

DESIGN PACK

QID-GK6L-36XC

Ian Sturgess · 8 Marchwood Avenue, Emmer Green, Reading, Berkshire, RG4 8UH

Contract status	Unsigned
Customer	Ian Sturgess
Reference	QID-GK6L-36XC
Installation address	8 Marchwood Avenue, Emmer Green, Reading, Berkshire, RG4 8UH
Quote issued by	Andrew Haron
Date of quotation	11 Sept 2026
Contract version	2025-04-v2

System specification

Property



Address	8 Marchwood Avenue, Emmer Green, Reading, Berkshire, RG4 8UH
Heat loss estimate	5.9 kW
Current heating fuel	Mains gas

Heat pump location



Location	Wall mounted on first floor bathroom external wall.
Mounting	Wall
Sound calculation	Pass

Heat pump



Model	Vaillant aroTHERM Plus 2026 7kW
Capacity	7.5 kW
Design flow temperature	50 degC
MCS SCOP	3.7

Cylinder



Supply status	Replacement cylinder supplied and installed
Model	Vaillant Vaillant UniSTOR Plus 175 Litre Slimline Cylinder 8000011506
Location	Cylinder cupboard in Bedroom 3.
Size	175 litres
Minimum calculated size	180 litres

MCS specification

Property information

Date created	11 Sept 2026
Customer name	Ian Sturgess

Address	8 Marchwood Avenue, Emmer Green, Reading, Berkshire, RG4 8UH
Property type	Detached House
Property age	1950-1966
Property size	126.4 m2
Bedrooms	3
EPC certificate	0383-2865-6152-9409-3291
Conservation area	No
Listed building	Not recorded
Building heat loss	5.9 kW
Outside design temperature	-3 degC
Design flow temperature	50 degC
Reference location	London - Heathrow
Heating degree days	2,033 days
Heating demand (EPC)	10,066 kWh
Hot water demand (EPC)	3,638 kWh

Air source heat pump

Manufacturer	Vaillant
Model	Vaillant aroTHERM Plus 2026 7kW
Max. output	7.5 kW
MCS SCOP Heat	3.7 at 50 degC flow temperature
MCS SCOP Water	1.9
Designed for	Heating and water
Location	Wall mounted on first floor bathroom external wall.
Mounting	Wall
Aux. heating	0.00
DNO application type	Connect and Notify

Hot water cylinder

Manufacturer	Vaillant
Model	

	Vaillant Vaillant UniSTOR Plus 175 Litre Slimline Cylinder 8000011506
Supply status	Replacement cylinder supplied and installed
Size	175 litres
Location	Cylinder cupboard in Bedroom 3.
Calculated demand	180 litres
Water temperature	50 degC
Estimated reheat time	65 minutes
Estimated electricity for reheat	4.3 kWh
Immersion size	0 kW
Immersion use	No - R290 heat pump

Estimated reheat time assumes the stored water starts at 10 degC and is heated to 50 degC. Heat energy = litres x 1 kg/L x 4.186 kJ/kg.K x 40 K / 3,600. Reheat time = heat energy / heat pump thermal output. Estimated electricity = heat energy / MCS SCOP water. As a rough sensitivity check, assuming a hot water COP of 2 gives a 62 minutes reheat time. Also note often you will probably not be reheating a full tank from 10 degC in daily use.

Sound assessment

Result	Pass
Description	The position of your heat pump has passed the MCS 020a sound assessment test.
Calculation method used	MCS 020a

Calculation

Date assessment undertaken	10 Sept 2026
Description of assessment location (habitable room of neighbouring property)	Neighbours first floor bedroom window.
Sound power of outdoor unit	46.7 dB
Directivity of heat pump sound (Q)	Q4
Distance from heat pump to assessment position	14 m
Barrier corrections	No barrier / Sight: Full view
Sound pressure level result	18.8 dB
Pass if sound pressure result <37 dB	Pass

Calculation method used: MCS 020a.

Room heat losses

Heat loss	5.9 kW
Floor area	126.4 m2
Heat demand	46.8 W/m2
Outside design temperature	-3 degC
Heating degree days	2,033 days
Space heating requirement (EPC)	10,066 kWh
Hot water requirement (EPC)	3,638 kWh

Room	Heat loss	Area	Demand	Design temp
Lounge	1,133 W	17.5 m2	64.6 W/m2	21 degC
Dining room	917 W	17.5 m2	52.5 W/m2	21 degC
Conservatory	1,221 W	12.3 m2	99.2 W/m2	18 degC
Utility	631 W	7 m2	90.3 W/m2	18 degC
WC	71 W	2.2 m2	32.4 W/m2	18 degC
Hall	396 W	8 m2	49.5 W/m2	18 degC
Kitchen	441 W	11.6 m2	38 W/m2	18 degC
Bedroom 1	804 W	17.6 m2	45.7 W/m2	18 degC
Bedroom 2	327 W	10.3 m2	31.8 W/m2	18 degC
Bedroom 3	431 W	9.5 m2	45.5 W/m2	18 degC
Bathroom	454 W	4.5 m2	100.5 W/m2	22 degC
Landing	244 W	8.4 m2	29 W/m2	18 degC

Worst performing room

We have designed your system based on the worst-performing room (by heat loss per m2). This is your Bathroom, which has a room-specific heat loss of 454 watts with an estimated watts per m2 of 100.5 W/m2. Your system has been designed to operate with a flow temperature of 50 degC.

Further information

The performance of micro generation 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 based upon the best available information but is given as guidance only and should not be considered as a guarantee.

Emitter schedule

Room	Heat loss	Emitter output	Current	Proposed
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Room	Heat loss	Emitter output	Current	Proposed
Lounge	1,133 W	864 W	400 (H) x 1600 (W) x Panel 22 (1)	400 (H) x 1600 (W) x Panel 22 (1)
Dining room - emitter 1	917 W	1,283 W	600 (H) x 600 (W) x Panel 22 (1)	600 (H) x 600 (W) x Panel 22 (1)
Dining room - emitter 2	917 W	1,283 W	600 (H) x 1100 (W) x Panel 22 (2)	600 (H) x 1100 (W) x Panel 22 (2)
Conservatory	1,221 W	1,197 W	1600 (H) x 450 (W) x Tall designer column (1)	1800 (H) x 600 (W) x 22 (1)
Utility	631 W	691 W	650 (H) x 550 (W) x Other (1)	700 (H) x 700 (W) x 22 (1)
Hall	396 W	440 W	550 (H) x 450 (W) x Electric panel (1)	600 (H) x 500 (W) x 22 (1)
Bedroom 1 - emitter 1	804 W	1,892 W	600 (H) x 1400 (W) x Panel 21 (1)	Not recorded
Bedroom 1 - emitter 2	804 W	1,892 W	600 (H) x 1400 (W) x Panel 21 (2)	Not recorded
Bedroom 2	327 W	790 W	600 (H) x 1600 (W) x Panel 11 (1)	Not recorded
Bedroom 3	431 W	592 W	600 (H) x 1200 (W) x Panel 11 (1)	Not recorded
Bathroom	454 W	176 W	1500 (H) x 400 (W) x Other (1)	Not recorded

Performance estimate

Your energy requirements

Energy required for space heating	10,066 kWh
Demand to be supplied by the heat pump	10,066 kWh
Energy required for hot water	3,638 kWh
Hot water demand supplied by the heat pump	3,638 kWh

Your property

Postcode prefix	RG
Total property floorspace	126.4 m2
Average watts per square metre	39.2 W/m2

Note: W/m² is a measure of your property's thermal efficiency. 0-30W/m² is very low heat loss and 120-150W/m² is very high heat loss.

Proposed system

Heat pump capacity	5.9 kW
Heat pump type	ASHP
Your system is proposed to provide	Space heat and hot water
Your proposed heating system will be	Mostly upgraded radiators
The proposed flow temperature will be	46-50

Note: the heat pump capacity is based on the full heat loss estimate recorded for the property, not the actual heat pump maximum output at design conditions.

Performance

The Seasonal Performance Factor is calculated to be:	3.1
High estimate	5,678 kWh/year
Low estimate	4,645.7 kWh/year

Important note: This is not a detailed system design. It offers a reasonable estimate of likely performance and a description of the likely design. System performance estimates for heating technologies under the MCS scheme, whilst based on the same principles, are derived using different calculation methodologies. As a result, these estimates are not directly comparable and should not be used as the basis for a one-to-one comparison with one another. This estimate is based on a full heat loss survey and design.

Key information

The heat demand of a building, and therefore the performance and running costs of heating systems, is difficult to predict with certainty due to the variables discussed here. These variables apply to all types of heating systems, although the efficiency of heat pumps is more sensitive to good system design and installation. For these reasons your estimate is given as guidance only and should not be considered as a guarantee.

Seasonal Performance Factor

Seasonal performance factor (SPF) is a measure of the operating performance of a heating system incorporating an electric heat pump over a season, typically a year. It is the ratio of heat delivered to the total electrical energy consumed by the unit over the same period. As a guide, a heat pump system achieving an SPF of 3 would have delivered 3 kWh of heat energy for every 1 kWh of electrical energy it consumed over a standard annual cycle.

Energy Performance Certificate

An energy performance certificate (EPC) is produced in accordance with a methodology approved by the government. As with all such calculations, it relies on the accuracy of the information input. Some of this information, such as the insulation and air tightness properties of the building may have to be assumed and this can affect the final figures significantly leading to uncertainty especially with irregular or unusual buildings.

Identifying the uncertainties of energy predictions for heating systems

We have identified 3 key types of factor that can affect how much energy a heating system will consume and how much energy it will deliver into a home. These are Fixed, Variable and Random. Most factors are common to all heating systems regardless of the type, although the degree of effect varies between different types of heating system as given in the following table. The combined effect of these factors on energy consumption and the running costs makes overall predictions difficult however an accuracy + 25-30% would not be unreasonable in many instances. Under some conditions even this could be exceeded, for example considerable opening of windows. Therefore it is advised that when making choices based on mainly financial criteria, this variability is taken into account as it could extend paybacks well beyond the period of any incentives received, intended occupancy, finance agreement etc.

Type	Factor	Impact
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Type	Factor	Impact
Fixed	Equipment selection performance figures (SCoP) from ErP data	System Efficiency
Fixed	Energy assessment via the EPC (e.g. assumptions as to fabric construction and levels of insulation; the variation in knowledge and experience of Energy Assessors)	Energy Required
Variable	Accuracy of sizing of heat pump - i.e. closeness of unit output selection (kW) to demand heat requirement (kW)	System Efficiency
Variable	Design space and ambient (external) temperatures	Energy Required
Variable	Design flow /return water temperatures, and weather compensation	System Efficiency
Variable	Type of Heat emitter (e.g. Under-floor; natural convector (e.g. 'radiator'), fan convector etc.)	System Efficiency
Random	User behaviour: Room temperature settings	Energy Required
Random	User behaviour: Hot water usage and temperature settings	Energy Required
Random	User behaviour: Occupancy patterns/ times	Energy Required
Random	User behaviour: Changing the design HP flow temperatures	System Efficiency
Random	User behaviour: Ventilation (i.e. opening windows)	Energy Required
Random	Annual climatic variations (i.e. warmer and colder years than average)	Energy Required

Key

Energy Required: the heat energy output requirement of the system which directly impacts on running costs. This requirement exists regardless of the heating system chosen as it is the heat required to keep the space comfortable. Opening windows or increasing room temperatures will demand more heat output, which means more energy input but this would not directly affect the efficiency. Thus increased energy demand does not automatically mean reduced efficiency.

System Efficiency: the efficiency of the system has been directly affected and will therefore demand more input energy to achieve the same heat output thus increasing running costs. However, increased energy input does not necessarily mean lower system efficiency.

Quote

Description	Qty	Total
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Description	Qty	Total
aroTHERM Plus 2026 7kW and fittings	1	£5,239.33
Vaillant UniSTOR Plus 175 Litre Slimline Cylinder 8000011506 and fittings	1	£1,391.37
Central heating sundries and fittings	1	£2,907.01
Installation labour, including electrician	1	£4,777.69
Survey and registration fees	1	£378.00

Subtotal	£14,693.40
Government grant (subject to eligibility)	-£7,500.00
VAT	£0.00
Total contract	£7,193.40
Deposit	£1,599.35
Payments already made	£199.00
Final payment	£5,395.05

Quotation notes

This quotation is valid for 30 days from the date of quotation. The quotation should be read in conjunction with our terms and conditions which are also included within this document.

Planning

We have determined that your installation can be undertaken within permitted development rights. Our calculations to support this are included within the specifications section.

Building control

After your installation is complete, we will make the relevant registrations with your local building control department and share confirmations with you as part of the handover pack we provide.

District Network Operator (DNO) Application

As the deployment of low-carbon technologies increases, it is important that network operators are aware of the number and location of energy assets within their network. DNO notification allows operators to record installation numbers of low-carbon technologies, which is critical for maintaining safe and efficient operation of the electricity network. Once you have confirmed you wish to proceed we will make the relevant DNO application on your behalf.

Product warranty registrations

We will register any manufacturer product warranties on your behalf and include confirmation of these as part of your handover pack.

Approach to performance calculations

The estimated performance calculations included within this document have been calculated in accordance with the Microgeneration Certification Scheme (MCS) standard MIS 3005-D. Important information on this estimate is included on the Key Facts page.

Exclusions

It is possible that a problem with your property will become apparent during the course of the installation. This could include structural defects, underground obstructions, presence of asbestos or hidden cabling. We will draw this to your attention as soon as possible and agree with you a plan to resolve the problem, if possible, which may involve you bringing in other contractors which will be at your expense or additional costs to your planned works. If you are completing other works on your property with elements

that a successful commissioning of the heat pump are dependent on, unless we agree otherwise in writing, these dependencies must be in place before commencement of work. If less than 14-days notice is given that there will be a delay in their readiness, we will charge a £250 +VAT rebooking charge. If work commences, and it becomes apparent dependencies are not in place and no notice has been provided, we will charge a £500 +VAT revisit charge.

Data sheets

- Heat pump: Heat pump data sheet

Where the data sheet is a PDF and can be accessed by the system, it is appended after this design pack.

Terms and Conditions

Interpretation

1. These are the Terms, which together with the Order comprise the Contract. Within these Terms, the following definitions shall apply to the defined words and expressions, unless the context requires otherwise:

Commencement Date: means the date on which both parties agree the Order in accordance with clause 4 and at which point the Contract is formed.

Contract: means the legally binding contract between You and Us comprising of these Terms and the Order which comes into force on the Commencement Date and on which We shall supply Goods and Services to You.

CRA: means the Consumer Rights Act 2015.

Delivery Date: means the estimated date that We aim to deliver the Goods and commence Your installation or as varied from time to time in accordance with these Terms.

HIES: means the Home Insulation and Energy Systems Quality Assured Contractors Scheme (a division of the Integrity Foundation (reg. no. 07972075) and which has prepared the Model Terms & Conditions which forms the basis of these Terms.

Emergency Works: means any work required by You to be carried out in an emergency, such as where Your property has been damaged by a storm, is not watertight, or the health and safety of You or Your family is at risk.

Goods: means the items specified in the Order that We have agreed to supply to You.

Installation Plan: means the plan which We will produce to explain what is going to happen, any health and safety issues that You need to be aware of, advise You about any preparations that You may need to make (such as moving furniture or valuables or clearing space), the arrangements for access to Your property by the installation team, any special instructions to protect Your children or pets and what We will be doing with waste and materials that We need to take away.

Marketing Materials: means brochures, drawings, illustrations, literature, samples or other such marketing materials.

Order: means the detailed description of the Goods and Services that You require Us to supply to You and any documents referred to therein.

Order Confirmation: means the action by Us, in writing, of accepting the Order.

Preparatory Work: means any work that We are contracted to do prior to installation of the Goods.

Price: means the total amount that You are contracted to pay to Us for the Goods and Services as shown on the Order.

Services: means the delivery, installation and professional services specified in the Order that We have agreed to provide to You.

We, Us, Our: means Dwellow Limited, a company registered in England with the registered number 15114137 whose registered trading address is Hermes House, Fire Fly Avenue, Swindon, SN2 2GA.

You, Your: means the person(s) whose details are set out in the Order.

2. You should read these Terms carefully and check that the information shown in the Order is correct. We intend to rely on these Terms, so if You require any changes to them, please ask for the change to be confirmed in writing and prior to the Contract being formed.

3. Your statutory rights as a consumer are set out in legislation and nothing in this Contract, or any of Our Marketing Materials shall affect any of Your statutory rights.

Commencement

4. To signify acceptance of the Order and the Terms and to form the Contract, the Order shall be signed by both parties.

Information we are Required to Give you

5. Dwellow Limited is authorised and regulated by the Financial Conduct Authority (Register no. 1016452). We are a credit broker and not a lender and offer credit from a panel of lenders. Credit is available subject to status to UK residents aged 18 or over. Terms and conditions apply. Not all products offered are regulated by the Financial Conduct Authority. Registered with the Information Commissioner's Office under reference number ZA026178.

6. Accompanying your Order, we will provide you with the price of the Goods and Services and a breakdown, where appropriate, of how that price has been reached, including:

- (a) Delivery charges (if any)
- (b) VAT charges (at the prevailing rates at the time of the Commencement Date)
- (c) Any statutory fees, such as planning consent fees
- (d) Any charges for credit
- (e) Any other costed items and whether optional or mandatory as part of your Order

7. If You have chosen or accepted any special offer or incentive as part of the Order we will include details of this including any Terms associated with that arrangement.

8. We will provide you with information ahead of the Commencement Date, during installation and after installation completes as required under the Microgeneration Certification Scheme (or any equivalent).

Specification of Goods

9. The Goods are described in the Order.

10. We may have shown You Marketing Materials to provide You with an approximate idea of the Goods, layout or positioning that they describe. Although we have made every effort to display the Goods correctly, they may vary slightly from the colour or composition shown. All specifications are approximate only and are subject to normal margins of tolerance for the materials and installation in question.

11. We have taken measurements for your Goods to enable Us to order the right materials to complete your order. It may be necessary for us to carry out a survey to verify our measurements and to develop an Installation Plan (see Preparatory Work).

Performance Calculations

12. We have estimated the energy performance calculations and provided these with Your quotation. Our standard calculations are based on standard calculations approved for use by the Microgeneration Certification Scheme (or any equivalent approved by HIES). Where We have referred to energy inflation or other statistical information, We have used information publicly available from the Office for National Statistics.

13. The performance of energy systems is impossible to predict with certainty due to the variability in fuels and energy sources, climatic variations, local obstructions or environmental conditions and differences from location to location. The estimates provided in this contract are for guidance only and must not be considered as a guarantee of performance.

Preparatory or Emergency Work

14. We will commence work on preparing the Goods for delivery and developing an Installation Plan from the Commencement Date. We may, at Our discretion, wait until Your right to change Your mind elapses (see Rights to Change Your Mind).

15. Our preparatory work may include a survey of Your property, assessment for an Energy Performance Certificate (EPC) or any other preparatory matter. Our fees and charges for preparatory work are clearly shown on the Order. By placing the Order, You give Us permission to go ahead with any Preparatory Work specified in the Order. If You change Your mind and cancel the Contract after commencement of these Preparatory Works, You will be charged a reasonable proportion of the fees shown for them on the Order.

16. If You have requested Emergency Works, this will be clearly shown on the Order and You shall be deemed to have given Us permission to commence with these Emergency Works straight away. In this case We may take temporary action to make Your property safe, secure and watertight, before completing a full repair or replacement as set out in the Order You understand that this means You cannot change Your mind and cancel the Contract in respect of those Emergency Works.

Variations

17. We may need to make minor changes to the Goods specified on the Order if there is a change in laws, regulatory or technical requirements or improvements. These changes will not adversely affect the use or nature of the Goods.

18. You may ask Us to make changes to the specification of the Goods in advance of delivery. We will then advise You if Your requested change is possible and any consequences of that, including to the Price, the Delivery Date or anything else. Any agreed change will be confirmed by Us in writing.

19. During Our Preparatory Work (perhaps as a result of a survey or as a result of Your EPC assessment), it may be necessary to make more substantial changes to the Order. We will discuss these with You to determine if the change is possible and any consequences of that, including the Price, the Delivery Date or anything else. If significant changes are required, We will place the Contract on hold for up to 14 days to enable You to consider whether or not You wish to proceed. At the end of 14 days, if no agreement on changes is reached, the Contract will be terminated. You will receive a refund of any deposit paid within a further 14 days less, at Our discretion, any fees and charges due for the Preparatory Work completed so far. Any agreed change will be confirmed by Us in writing.

Changing Your Mind

20. You have the right to change your mind and cancel this Contract within 14 days from the date of completion of Your installation without giving any reason. This does not apply to the extent that the Contract includes Emergency Works.

21. To change Your mind and cancel the Contract in accordance with the above clause You should tell Us as quickly as possible and confirm this in writing. We have supplied a tear off slip below which You can use, but You do not need to. You can notify Us by any means (see Contact Us).

22. You should think carefully about the consequences of cancelling the Contract at different stages. However, You may change Your mind and cancel the Contract from the Commencement Date to 14 days after the date of completion of Your installation. This is over and above Your statutory rights.

23. If no Goods have been provided or Services carried out (including any Preparatory Work), You may change your mind and cancel the Contract, in which case You will receive a full refund of any monies paid within a further 14 days.

24. If We have commenced with the provision of the Services (including any Preparatory Work) on the Contract, You may change Your mind and cancel the Contract, however We may charge You reasonable fees, provided:

- (a) it is a reasonable reflection of the value of the work that has been carried out; and
- (b) You gave us permission (by agreeing to this Contract) to proceed within the cancellation period.

25. If We have completed (or partially completed an installation) You should think carefully about the consequences of cancelling the Contract at this stage. We will return to Your property to remove the Goods and You must allow Us to do so. You should plan carefully for this. We will carefully remove the Goods and leave Your property safe, secure and watertight. It is likely to be impossible to refit Your old goods back into the property and We are under no obligation to do so. However, We will ensure that any gas or water pipes are safely capped off and Your property boarded up or sealed so that it is temporarily protected from bad weather. We will charge You reasonable fees for the work done so far and the reduced value of the Goods. If the work has been completed, this could mean that you could be charged a significant proportion of the agreed price.

Delivery and Installation

26. Any additional delivery or installation costs will be shown on the Order (or any agreed variation to it), otherwise Your delivery and installation costs are included in the Price.

27. We aim to complete the delivery and installation on or about the Delivery Date, but We will liaise with You over any reasonable changes to that. For the avoidance of doubt time is not of the essence in respect of the Delivery Date.

28. If a change or delay is caused by something that is within Our reasonable control, We will notify You as soon as reasonably possible and agree with You an alternate Delivery Date. We will take steps to minimise the delay and, if the delay lasts for more than 60 days from the original Delivery Date (unless You have asked for a longer period), We will allow You to cancel the Contract. You will receive a refund of any deposit paid within a further 14 days less, at Our discretion, any fees and charges due for the Preparatory Work completed so far.

29. If a change or delay is caused by something that is not within Our reasonable control (see Events Outside Our Control), We will

notify You as soon as reasonably possible and the change or delay and the reasons for it. We will take steps to minimise the delay, but We may, if necessary, suspend the performance of the Contract until that event is over and the matter back within Our reasonable control.

30. We will prepare for You an Installation Plan. You will be asked to sign a copy of Your Installation Plan and this will be giving Your consent for Us to proceed with the delivery and installation of the Goods.

31. Each installation is different and the specific requirements for Your installation will be set out in Your Installation Plan, but generally:

- (a) You permit Us (Our installation team and contractors) safe access to, around and egress from the installation site at all reasonable times and, unless otherwise stated in Your Installation Plan and agreed by You, between the hours of 08:00 and 18:00.
- (b) You agree to have relocated any television systems at or near to the energy systems installation.
- (c) You agree to provide Us (Our installation team and contractors) with access to a toilet, hot and cold running water and reasonable use of Your power supply whilst on site.

32. We, or where we choose our sub-contractors, will be responsible for the removal of waste from the site. Our Waste Carrier registration number is CBDU549608. Where our sub-contractor removes waste we will have checked that they have a current licence issued by the Environment Agency (or equivalent). Waste will be removed not more than 7 days following completion of the installation.

33. In circumstances where We agree to remove waste from the installation site, You understand that unless We agree otherwise, We shall not be responsible for removing any waste which is not produced as a direct consequence of Our performance of the Services or delivery of the Goods, that is hazardous (including but not limited to asbestos), or which otherwise comes from Your home or garden.

34. It is possible that a problem with Your property will become apparent during the course of the installation. This could include structural defects, underground obstructions, presence of asbestos or hidden cabling. We will draw this to Your attention as soon as possible and agree with You a plan to resolve the problem, if possible, which may involve You bringing in other contractors which will be at Your expense or additional costs to Your planned work.

Permission and Approvals

35. Unless we agree otherwise as part of the Order, You are responsible for gaining any necessary approvals including but not limited to any planning permissions, local authority permits and approvals, landlord approval or deed of covenant. By permitting Us to provide the Goods and carry out the Services You warrant to Us that this has been done.

36. We are responsible for the registration of Your installation with HIES, electrical certification, if required, registrations with the Microgeneration Certification Scheme, building regulations, District Network Operator notifications / applications, registration of any manufacturer's guarantees, application for any local or public incentive or grant payments.

Obtaining Ownership of the Goods

37. You take responsibility for the risk of damage or loss to the Goods from the date that We complete the Services.

38. You obtain title (ownership) of the Goods when We receive payment of the Price in full without any set-off or counterclaim or a properly executed finance agreement is in place with a finance provider who will pay Us for the Goods and Services on Your behalf. However, in the event that You enter into a finance agreement please be aware that there may be terms governing title (ownership) as between You and the finance provider.

Insurers

39. It is the customers responsibility to notify the customers household buildings or content insurers, should such be required. of any change to the property bought about by the works and in so far as the same is Insurable to ensure appropriate insurance cover is affected. The customer is strongly recommended to check the insurance policy. schedule and terms and conditions to see if such notification is required and if there is any doubt the customer should notify the insurers in writing of the proposed works before such works commence.

Payment Terms

40. The full Price is shown clearly on the Order. We may amend the Price, by agreement with You, following a survey or any other additional matters that arise in the course of delivering the Services.

41. You will pay for the Goods and Services as follows:

- (a) You will pay Us a fee of £199.00 for completion of the Home Survey.

(b) You will pay Us a deposit of 25% of the Price (after deducting any local or public grants you are eligible for, which are paid directly to us, and not exceeding £5,000), on receipt of the Order Confirmation.

(c) On completion of the installation, You will pay the balance of any sums due within five (5) working days

42. We accept payment by bank transfer, debit or credit card and finance agreement.

43. The non-payment of any payments due by the relevant due date, may incur additional charges. We may levy interest at a rate of up to 8% above the base rate of the Bank of England. Any interest due will be calculated and added to Your bill and accrue from the date on which payment was due to the date of payment whether before or after any judgment. We may also add any legal, debt recovery or processing fees to the amount due.

Defective Goods or Service

44. We make every effort to supply and fit Goods to Your complete satisfaction. However, if You have a concern or complaint about the Goods or Service, please let Us know as soon as possible (See Contact Us).

45. If You do identify a fault or problem with the Goods, You agree to give Us a chance to put things right. We will investigate the fault, which may include coming back to Your property if necessary. You agree to cooperate with Us to enable Us access to Your property and to resolve Your complaint.

46. We do not accept liability for the following faults with Your installation:

(a) any damage caused by You following the completion of installation,

(b) any damage caused by You, or anyone acting for You, in attempting to repair the fault without Our consent,

(c) any damage caused by fair wear and tear of the Goods.

47. If Your product is made from wood, this is a natural product which is subject to imperfections, knots and blemishes. It can also differ in colour and shade. We cannot accept responsibility for such blemishes.

48. The installation of Your product could make Your property more thermally and energy efficient. However, a by-product of this can be additional condensation either on the surface of the glass (but not between the panes), the surface of the frames and elsewhere in Your home. This is related to the need for adequate ventilation. We will advise You about how to improve the free flow of air around Your property, which will reduce condensation, but We cannot accept responsibility for problems with condensation.

49. The CRA states that if You have a problem with the Services, then You can ask Us to repeat or fix the Services if it's not carried out with reasonable care and skill or get some money back if We can't fix it.

50. The CRA states that the Goods must be as described, fit for purpose and of satisfactory quality. If the goods do not meet these requirements:

(a) within 30 days then You are entitled to a refund,

(b) after 30 days but within 6 months then if We are unable to repair or replace the Goods, then You are entitled to a full refund or

(c) after 6 months but within 6 years then if the Goods do not last for a reasonable period of time, then You may be entitled to some money back

51. If You reject the Goods and seek a full refund, We will return to Your property to remove the Goods and You must allow Us to do so. You should plan carefully for this. We will carefully remove the Goods and leave Your property safe, secure and watertight. It is likely to be impossible to refit Your old goods back into the property and We are under no obligation to do so. However, We will ensure that any gas or water pipes are safely capped off and Your property boarded up or sealed so that it is temporarily protected from bad weather.

52. The Goods may have a manufacturers guarantee and, if the fault is a manufacturing fault, We will work with the manufacturer to repair or replace the Goods. For convenience, many manufacturers prefer to deal directly with You if it is a manufacturing fault, but We retain primary responsibility for resolving Your concern or complaint.

Workmanship Guarantee

53. We are required under the HIES Code of Practice to provide you with a Workmanship Guarantee.

54. We guarantee all work will be carried out by installers using reasonable care and skill. They will use a level of reasonable care and skill as it is reasonable for you to expect. The guarantee period for the installation services shall be 2 years from completion of the installation services. Further terms of the Workmanship Guarantee will be provided to you in our Workmanship Guarantee Document.

55. The Workmanship Guarantee will be underwritten with an Insurance Backed Guarantee, You will be entitled to claim on this insurance policy should We cease to trade and not be in a position to honour such a guarantee.

56. We will ensure that if a property changes ownership there will be no charge to transfer any workmanship guarantee to the new

owners of the property.

57. We will register the completion date of the Contract with HIES within 7 days of completion in order that an Insurance Backed Guarantee is issued to You to underwrite the workmanship guarantee.

Complaints

58. In the event of a complaint please contact Us as soon as possible (see Contact Us).

59. A copy of our complaints policy is available upon request.

Dispute Resolution

60. In the event of an unresolvable issue, You can refer Your case to Our nominated alternative dispute resolution provider through HIES, HIES can be contacted at:

Address: Solutions House Chorley Business & Technology Centre, Euxton Lane, Chorley, PR7 6TE

Telephone: 0330 335 3354

Email: info@hiesscheme.org.uk

61. The parties agree that, in the event of a dispute, We will exclusively attempt to resolve the dispute through using HIES's alternative dispute resolution services.

62. If we are unable to resolve the dispute through mediation, the complaint can be referred by HIES to The Dispute Resolution Ombudsman, who is entirely independent of HIES.

63. This Contract is subject to the applicable laws of England, Wales, Scotland and Northern Ireland and subject to the agreement of the parties to attempt to resolve a dispute through alternative dispute resolution, the courts of England and Wales shall have exclusive jurisdiction to hear any dispute arising from this Contract.

64. If any court, ombudsman or any other competent authority decides that any aspect of any term of this Contract is invalid or unenforceable, that aspect of that term shall be severed from the Contract and shall have no effect on the remainder of the Contract.

Limitation of Liability

65. Either party shall be liable for any death or personal injury caused by its negligence or any negligence of its subcontractors, any fraud or fraudulent misrepresentation committed by it and for any other loss or damage suffered by the other party which is a direct consequence of the relevant party's breach of its obligations under this Contract and whether in contract, tort (including negligence), breach of statutory duty or otherwise. In the event of loss or damage, the party suffering the loss or damage shall be required to take reasonable steps to mitigate the loss or damage.

Events Outside our Control

66. We will not be liable for the consequences of any events that are outside of Our reasonable control and which includes, but is not limited to:

- (a) Civil commotion, civil war, riot, invasion, armed conflict, terrorist attack or threat of terrorist attack, war or threat or preparation for war,
- (b) Acts of God, collapse of buildings, fire, explosion, inclement weather, storm, flood, subsidence, drought, epidemic or natural disaster,
- (c) Impossibility of use of railways, shipping, aircraft, motor transport or other means of public or private transport,
- (d) Impossibility of use of public or private utility networks or telecommunications,
- (e) The acts, decrees, legislation, regulations or restrictions of any government, whether national or local or
- (f) Strikes or labour unrest (other than in relation to Our own employees).

67. The obligations of the parties under this Contract are suspended for the period for which such a Specified Event continues and extended for the duration of that period.

Transfer of Rights and Third Parties

68. In the event of Dwellow Limited ceasing to trade and not be in a position to honour Our obligations under this Contract, we may transfer Our rights and obligations under this Contract to a suitably qualified third party of Our choosing. We will tell You in writing if this happens and We will ensure that the transfer will not affect Your rights under this Contract.

69. You may not transfer Your rights and obligations under this Contract to any other person without Our consent. Except that, if We are in default of any award made by Our nominated alternative dispute resolution provider You may transfer Your rights to HIES for

the purpose of recovering that award from Us.

70. This Contract is between You and Us. To the extent permitted by law, no third party has any rights to enforce any of the terms of this Contract.

Using Your Personal Information

71. We will use the personal information You provide to Us in accordance with the Data Protection Act 2018, General Data Protection Regulations and more specifically to:

- (a) Supply the Goods and Services to You,
- (b) Process any payments that You make for the Goods and Services, including if necessary, conducting credit reference check,
- (c) Register Your installation with any relevant bodies, including Your deposit protection and insurance backed guarantee and any competent person scheme,
- (d) Address any concerns or complaints that You have about the Goods and Services, including liaison with HIES or The Dispute Resolution Ombudsman where the law requires Us to share.

72. On the Order, We have asked You to indicate whether or not You will allow Us to send You information about Our future Products and Services. We will use Your information in accordance with Your wishes and You may notify Us of any changes to those wishes (See Contact Us).

Contact Us

73. If you need to write to us, you may do so at:

Dwellow Limited, Hermes House (c/o Monahans), Firefly Avenue, Swindon, SN2 2GA
hello@dwellow.co.uk

If you need to call us, you may do so by calling: 0330 822 2795

Cancellation Form

If you change your mind and decide to cancel Your contract, you may do so by contacting us or sending us this form (you do not have to use this form):

NAME:

ADDRESS:

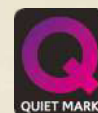
I/We (delete as appropriate) hereby give notice that I/we wish to cancel my/our contract dated:

SIGNED:

DATE:

aroTHERM plus

Air source heat pump



Overview

The next generation aroTHERM plus has been fine-tuned and optimised to deliver our most efficient air source heat pump yet.

Thanks to our unique safety concept, the new aroTHERM plus has never been so simple to site and install. The protective zone around the heat pump has been significantly reduced, giving you unprecedented flexibility. The range is available in 3.5, 5, 7, 10* and 12kW* output sizes at 230v to suit varied installation requirements. Supporting the new aroTHERM plus is a brand-new VWZ AI with a user-friendly semi-touch interface that offers intuitive control, mirroring the familiar design of our boilers.

Our extensive uniSTOR range of high recovery cylinders suits all property types and water demands, making it the perfect partner for the aroTHERM plus.

Features & benefits



Super quiet operation

The aroTHERM plus is the quietest air-to-water heat pump in our portfolio. With a particularly low noise level of only 44 dB(A), it offers an advantage when choosing the installation location.



Maximum flexibility. Minimum protection zones

The new standard in heat pump technology. Our new safety concept, Flexible Space Function (FSF), provides greater siting options around the home. This allows you to install the aroTHERM plus in tighter areas where space is a minimum. Under windows, next to doors, our new FSF unlocks more installation opportunities than ever before.



Best performance, better for the environment

R290 enables high flow temperatures of up to 75°C. At the same time, the low GWP of only 0.02**, makes it particularly climate-friendly for your customers.



Up to 7-year extended guarantee

The brand-new aroTHERM plus comes with a 7-year extended guarantee when registered with a Vaillant cylinder on myREWARDS, so you can offer your customers an additional benefit: long-term system reliability and peace of mind.



Blends in perfectly with UK housing stock

Discreet and timeless. The new anthracite casing retains the distinctive look of our award-winning predecessor, perfect for the retrofit market.

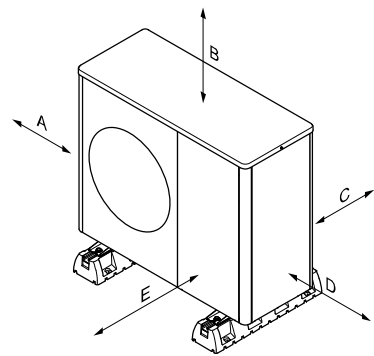
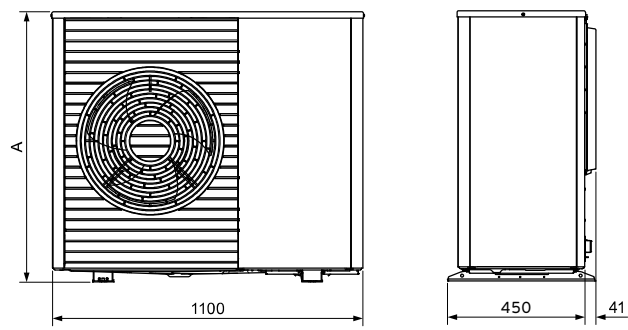
* Also available in 400v.

** R290 has a 10-year GWP of 0.02, much lower than the traditionally assumed value of 3.

Technical data	Unit	3.5kW	5kW	7kW	10kW (230V)	12kW (230V)	10kW (400V)	12kW (400V)
General								
Dimensions (H x W x D)	mm	765 x 1100 x 450		965 x 1100 x 450	1480 x 1100 x 450			
Weight, ready for operation	kg	114		132	196		211	
Connection, heating circuit		G 1 1/4"						
Rated voltage		230 V (+10%/-15%), 50 Hz, 1~/N/PE						400 V (+10%/-15%), 50 Hz,3~/N/PE
Rated current, maximum	A	15.2		15.5	25		14	
Fuse size	A	16			25		16	
Fuse type		Characteristic B, slow-blow, singlepole switching						
RCD type		Type B rated to 20kHz or greater and with a minimum trigger point of 150mA above 1kHz						
eBUS (2-core communication cable)	mm²	0.75						
Maximum length eBUS cable (polarity sensitive)	m	50						
IP rating		IPX4						
Fan power consumption	W	40			50			
Fan quantity		1			2			
Fan air flow, maximum	m³/h	2300			5100			
Heating pump, power consumption	W	2 - 50			3 - 87			
Heating circuit								
Heating water temperature, minimum/ maximum	°C	20 - 75						
Basic length of the heating water pipe, maximum, between the outdoor unit and indoor unit	m	20						
Maximum static height difference between outdoor unit and the highest point in the heating system	m	18			13			
Minimum operating pressure	bar	0.5						
Maximum operating pressure	bar	2.5						
Minimum volume flow	l/h	430		605	1075			
Maximum volume flow	l/h	860		1205	2065			
Water volume, in the outdoor unit	l	1.5		2.0	4.5			
Minimum open water volume	l	15		20	45			
Refrigerant circuit								
Fluid type		R290						
Fluid fill quantity	kg	0.6		0.9	1.3			
Refrigerant, Global Warming Potential (GWP)		0.02						
CO ₂ equivalent	t	0.000012		0.000018	0.000026			
Permissible operating pressure	bar	31.5						
Compressor type		Rotary piston			Scroll compressor			
Compressor oil type		Specific polyalkylene glycol (PAG)						
Compressor, control		Electronic						
Noise emissions, heating mode								
Sound Power Level atA7/W55 (ErP / outdoor)	dB(A)	44.1	44.3	46.8	50			
Efficiency								
Energy efficiency class 35°C	(A+++ to F)	A+++						
Energy efficiency class 55°C	(A+++ to F)	A++			A+++			

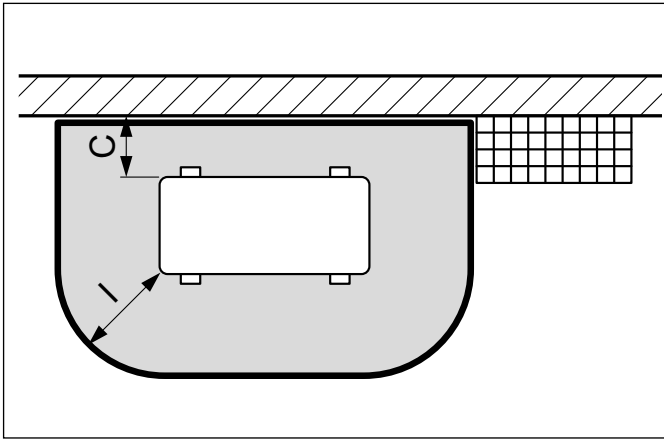
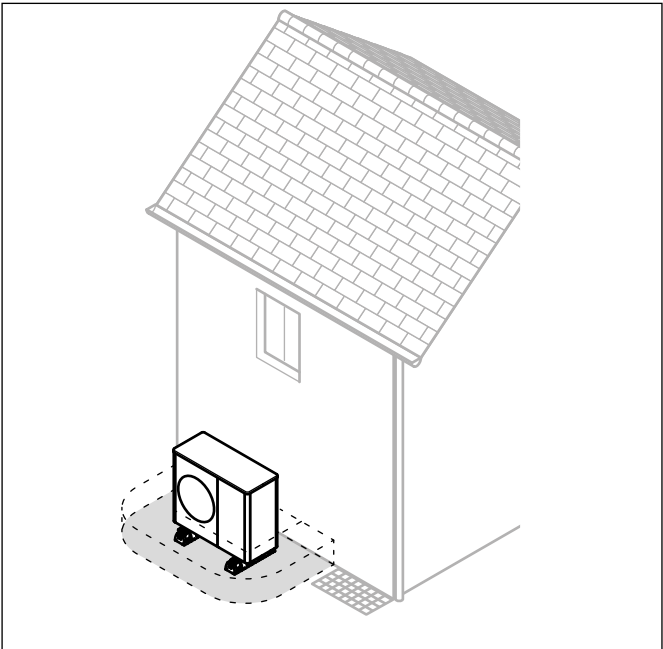
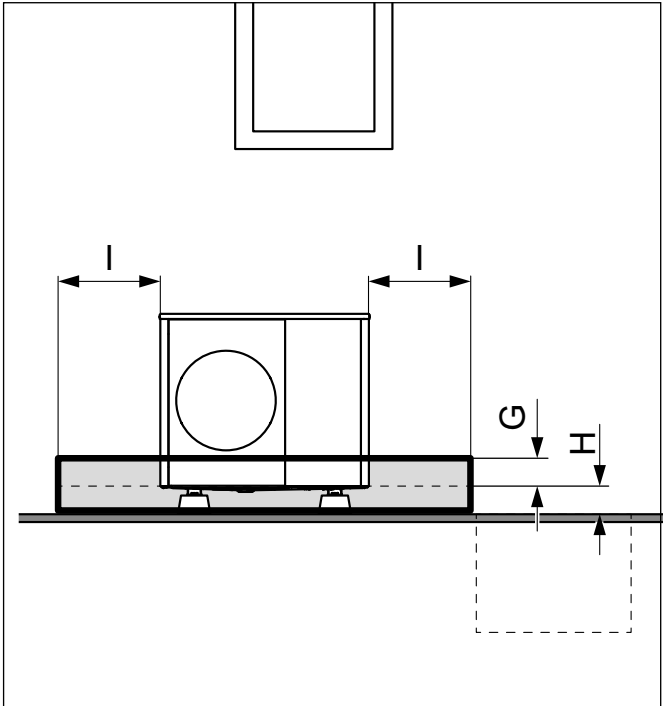
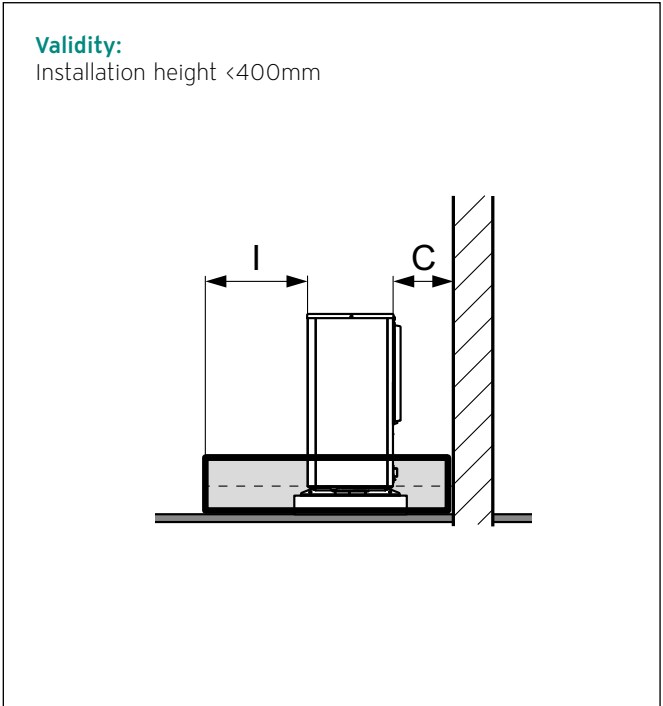
* 490mm (including back plate and mounting brackets).

Dimensions and clearances



aroTHERM plus	Unit	Dimension A
3.5kW	mm	765
5kW	mm	765
7kW	mm	965
10kW	mm	1565
12kW	mm	1565

minimum clearances	Unit	Heating mode	Heating and cooling mode
A	mm	100	100
B	mm	1000	1000
C	mm	200	250
D	mm	500	500
E	mm	600	600



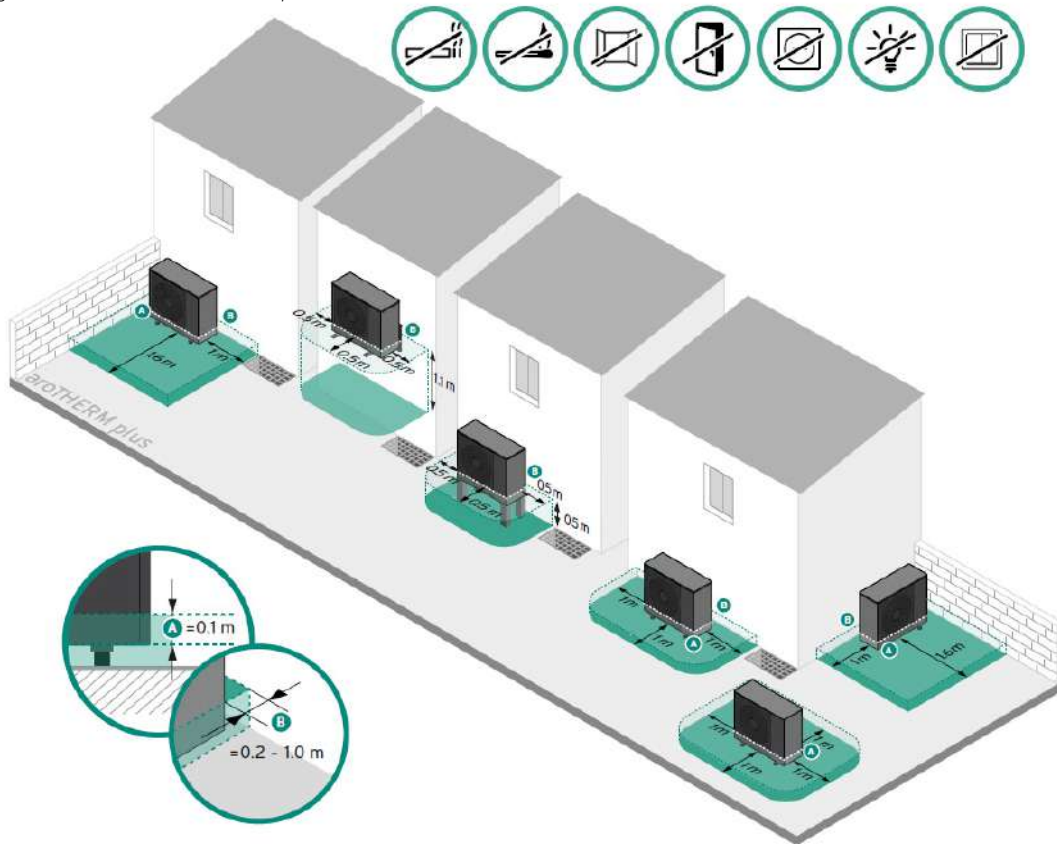
minimum clearances	With or without base cover
C	See table above
G	100mm
H	<400mm
I	1000mm

A safe space for carefree operation

When placing the unit you must be aware of drains and openings.

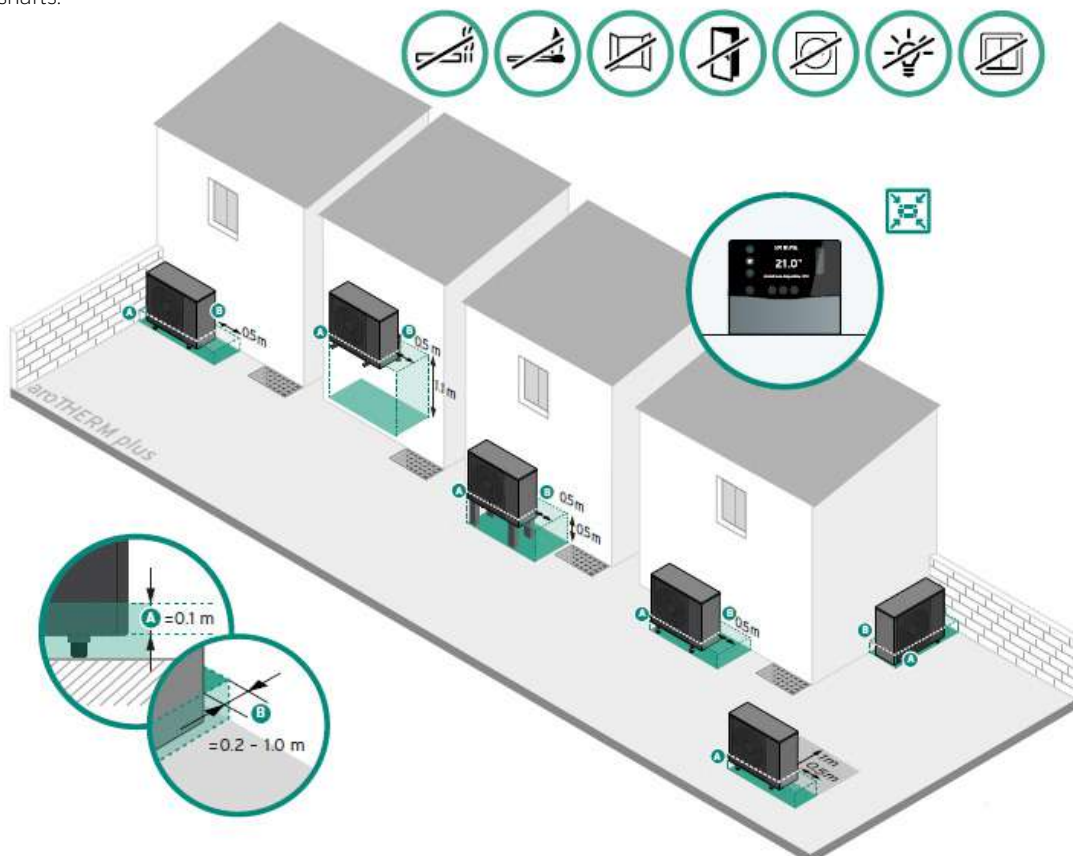
In the unlikely event of a refrigerant leak, the gas needs to be allowed to disperse to stop the risk of gas becoming lit.

Follow the diagrams below to ensure adequate clearance.



Optimised spacing for safe installation (Flexible Space Function activated)

The Flexible Space Function delivers maximum siting flexibility with the significant reduction of the protection zone. Once activated*, this allows free positioning near to doors, power outlets, windows or basement shafts.



*Activated in the installer settings.