAT LOSS	VARIANCE
Kitchen	700x1000	K3	1427W		
Kitchen Total			1427W	1116W	+311W
Living Room	450x2000	K2	1443W		
Living Room	600x1400	K2	1276W		
Living Room Total			2719W	2116W	+603W
Bathroom	600x1200	P+	849W		
Bathroom Total			849W	803W	+46W
Bed1	600x1200	P+	849W		
Bed1 Total			849W	786W	+63W



Technical support.

**FOR ASSISTANCE/SUPPORT WITH
THE HEAT PUMP ESTIMATOR AND/OR
DESIGNER APP, PLEASE CONTACT:**

Stephen.bancroft@groupe-atlantic.co.uk

Mobile

07980 902555

Customer Service:

01482 498660

Technical Help:

01482 498663

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idealheating.com |     

The information in this brochure was correct at the time of going to print. Ideal Heating reserve the right to make any modifications to product specifications or any other details, without prior notification. For further clarification, please enquire in writing to the head office address above.