Daikin Altherma 3 H HT Heat Pump

High temperature air-to-water heat pump
Heating, cooling and domestic hot water

iF DESIGN AWARD 2019

reddot design award winner 2019

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Designed to withstand the coldest climate conditions

Made in Europe, for Europe

The Daikin Altherma 3 H HT is designed to perform reliably, whatever the weather. High heating capacities are maintained, even in low ambient temperature, thanks to Daikin's unique technology.

As a market leader in heat pump technology, Daikin always strives to make the most reliable and efficient heat pumps possible. Daikin developed Bluevolution technology to achieve higher and greener performance. This technology is now included in all new products such as the Daikin Altherma 3 H HT.

The Daikin Altherma 3 H HT is the first Daikin outdoor unit with a distinctive new design. Its single fan reduces noise levels and its black front grill blends well in any environment.

All these design components were developed specially by Daikin R&D teams to make the Daikin Altherma 3 H HT one of a kind.

Superior performance, innovative design and acoustic comfort.
This is what the quintessential heat pump is all about.

BLUEVOLUTION

Bluevolution technology combines a specially developed compressor and R-32 refrigerant. Daikin is a global pioneer: the first to have launched heat pumps using R-32. With a lower Global Warming Potential (GWP), R-32 is equivalent in power to standard refrigerants, but achieves higher energy efficiency and lower CO_2 emissions.

Easy to recover and reuse, R-32 is the perfect solution for attaining the new CO_2 emission targets.

R-32

Design and space-saving installation

Aside from the acoustic comfort, design is a decisive point nowadays. Specific attention was paid to making the outdoor unit blend in with the home environment.

The black front horizontal grill makes the fan invisible inside, while the matt grey casing blends in discreetly with surrounding architecture. This unit received the IF and reddot design awards 2019.

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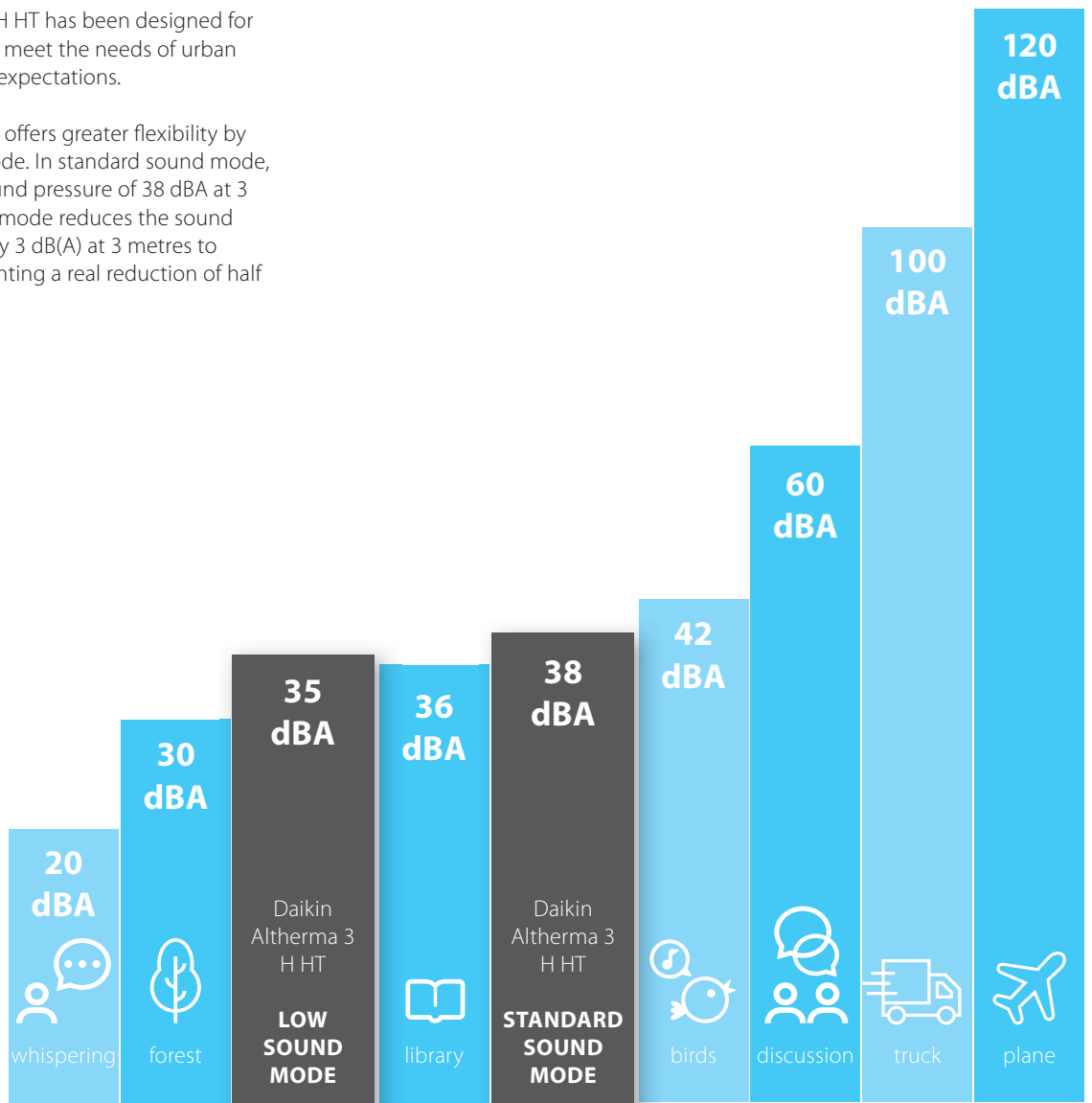
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Meeting modern society's expectations

The comfort of silence

The Daikin Altherma 3 H HT has been designed for lower acoustic levels to meet the needs of urban areas and homeowner expectations.

Daikin Altherma 3 H HT offers greater flexibility by having a low sound mode. In standard sound mode, the unit produces a sound pressure of 38 dBA at 3 metres. The low sound mode reduces the sound pressure even further by 3 dB(A) at 3 metres to reach 35 dB(A), representing a real reduction of half the sound level!

20 dBA	30 dBA	35 dBA	36 dBA	38 dBA	42 dBA	60 dBA	100 dBA	120 dBA
whispering	forest	Daikin Altherma 3 H HT **LOW SOUND MODE**	library	Daikin Altherma 3 H HT **STANDARD SOUND MODE**	birds	discussion	truck	plane

Innovation
At the heart of our concerns

The Daikin Altherma 3 H HT is the pinnacle of acoustic comfort and and heating performance, thanks to the very latest design developments. Several major components have been enhanced to achieve this excellence - such as a double injection compressor and a single fan even on large capacity units - all wrapped up in a brand-new casing

A redesigned casing

The black front grill of horizontal lines hides the fan from view, reducing the perception of the sound produced by the unit.

The light grey casing better reflects the environment in which the unit is installed, helping it to blend in with any decor.

This unique design has already received multiple design awards.

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A single fan for high capacities

The single fan is slightly larger, replacing the usual double fan for high capacity units.

The shape of the fan has also been reviewed to reduce the contact surface with the air, therefore reducing the sound level by improving the air circulation.

Compressor insulation and anti-vibration

To reduce the compressor sound power, several actions have been taken to improve absorption and insulation.

First, the compressor is surrounded by a 3-layer insulation of air, insulation material and a metal box.

Regarding absorption, the Daikin Altherma 3 H HT benefits from double sound reduction by using rubber pads between the bottom plate and the vibration plate under the compressor.

Metal box

Insulating air layer

Insulating material

Anti-vibration plate

**Bottom plate**

Rubber pads
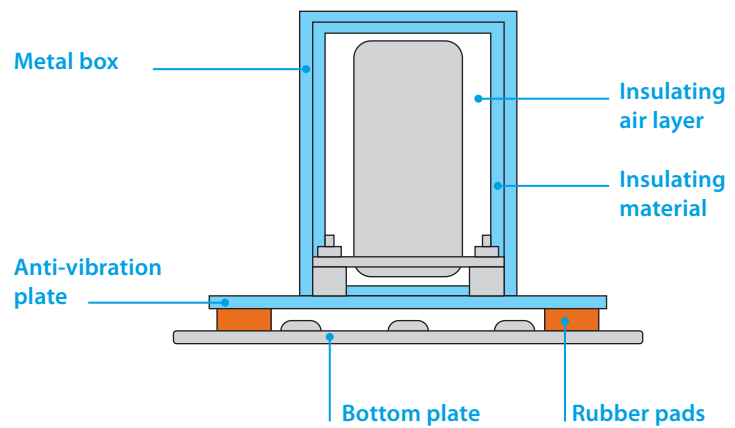
New double injection compressor

To make this product unique, Daikin Europe cooperated with Daikin Japan to develop world class components. The Daikin Altherma 3 H HT compressor is able to deliver a high leaving water temperature of 70°C on its own.

Moreover, Daikin is a pioneer in launching heat pumps using R-32. With a lower Global Warming Potential (GWP), the R-32 is equivalent in power to standard refrigerants, but achieves higher energy efficiency and lower CO_2 emissions. Easy to recover and reuse, R-32 is the perfect solution for attaining the new European CO_2 emission targets.

Unrivalled capacities

With these new developments, the Daikin Altherma 3 H HT achieves the best performances illustrated in the energy labels:

up to

A⁺⁺⁺

35°C and 55°C
Space heating
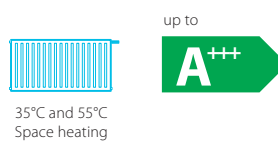
Daikin Altherma 3 H HT Wall mounted unit

Daikin wall mounted unit

The Daikin Altherma 3 split wall mounted unit offers heating and cooling with high flexibility for a quick and easy installation.

High flexibility for installation and domestic hot water connection

› Inclusion of all hydraulic components means no third party components are required
› PCB board and hydraulic components are located in the front for easy access
› Compact dimensions allows for small installation space, as almost no side clearances are required
› The unit's sleek design blends in with other household appliances
› Combine with a stainless steel domestic hot water tank

Heating and cooling

Underfloor heating

Domestic hot water

Example of installation with a stainless steel domestic hot water tank.

DAIKIN altherma

BLUEVOLUTiON

Daikin Altherma 3 H HT

Wall mounted **heating only** and
reversible air-to-water heat pump

› Inclusion of all hydraulic components means no third party
  components are required
› PCB board and hydraulic components are located in the front
  for easy access
› Compact dimensions allows for small installation space,
  as almost no side clearances are required
› The unit's sleek design blends in with other household appliances
› Combine with a stainless steel domestic hot water tank
› Heat pump operation down to -28°C

ETB(H/X)-D6V/D9W

EPRA14-18DV3/W1

BRC1HHDW

up to **A+++**   70°C   **R-32**

Indoor Unit (Wall hung)			Heating only		Heating and Cooling	
			ETBH16D6V	ETBH16D9W	ETBX16D6V	ETBX16D9W
Compatible outdoor unit			EPRA14-18DV3/DW1			
User interface (Must be ordered separately)			BRC1HHD(W/S/K)	BRC1HHD(W/S/K)	BRC1HHD(W/S/K)	BRC1HHD(W/S/K)
Fuction			Heating Only	Heating Only	Reversible	Reversible
Dimensions	Height x Width x Depth	mm	840 x 440 x 390			
Leaving water temperature range	Heating	°C	+18 to +70			
	Cooling	°C	-		+5 to +50	
	Domestic hot water	°C	+25 to +80			
Pump	No. of speeds		Inverter controlled			
Expansion vessel volume		litres	10			
Minimum water volume		litres	20			
Water connections		Inch	1" (female)			
Back-up heater fuse rating	6kW 1ph 230V	A	32	-	32	-
	9kW 3ph 400V	A	-	16	-	16

Notes: i) Back-up heaters are three step control, 1 phase 2-4-6 kW and 3 phase 3-6-9 kW
        ii) Compatible with Daikin EKHWSU-D series domestic hot water cylinders

Outdoor Unit			Single Phase			3 Phase		
			EPRA14DV3	EPRA16DV3	EPRA18DV3	EPRA14DW1	EPRA16DW1	EPRA18DW1
Description			**14kW**	**16kW**	**18kW**	**14kW**	**16kW**	**18kW**
Dimensions [1]	Height x Width x Depth	mm	990 x 1270 x 460					
Weight		kg	146			151		
Nominal capacity	Heating (a/b)	kW	10.17 / 10.12	11.57 / 11.51	12.11 / 12.04	10.39 / 10.26	11.82 / 11.67	12.37 / 12.21
	Cooling (c/d)	kW	10.55 / 6.90	11.51 / 7.88	12.46 / 8.86	10.55 / 6.90	11.51 / 7.88	12.46 / 8.86
Seasonal space heating efficiency (Heating only indoor unit)	Space heating (Average climate) 35°C	Class	A+++					
		Efficiency	177			186		
		SCOP	4.51			4.71		
	Space heating (Average climate) 55°C	Class	A++					
		Efficiency	140					
		SCOP	3.58			3.57		
Seasonal space heating efficiency (Reversible indoor unit)	Space heating (Average climate) 35°C	Class	A+++					
		Efficiency	180					
		SCOP	4.57					
	Space heating (Average climate) 55°C	Class	A++					
		Efficiency	142					
		SCOP	3.62			3.63		
COP	Heating (e/f)		4.86 / 3.70			4.50 / 3.56		
EER	Cooling (c/d)		4.13 / 2.70	4.11 / 2.69	4.09 / 2.68	4.13 / 2.70	4.11 / 2.69	4.09 / 2.68
Operation range	Heating	°C	-28 to +35					
	Cooling	°C	+10 to +43					
	Hot water	°C	-28 to +35					
Sound pressure / power level	Heating	dBA	43 / 54		48 / 54	43 / 54		48 / 54
	Cooling	dBA	43 / 54		48 / 54	43 / 54		48 / 54
Refrigerant charge	R-32	kg	4.2					
Water connections (Diameter)			1" (Male)					
Max piping length OU to IU [2]		m	10[2]					
Power supply			1-phase / 230V / 50Hz			3-phase / 400V / 50Hz		
Recommended fuses		A	32			16		

Notes: Nominal capacity and nominal input tested according to EN 14511
        Heating (a): Ambient air temperature -2°CDB and leaving water temperature 55°C (A-2/W55). Heating (b): Ambient air temperature -2°CDB and leaving water temperature 65°C (A-2/W65)
        Cooling (c): Ambient air temperature 35°C and leaving water temperature 18°C (A35/W18). Cooling (d): Ambient air temperature 35°C and leaving water temperature 7°C (A35/W7)
        Heating (e): Ambient air temperature 7°CDB and leaving water temperature 35°C (A7/W35). Heating (f): Ambient air temperature 7°CDB and leaving water temperature 45°C (A7/W45)
        Sound pressure / power measured according to EN 12102 under conditions of EN 14825
        [1] Excludes aesthetic grill
        [2] Spare pump capacity can be utilised to extend the interconnecting pipe length using the Daikin pipe sizing tool.

Accessories

Accessory reference	Description
BRC1HHDW	Madoka Heating - White
BRC1HHDS	Madoka Heating - Silver
BRC1HHDK	Madoka Heating - Black
AFVALVE1	Anti-freeze valve for glycol free systems (two required per heat pump)
EKPCCAB4	PC cable – to upload field settings from PC to unit
EKRSC1	Optional remote temperature sensor for outdoor unit*
KRCS01-1	Optional remote temperature sensor for indoor unit*
EKRP1HBA	Optional PCB kit for remote alarm monitoring, run and fault indication and bivalent operation
EKRP1AHT	Optional PCB for upto 4 digital inputs for power limitation
K.FF600ASN	Pair of flexi-feet for mounting outdoor unit
UK.FF600H150	Pair of flexi-feet for mounting outdoor unit, 150mm tall**
K.HOSE750	Pair of flexible hoses (Length 750mm, 19mm tough PVC coated insulation, 1" FBSP x 28mm compression)
K.HOSE750EL	Pair of flexible hoses with elbow (Length 750mm, 19mm tough PVC coated insulation, 1" FBSP x 28mm compression)
EKHY3PART	Third party tank connection kit for dry pocket (contains 3-way valve and tank sensor)
EKHY3PART2	Third party tank connection kit for thermostat contact (contains 3-way valve and wiring harness)
BRP069A62	Smart Comfort Controller for smartphone control
K.ELECMETV	**Electric meter for domestic RHI - Single-phase (Metering for performance compliant)**
	MID Class A electric meter to measure the electricity consumption of the Daikin Altherma heat pump
K.ELECMETW	**Electric meter for domestic RHI - Three-phase (Metering for performance compliant)**
	MID Class A electric meter to measure the electricity consumption of the Daikin Altherma heat pump

Notes: i) * Only one optional remote sensor can be installed. Sensor connects to indoor unit.
ii) **Recommended to achieve minimum outdoor unit ground clearance of 150mm.

Domestic hot water tank
Hot water heating installation options

☑ Stainless steel domestic hot water tank

EKHWSU-D

Comfort

› Available in 150, 180, 200, 250 and 300 litres in stainless steel EKHWSU-D

Efficiency

› High-quality insulation keeps heat loss to a minimum
› Efficient temperature heating: from 10°C to 50°C in only 60 minutes

Reliability

› At necessary intervals, the unit can heat up water up to 60°C to prevent the risk of bacteria growth

EKHWSU-D

Hot Water Cylinder

Domestic hot water cylinder			SB.EKHWSU150/EKEXP	SB.EKHWSU180/EKEXP	SB.EKHWSU200/EKEXP	SB.EKHWSU250/EKEXP	SB.EKHWSU300/EKEXP
Description			150L unvented cylinder (Including EKEXPVES)	180L unvented cylinder (Including EKEXPVES)	200L unvented cylinder (Including EKEXPVES)	250L unvented cylinder (Including EKEXPVES)	300L unvented cylinder (Including EKEXPVES)
Suitable for			R32 Split and Monobloc systems				
Energy efficiency class			B				
Standing heat loss (ErP)		W	45	50	55	60	68
Storage volume		L	145	174	192	242	292
Standing heat loss		kWh/24h	1.1	1.2	1.3	1.4	1.6
Max water temperature		°C	75				
Booster heater capacity		kW	3				
Power supply			1-phase / 230V / 50Hz				
Recommended fuses		A	20				
Height		mm	1015	1175	1283	1553	1763
Diameter		mm	595				
Empty weight		kg	45	50	53	58	63
Material inside cylinder			Stainless steel (EN 1.4521)				
Piping connections (diameter)	Water inlet H/E	inch	3/4 (female)				
	Water outlet H/E	inch	3/4 (female)				
	Cold water in	inch	3/4 (female)				
	Hot water out	inch	3/4 (female)				

Features:

> This stainless steel unvented cylinder is the ideal partner for Daikin Altherma R32 Split and Low temperature monobloc systems
> Fitted with a 3kW immersion heater as standard
> Quick and easy installation with semi pre-plumbed G3 safety kit included
> Supplied with 3-way valve

Madoka for Heating

reddot award 2018
winner

DESIGN
AWARD
2018

The beauty of simplicity

Silver
RAL 9006 (metallic)
BRC1HHDS

Black
RAL 9005 (matt)
BRC1HHDK

White
RAL9003 (glossy)
BRC1HHDW

User-friendly wired remote controller with premium design

Intuitive control with a premium design:

The smooth curves of the Madoka for Heating controller offer a sleek, refined shape which is distinguished by its striking blue circular display. Presenting a clear visual reference with large easy to read numbers, the controller features are accessed through three touch buttons, which combine intuitive control with easy adjustability for an enhanced user experience.

Three colours to match any interior design:

Madoka for Heating will complement perfectly any interior design scheme. Silver gives an additional touch to stand out in any interior or application, while Black is an ideal match for darker, stylish interiors and White offers a sleek, modern look.

Easily-set operation parameters:

Setting and fine-tuning your controller is simple and helps you attain higher energy savings and more comfort. The system enables you to select the space operation mode (heating, cooling or automatic), set the desired room teperature and control the domestic hot water temperature.

Easy Update via Bluetooth:

It is strongly recommended that the user interface has the latest software version. To update the software or check if updates are available, you need a mobile device and the Madoka Assistant app. This app is available from Google Play and the Apple Store

GET IT ON
Google Play

Available on the
App Store

www.daikin.eu/madoka

Always in control

Daikin Online Controller

The Daikin Online Controller application can control and monitor the status of a heating system and allows you to:

Monitor
› The heating system status
› Energy consumption graphs

Schedule
› Schedule the set temperature* and operation mode with up to **6 actions per day for 7 days**
› Enable **holiday mode**
› View in intuitive mode

Control
› Control space heating and domestic hot water via room thermostat
› Control leaving water temperature for domestic hot water

Main features
› Tank temperature monitoring
› Equipped with GDPR (data protection)
› Remote firmware update of LAN Adapter
› Control over multiple unit locations

Stand By Me
A complete customer after-care solution

With your customer's new Daikin installation and Stand By Me warranty and maintenance options, you can rest assured they are benefiting from the best comfort, energy efficiency, usability and service available on the market. Stand By Me provides an easy way to hand over the system to your customer. Simply complete the commissioning details on standbyme.daikin.co.uk, add your customer's email address and they will receive a code so they can create an account on Stand By Me and select their warranty and maintenance options.

☑ **Installation database**

Stand By Me provides a live dashboard of your project leads and, once the system is commissioned, your existing installations. So you can review and manage which products were installed, where and when.

☑ **Easy commissioning**

Hand over couldn't be simpler either. Simply complete the commissioning details, add your customer's email address and they will receive a code so they can create an account on **Stand By Me** and select their warranty and maintenance options.

☑ **End user warranty registration**

Warranty registration (previously on KEY) is now all done on **Stand By Me.** Once you've commissioned the system and emailed the code to your customer, your database will show you if the end-user has completed the warranty registration and the length of time remaining on their warranty*.

☑ **Installation database**

Stand By Me means that social housing providers no longer need physical access to properties in order to read meters for RHI reports. Remote monitoring of meters on **Stand By Me** provides a daily summary of the energy produced, consumed and the system efficiency, which can be submitted to Ofgem for RHI reporting. The Daikin remote metering cloud has been designed specifically for Daikin Altherma Hybrid systems and connects with your installed meters to provide all the information needed for quarterly RHI reporting.

Heating Solutions Navigator

The Heating Solutions Navigator is a versatile toolkit on Stand By Me, which brings together all the tools required to complete the design and selection of a system and allows you to to showcase Daikin heating solutions to your customers.

The Heating Solutions Navigator helps you to:

› Quickly see the wide array of Daikin Heating Solutions available
› Check all the options specifically for your installation
› Link easily to the installation specific literature
› Estimate the required heat load – from a simple snapshot to a detailed room-by-room calculation
› Use the embedded Pipe Sizing tool to calculate the maximum hydronic piping length from the indoor unit to the outdoor unit

› Create custom made piping & wiring diagrams
› Use the flue gas selection tool for gas based solutions
› Set the configuration of your installation
› Compare economic and environmental benefits of the Daikin system versus a conventional heating installation
› Store all your leads on you Stand By Me account
› Track projects from lead, installation and commissioning to inviting your customers to select after-sales services
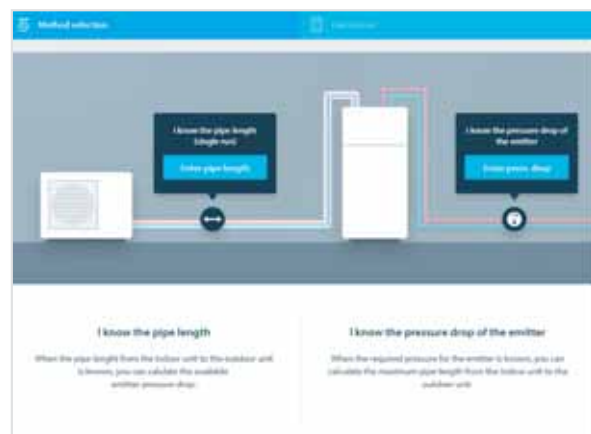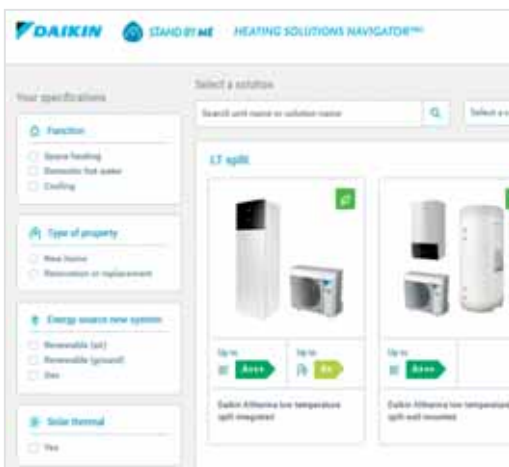
daikin.co.uk
Heating installer line: 01932 879070
Dedicated homeowner support line: 01932 879271

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