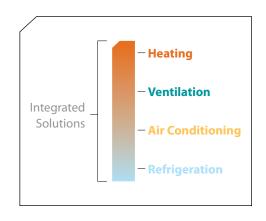


Heating Range

Next generation of renewable solutions







Who is Daikin

Daikin has a worldwide reputation for quality and innovative technology, with over 50 years experience in the design and manufacture of heat pump solutions. Daikin is a leading supplier of heating, cooling, ventilation and refrigeration solutions for commercial, residential and industrial applications. Daikin provides a comprehensive choice of domestic heating and renewable energy products which are ideally suited to the UK housing market.

A wholly owned subsidiary of Daikin Europe NV, Daikin UK has an excellent record of concern for environmental issues and applies it to all areas of the business, in many cases pre-empting international and national environmental legislation.

Forward thinking

Now is the time to rethink the way we heat our homes and hot water. Central heating systems as we have known them are changing dramatically today.

Everyone is concerned about reducing their energy bills, and the more eco-conscious (among us) also want to reduce our impact on the environment by using renewable energy sources. Whether for environmental or financial reasons (or even better, both),

finding a more energy efficient and economical way to heat our homes is a real priority – for the Government, for housing providers and for forward thinking home owners alike.

The good news is that you can get cheaper and 'greener' heating, without compromising on system performance. Daikin's efficient heating solutions make maximum use of the renewable energy all around us, converting free heat from the air and the sun to deliver completely reliable and controllable heating and hot water for homes, even when temperatures outside are below zero.

Daikin's heating and renewables range offers:

- Savings on running costs
- Reduction in CO₂ emissions
- Easy installation
- Space saving, low noise units
- Safe, easy maintenance
- High reliability
- Solutions for new homes and for retrofit

Why the time is right for a new approach to heating our homes

"I want to see more homes, communities and businesses generating their own energy. We can literally bring power back to the people."

Gregory Barker, Minister of State for Climate Change





How are the Government helping?

The UK Government are committed to reducing carbon emissions, with heating within the home being a priority in their strategy. The Climate Change Act of November 2008 commits the UK to reducing carbon dioxide emissions by at least 26% by 2020 with a long-term goal of an 80% reduction by 2050.

The European RES Directive

The European RES Directive took effect in October 2001, and came into force in June 2009 and was designed to set a goal that 20% of European total energy production must be produced from renewable energy sources by 2020. Under the European RES Directive, air source heat pumps and solar thermal systems are recognised as renewable energy sources, this means that the market for these will grow fast over the next decade.

The Microgeneration Strategy

The Microgeneration Strategy, published in June 2009 was designed to promote microgeneration technologies. The Department of Energy and Climate Change is also planning a domestic Renewable Heat Incentive (RHI) to encourage the uptake of renewables, with air source heat pumps and solar thermal being included. Full details of the RHI has not been published yet, however for future qualification of grants, Daikin UK recommends customers to only choose MCS approved products, installed by MCS accredited installers.

A Green Deal for householders

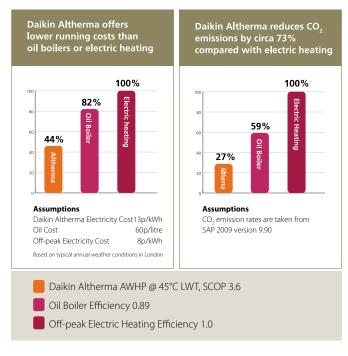
Our homes account for almost 27% of the UK's CO₂ emissions, more than 80% of which is attributed to our heating and hot water provision. Older, harder to heat properties make up the majority of homes in the UK and many have poor insulation, leading to excessive heat loss. The Government is committed to reducing CO₂ emissions and improving energy efficiency in our homes through a new Green Deal, due to be announced in Autumn 2012, which will help individuals to invest in home energy efficiency improvements.

The Code for Sustainable Homes

The Code for Sustainable Homes (CfSH) was implemented in April 2007 as a voluntary standard designed to encourage construction of new homes to higher environmental and sustainable standards. Building Regulations Part L were updated in October 2010 and the energy requirements were increased to reflect CfSH Level 3, i.e. 25% reduction against the previous Building Regulations 2006. There are many local requirements to encourage new homes to meet CfSH Level 3 and even CfSH Level 4.

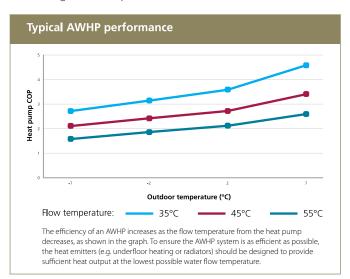
Why choose Daikin renewable energy solutions?

Daikin heating systems are more than capable of delivering all of a homes heating and hot water requirements from renewable sources throughout the year – even when the outside temperature is -20°C.



Reduce running costs with renewables

Daikin Altherma is a domestic heating and hot water system based on air-water heat pump technology, which generates up to 70% of the heat free from the air and represents a highly energy-efficient alternative to oil, LPG and electric storage systems. As a result, Daikin heat pumps can offer efficiencies up to 5 times higher than a fossil fuel boiler, so they will typically save on running costs compared with old oil and LPG boilers.



Minimise the environmental impact of heating

Daikin Altherma low temperature heat pumps deliver some of the very highest efficiencies available in the market today. Capable of achieving a Coefficient of Performance (COP) of up to 5.041 when installed correctly, Daikin Altherma LT systems are more efficient than traditional boilers and reduce the environmental impact of new homes, minimising carbon emissions.

European Eco-label

Daikin Altherma products carry the European Eco-label, certifying their performance meets EU-wide environmental criteria. The Eco-label scheme represents products in the top of their class for environmental performance, with compliance verified by an independent test body.



MCS Certification

Daikin Altherma air-water heat pumps are certified by the Microgeneration Certification Scheme (MCS)*, providing reassurance that products and services provided meet rigorous and consistent Government standards. MCS accreditation is a mandatory standard in Government initiatives such as the proposed RHI, so it's important that developers specify MCS accredited products to ensure compliance with any forthcoming funding schemes.

*Please check the MCS website for the latest list of up to date accredited Daikin heat pumps

¹ERLQ004CAV3 - tested in accordance to EN 14511 at A7 W35

Improved ratings in SAP Calculations

Some Daikin Altherma products are also included in the SAP (Standard Assessment Procedure) Appendix Q, which provides specific energy performance ratings of individual products. This means that homes using listed products will reflect the higher performance of those specific heat pumps and achieve better SAP ratings.

How to choose a system that suits your project

To get a better idea of which Daikin system would best suit your installation, please follow the flow chart showing the preferred applications of the Daikin heating products.

Daikin offers a whole range of systems to suit your requirements:

Daikin Altherma heat pump systems

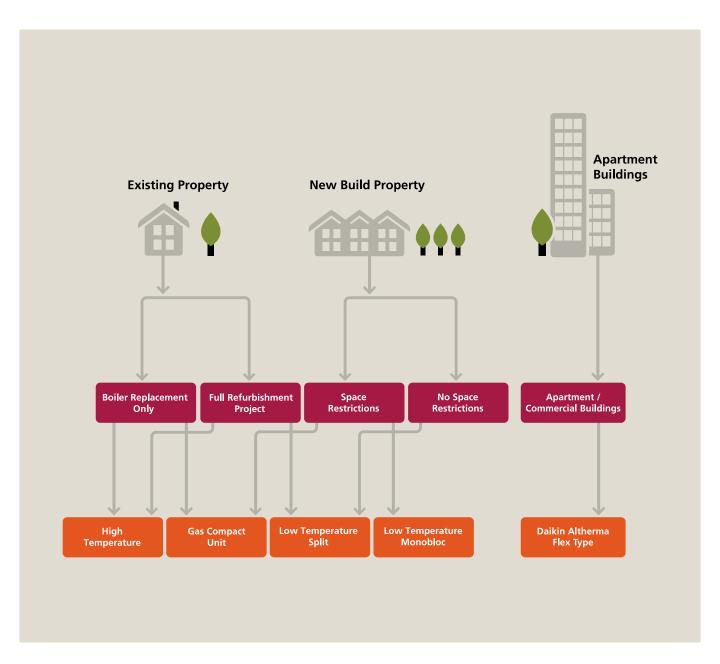
- Low temperature monobloc
- Low temperature split systems
- High temperature split systems

Solar and GasCompactUnits

- > Solar thermal systems
- > GasCompactUnit combined gas condensing boiler and solar energy

Heat emitters

- Fan coils
- Heat pump convectors
- Underfloor heating

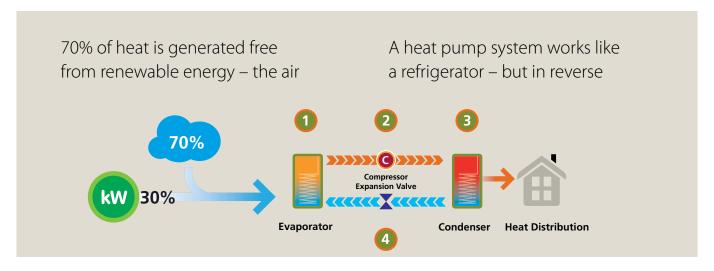


Daikin Altherma air-water heat pumps

Innovation and quality are constantly at the forefront of Daikin's philosophy. Daikin's systems provide highly efficient solutions, which minimise the impact on the environment and running costs.

Daikin Altherma is a domestic heating and hot water system based on air-water heat pump (AWHP) technology. With over 200,000 installations across Europe, it represents a flexible and cost-effective alternative to a fossil fuel boiler.

How does a heat pump work?



- 1. A heat exchanger contains refrigerant, which is colder than the outside air. As the air passes the exchanger, the refrigerant absorbs the latent heat from the outside air and evaporates.
- 2. The vapour passes into the compressor and is compressed, increasing its pressure and temperature, effectively concentrating the heat.
- 3. Hot vapour is condensed in the second heat exchanger where heat is rejected and the vapour condenses back into a liquid. The rejected heat passes into the central heating and hot water system, ready for use in the home.
- **4.** The liquid refrigerant passes back through an expansion valve, ready to start the cycle again.

Daikin Altherma advantages

- > Uses renewable energy source
- Advanced energy saving features
 - Weather compensation built in as standard
 - Inverter compressor technology
- Low running and maintenance costs
- Low noise unobtrusive and quiet
- Easy to install, no groundworks needed e.g. boreholes
- Ideal for off gas grid properties
- Single phase power supply with low starting current
- Flexible, can be connected to underfloor heating, radiators or fan coils
- > As a package of energy saving measures, helps towards higher rating in the Code for Sustainable Homes
- > Can be connected with a solar thermal system which can provide up to 60% of your hot water needs for free from the sun

Daikin Altherma advantages over traditional boiler systems

- Daikin Altherma heat pump is 3 to 5 times more efficient
- > Up to 50% reduction in CO₂ emissions

Heat pumps

Low Temperature (LT) Split system

The new advanced Daikin Altherma LT Split system offers even greater running cost savings than the original.

Based on a tried and tested concept, the new heat pump is the perfect choice for all new build and many refurbishment projects.

In a LT split system, the outdoor unit extracts energy from the outside air. Refrigerant pipework then delivers this energy to the indoor unit (or hydrobox) which can be located up to 75 metres away.

System elements

1. Outdoor unit options

The ERLQ-C-series range now includes three brand new outdoor units – 4kW, 6kW and 8kW – to complement the existing 11kW, 14kW and 16kW units. Designed for installation anywhere in Europe, this range can withstand even the toughest winter climates and will still operate even when the outside temperature drops to -25°C.

The new 4kW model has been specially designed for today's low energy homes. With even higher efficiencies and a modulation range down to 1.8kW (at A7/W35), it easily helps developers to achieve Code for Sustainable Homes Level 4.

All the new heat pumps benefit from the latest Daikin inverter technology. With a higher modulation range, even higher efficiencies are achieved.

The original ERHQ-B-series is still available in 11-16kW capacities.

2. Indoor unit options

A new wall hung indoor hydrobox with a modern design is connected to the outdoor unit. These units can produce water temperatures up to 55°C with guaranteed capacities all the way down to at least -15°C. Operation is guaranteed even at -25°C.

All required hydraulic components are in the hydrobox including circulation pump, expansion vessel and isolation valves. A new high efficiency "A" label circulation pump and a bigger heat exchanger both increase system efficiency. Additionally, the new hydrobox is easier to install and maintain with front access to the wiring and hydraulics.

The new unit is smaller and requires only 10mm side clearances. With its reduced installation footprint, siting the unit is even easier.

The system can be completed with a separate unvented hot water cylinder which can be sited to suit the available space. The hot water cylinder with back-up immersion heater is specially designed to maximise hot water supply and comes in three sizes: 150, 200 and 300 litres.

3. Controller

The Daikin Altherma LT Split heat pumps have a new and improved modern controller. This easy to use backlit controller can also be installed as a modulating room thermostat to improve system efficiencies still further.

The new controller has a simple to follow menu structure to allow the system to be set up and optimised for each installation. The controller can be commissioned by PC and has energy metering functionality to help the householder understand how much energy is used and generated by the heat pump.



4. Solar thermal system

It is possible to connect an indirect pressurised solar thermal system to provide additional heat to the domestic hot water during summer months.

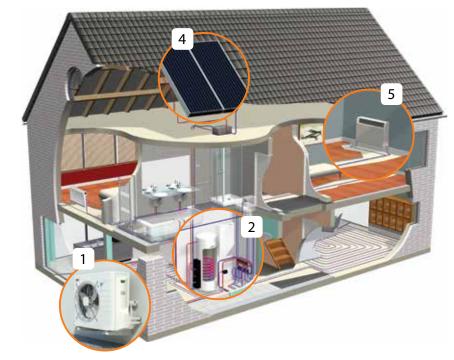
5. Heat emitters

The system can work with all appropriately sized heat emitters including underfloor heating, radiators, heat pump convectors and fan coil units.

All products are MCS accredited. The ERLQ-C range is also listed on the product characteristics database.





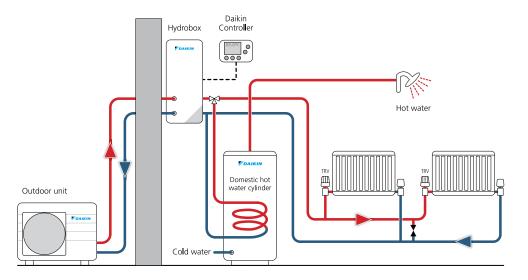




The Daikin Altherma LT Split system is available in a number of configurations, offering many combinations.

LT split with wall hung indoor unit

INDOOR UNIT	CYLINDER CAPACITY	OUTDOOR UNIT	CAPACITY RANGE	BENEFITS
Wall hung indoor unit & separate cylinder	150, 200 and 300 litre	C series	4-16kW	High seasonal efficiency providing low running costs Designed to withstand even the toughest winter climates – with operation down to -25°C Hydrobox produces leaving water temperatures up to 55°C Cylinder can be sited to suit requirements Outdoor unit can be sited up to 30m (4-8kW) or 50m (11-16kW) from indoor unit
4		B series	11-16kW	Has many similar benefits to the C series, this model is designed for milder climates



Heat pumps

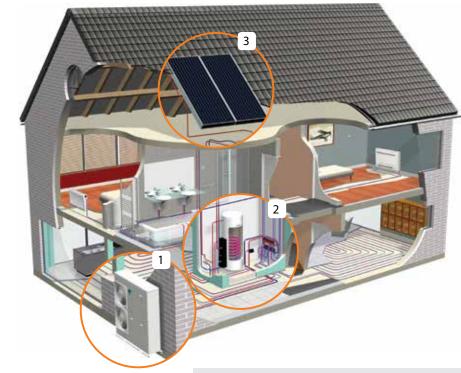
Low Temperature Monobloc system

When there are internal space constraints, the Daikin Altherma LT Monobloc system offers a perfect solution as it combines all the main hydraulic components in a single outdoor unit. No refrigerant handling qualification is required to install the system.





*Please check the MCS website for the latest list of up to date accredited Daikin heat pumps.



System elements

1. Outdoor unit

Simplified installation, as it requires only power and water connections. Sealed refrigerant circuit including back-up heater.

2. Hot water cylinder

The hot water cylinder is specially designed to maximise hot water supply and comes in three sizes: 150, 200 and 300 litres.

3. Solar thermal system

Optional connection with solar panels to create a fully renewable system.

Daikin Altherma LT Small Monobloc

Available in 6kW and 8kW capacities, ideal for small properties

- > **NEW!** 12 metre interconnecting cable between outdoor unit and control box delivered separately to aid first fix installation
- > Quick installation
- > Simplified wiring
- > All hydraulic components included in the unit
- > Compatible with solar thermal systems to create a completely renewable solution for even greater energy savings
- > Great solution for tight spaces requiring smaller capacities
- > Optional back-up heater indoors
- > Delivers COP above 3.3 at A2/W35



Heat emitters

Heat Pump Convectors and Fan Coils

Daikin Altherma heat pumps are compatible with many different types of heat emitters including heat pump convectors and fan coils.

Heat pump convectors

Heat pump convectors can provide both heating and cooling if required and can be used with the Daikin Altherma heat pump to offer a compact and highly efficient solution:

- > Designed to operate at low flow temperature (35°C) to optimise the efficiency of an air-water heat pump
- Super quiet operation
- No draughts
- Able to heat and cool
- Compact size
- > Unique solution
- Savings on running costs
- Available in 1.5 & 2kW



Intelligent integration with Daikin Altherma system

If required, the heat pump convector and the other heat emitter can be set at two different temperature zones, thanks to the unique interlink function, which enhances the performance of the heating system.

In refurbishment projects, where it can be difficult to install a drain pipe, a unique feature is that the cooling is still possible by limiting the water temperatures.

Can easily replace existing heat emitters

- > Ideal solution instead of underfloor heating (i.e. bedrooms) or as an alternative to unsightly radiators
- Deliver ample levels of heat, even at low water temperatures
- > Offer remote control of each convector, for easy control of room temperature, fan speed, automatic or night mode, rapid heating or cooling and weekly timer
- > Easy to use controls
- > Can be installed against wall or recessed
- Plug and play installation

Fan coils

A fan coil is a type of heat emitter that consists of a heat exchanger and a convector fan, which distributes heat, quickly and evenly. Fan coils are designed to work at lower temperatures to optimise the efficiency of the Daikin Altherma heat pump.

Daikin offers a range of fan coils that can be mounted horizontally or vertically. They are also available as cased or chassis units for concealment in ceiling voids, or decorative casings, and provide:

- > A wide operating range
- Quiet operation
- Easy installation and maintenance
- Excellent air flow and air distribution
- Slim and compact aesthetic design
- Wireless remote control

Fan coils also offer the additional benefit of comfort cooling when used in conjunction with a heating and cooling Daikin Altherma system.



Heat pumps

Daikin Altherma High Temperature

In older or harder to heat properties, you need a system that reliably delivers higher water flow temperatures of up to 80°C, without necessarily replacing the whole radiator system.

System elements

1. Outdoor unit

The outdoor unit extracts heat from the outside air and transfers it to the indoor unit via refrigerant piping.

2. Indoor unit

The indoor unit can be sited up to 50 metres away from the outdoor unit.

3. Unvented domestic hot water cylinder

The unvented domestic hot water cylinder can be stacked on top of the indoor unit, thus saving space.



For boiler replacement and retrofit projects:

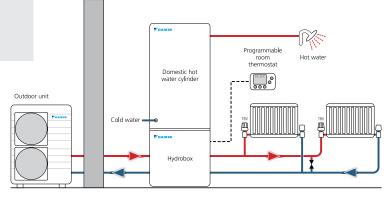
The Daikin Altherma high temperature system is ideal for straight-forward boiler replacement. The system offers:

- > Superior and unique cascade heat pump technology
- > Water flow temperature of up to 80°C, without need for an electric back-up heater
- > Hot water recovery time as fast as a boiler
- > Modular design and easy to install all components are pre-assembled

4. Solar system

The HT heat pump can be connected to a solar thermal system for higher hot water efficiencies. A dedicated unpressurised thermal store works together with the drainback solar system and floor standing hydrobox.





Typical HT system

Heat pumps

Daikin Altherma Flex Type

The award winning Daikin Altherma Flex Type air-to-water heat pump is a world-first renewable heating system – ideal for apartment schemes, collective housing, schools, leisure environments and businesses.

Efficient air-to-water heat pump technology for apartments and commercial applications

- > Heating and domestic hot water from a single efficient system
- Up to 80°C water temperatures by heat pump only
- > For a typical application this system can deliver*:
 - 27% reduction in primary energy use
 - 59% less CO₂ emissions and
 - 33% less operating costs compared to an installation with individual gas boilers
- * Simulation calculation carried out on an apartment building in Belgium: 5 floors, 22 apartments, average size per apartment: 107m²; all apartments are assumed to be heated with under floor heating and radiators.

A flexible heating solution

The Daikin Altherma Flex Type is a highly efficient and versatile hot water and heating solution delivering high water flow temperatures of up to 80°C. With two thirds of the heat generated from the renewable energy source of air, it's an ideal solution for replacing existing oil, LPG or electric heating systems. By reducing the total primary energy use, Daikin Altherma Flex Type can help to improve the energy performance of buildings, reduce running costs and cut carbon emissions.

A modular heating system

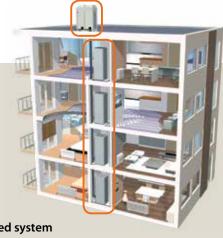
One or more outdoor heat pump units are connected by refrigerant pipework to multiple indoor hydrobox units. Each outdoor unit provides 23-45kW capacity and can connect up to 10 indoor units. The indoor units (5-16kW) can be configured in a centralised or de-centralised arrangement to meet the building's heating requirements. This offers complete flexibility to integrate air-water heat pump technology in various types of buildings with heat loads up to circa 500kW.



World-first

Centralised system

The indoor units can be located together in one central plant room, to create a centralised system suitable for a wide range of large domestic and light commercial applications. The centralised indoor units offer modular system scalability and capacity to meet the heating demand of the overall building.



De-centralised system

The hydroboxes can be located in individual dwellings, such as apartments, to create a de-centralised heating system. Each indoor unit can be operated independently, providing each property with individual control of heating, hot water and cooling (5 and 8kW models only). Individual dwellings can also be equipped with separate domestic hot water tanks.

Solar thermal systems

Daikin solar thermal systems integrate with the Daikin Altherma range of heat pumps to provide extra renewable energy support for domestic hot water.

System elements

1. Flat plate solar collectors

Absorbs solar energy and converts into useful heat. Can be pressurised or drainback. Various roof fixings available.

2. Solar controller and pump station

The controller decides when to start the solar pump to transfer energy from the solar collectors, depending on the available solar gain and tank temperature.

3. Hot water store

This is the store of solar energy to provide domestic hot water. Two options are available: (a) unvented indirect cylinder (150, 200 and 300 litres) for pressurised solar, or (b) vented thermal stores for drainback solar (300 and 500 litres).

Provides up to **60%** of the hot water needs for an average household over a year.

How does it work?

The Daikin high-performance solar collectors convert shortwave solar radiation into useful heat. As soon as the temperature of the fluid within the collectors exceeds the cylinder temperature, by a predetermined value, the solar controller starts the solar pump and charges the cylinder or thermal store.

Three system options

The **drainback solar system** utilises an unpressurised thermal store. Water in the store is pumped to the solar collectors, heated and drains back to the store. Hot water is delivered via an indirect mains pressure coil. The store is also heated by a heat pump when there is insufficient solar energy. There is no need for glycol or a solar fluid collection vessel resulting in lower maintenance costs.

In the **pressurised solar system**, a glycol antifreeze solar fluid collects the solar energy and transfers it from the collectors into the hot water cylinder via a specially designed external heat exchanger kit to the unvented cylinder. This allows the entire volume of the cylinder to be heated efficiently by solar energy or by the heat pump.

The **standalone pressurised solar** system includes an unvented twin coil solar cylinder and is designed to be combined with an auxiliary gas boiler. This system is ideal for on-gas retrofit applications.

Benefits of Daikin solar thermal systems

Solar collector: High efficiency and robust panel design with toughened glass for peace of mind.

Extensive range from one supplier: Daikin offer a comprehensive solar range for all applications. Pressurised or drainback systems, vertical or horizontal collectors, on-roof, in-roof or A-frame fixings and the choice of an unvented cylinder or thermal store. A full range of solar accessories are also available to complete your installation.

Intelligent control: The system automatically decides to run solar or heat pump for optimum utilisation of solar energy and reduced running costs.

Modulating pump: Automatic and controlled solar pump speed for maximum efficiency.

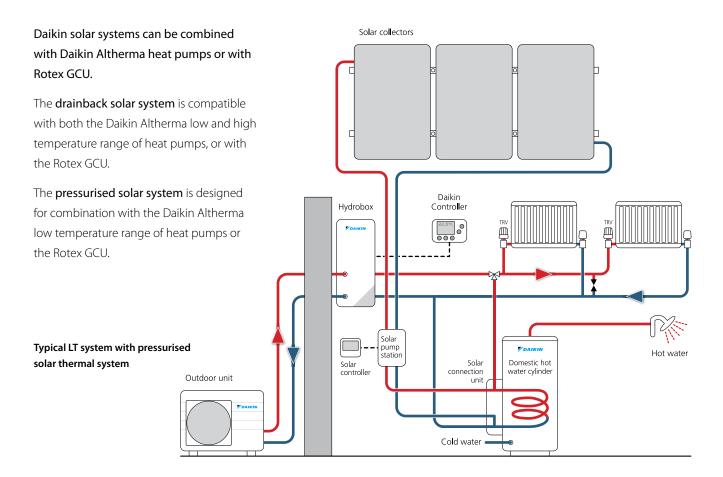
Grants available: The collector is Solar Keymark certified and qualifies for RHPP grants.

10 year warranty: against manufacturing defects for peace of mind.



Solar thermal systems

Daikin solar thermal systems offer complete flexibility for every installation. Both vertical and horizontal solar collectors are available with a range of fixing systems on-roof, in-roof and A-frame. Predefined packs are available for easy selection.



Daikin solar packs include:

- > Flat plate collectors
- > Roof brackets
- > Mounting rails for collectors
- > Hydraulic connection kit*
- > Solar controller
- > Solar pump station
- > Flow sensor
- > Solar fluid**
- > Solar expansion vessel**

Additional accessories available to complete the system including solar pipework and mixing valve.

- For fixings at solar panel(s) and pump station
- ** Required and included for pressurised systems only

Solar Keymark certification

Daikin solar collectors have Solar Keymark certification, the European quality label for solar thermal products. This accreditation certifies that the solar collectors (models EKSV26P and EKSH26P) comply with EN 12975.

The Solar Keymark is accepted by MCS and qualifies for grant funding schemes. The accreditation helps householders to select quality assured collectors.

For an up to date list of products awarded the Solar Keymark, go to www.estif.org/ solarkeymark and click 'products'.



Underfloor heating systems

ROTEX underfloor heating systems help to increase the efficiency of a heat pump system and are designed to work seamlessly with the Daikin heating range.

System types

A wide selection of underfloor heating fixing systems are available for a range of applications.

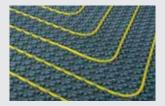


For quick and easy installation of pipe directly onto high density floor insulation with a protective film.



Clip rail

Rails fixed onto insulation provide a secure and easy clipping system for the pipe.



System plates

Styrofoam nap plates with a protective polystyrene layer provide both insulation and a secure pipe fixing system.



Secco dry system

Underfloor heating benefits

Comfort: the low surface temperature and large heating area provide an extremely comfortable

> Energy saving: UFH is designed to run at a lower

which is the ideal temperature range to achieve

higher efficiencies and lower running costs from

optimal versatility of design for individual rooms.

flow temperature than radiators, at 35-45°C

Dry overlay plates designed for retrofit applications or above timber suspended floors without removing the existing floor.



Controls and accessories

A new range of slim wired and wireless room controls are available to be connected to a wiring centre for multiple zones. An optional small and compact timer module plugs into the wiring centre to provide time control.

A full range of UFH accessories are available, including manifolds with integrated flow meters, actuators, fixing systems and edge insulation.



Rotex Pipes

Monopex®: PE-Xc crosslinked polyethylene pipe, which is corrosion free and is a sustainable material.

Monopex-AL: PE-Xc pipe with an aluminium coating and UV stabilised PE layer for easier handling.

DUO: Dual layer PE-Xc and outer ribbed PE pipe; suitable for flow temperatures up to 80°C.



Simple installation: easy to lay and allows

a Daikin Altherma heat pump.

Applications

room climate.

ROTEX underfloor heating can be used for heating almost every different type of building, from single and multiple dwellings, to schools, leisure centres, hotels, hospitals and sports halls.





Condensing gas boiler and solar energy combined

ROTEX GasCompactUnit combines a high efficiency gas boiler and hot water solution, with optional solar thermal connection.

Key features and benefits

> High efficiency boiler

Intelligent burner management with gas adaptive combustion system which controls the gas/air mixture for the most efficient combustion.

Easy installation

Pre-assembled gas condensing boiler and hot water storage, which is a lightweight and easy to manoeuvre. Composite dual layer rigid plastic shell which is highly insulated for low heat loss.

Weather compensator as standard

Controls flow temperature according to outside temperature and storage tank temperature to achieve highest operating efficiency.

Simple controller

Intuitive and easy to use for quick commissioning and reduced installation time. Factory fitted with full 7-day heating and hot water programmer.

Instantaneous hot water

Mains pressure hot water delivered via the indirect heat exchanger. Pressureless storage tank—no G3 required.

Optional solar connection

A boiler and solar heated store provides a unique option for meeting higher levels of the Code for Sustainable Homes.

Optional Bivalent version

For connecting an auxiliary heat source e.g. wood fired boiler.

> Parts and labour warranty

2 years on the boiler and 3 years on the tank.



Gas appliances must be installed and serviced by a competent person in accordance with the Gas Safety Regulations 1998. Always ensure that your installer is on the Gas Safe Register. Daikin is a Gas Safe Registered company and our Gas Safe Registered engineers are qualified to provide after sales service support on the GasCompactUnit.



Extensive range of models

Available in a range of heating outputs and tank capacities, the GCU is suitable for a wide range of applications.

All models delivered for natural gas and are LPG ready.

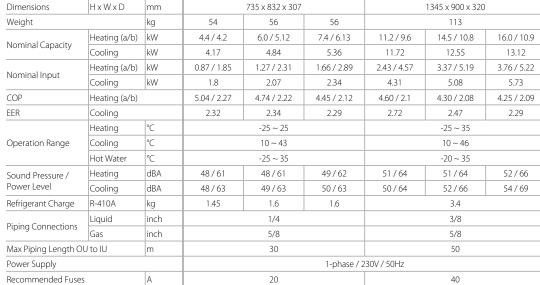
	15kW	24kW	33kW
300 litres	/	✓	X
500 litres	/	/	/

Daikin Altherma LT Split

Technical data







ERLQ004CV3 ERLQ006CV3 ERLQ008CV3 ERLQ011CV3 ERLQ014CV3 ERLQ016CV3



(INVERTER)

Nominal capacity and nominal input tested according to EN 14511 at the following conditions:

Heating a: Ambient air temperature 7°C and leaving water temperature 35°C (A7 W35) Heating b: Ambient air temperature -7°C and leaving water temperature 45°C (A-7 W35) Cooling: Ambient air temperature 35°C and leaving water temperature 7°C (A35 W7)

Sound pressure level measured at 1m from the unit

OUTDOOR UNIT - C SERIES



(INVERTER)

OUTDOOR UNIT - B SERIES		ERHQ011BV3 ERHQ014BV3 ERHQ016BV3						
Dimensions	HxWxD	mm						
Weight		kg	103					
Ni	Heating (a/b)	kW	11.2 / 6.43	14.0 / 7.42	16.0 / 8.49			
Nominal Capacity	Cooling	kW	10.0	12.5	13.1			
Nama in al la mont	Heating (a/b)	kW	2.55 / 3.11	3.26 / 3.88	3.92 / 4.5			
Nominal Input	Cooling	kW	3.69	5.39	5.95			
COP	Heating (a/b)		4.39 / 2.06	4.29 / 1.91	4.08 / 1.89			
EER	Cooling		2.71	2.32	2.20			
Heating °C			-20 ~ 35					
Operation Range	Cooling	℃	10 ~ 46					
	Hot Water	°C	-20 ~ 35					
Sound Pressure /	Heating	dBA	49/64	51/64	53/66			
Power Level	Cooling	dBA	50/64	52/66	54/69			
Weight		kg	103					
Refrigerant Charge	R-410A	kg		3.7				
D:-: C	Liquid	inch	3/8					
Piping Connections	Gas	inch	5/8					
Max Piping Length OU to IU m			75					
Power Supply			1-phase / 230V / 50Hz					
Recommended Fuse:	5	Α	32					

Daikin Altherma LT Split

Technical data

Note that specification tables refer to product part numbers. Please check the material reference on the price list at time of ordering



INDOOR UNIT (WA	LL HUNG)		EHBH04C3V	EHBX04C3V	EHBH08C**	EHBX08C**	EHBH16C**	EHBX16C**
Function	Heating Only	Reversible	Heating Only	Reversible	Heating Only	Reversible		
To use with			ERLQ004CV3 ERLQ006-008CV3			5-008CV3	ERLQ011-016C**	/ ERHQ011-016B**
Dimensions	HxWxD	mm			890 x 480	x 344 / 380		
Leaving Water	Heating	°C			1.	5~55		
Temperature Range	Cooling	°C	-	5~22	-	5~22	-	5~22
Pump	No. of speeds				Inverter	controlled		
Expansion Vessel Volur	ne	litres	10					
Water Connections	Diameter	inch			1 1/4	(female)		
	3kW 1ph 230V	А				16		
Back-up Heater	6kW 1ph 230V	А		-	32ª		32ª	
Fuse Rating 6kW 3ph 400V A			- 10 ^a					
	9kW 3ph 400V	А		- 16ª				

Note: a: 9W models only



DOMESTIC H	IOT WATER CYLIN	NDER	EKHWSU150B3V3	EKHWSU200B3V3	EKHWSU300B3V3				
Suitable for			Unver	Unvented Systems (EKUHWB Kit also required)					
Water Volume		litres	150	200	300				
Max Water Tem	perature	°C		85					
Booster Heater	Capacity	kW		3					
Power Supply				1-phase / 230V / 50Hz					
Recommended	Fuses	А	16						
Height		mm	1015	1265	1715				
Diameter		mm	580						
Empty Weight		kg	38	46	60				
Material Inside Cylinder			Stainless Steel (DIN 1.4521)						
	Water inlet H/E	inch	3/4 (female)						
Piping Connections (Diameter)	Water outlet H/E	inch	3/4 (female)						
	Cold water in	inch		3/4 (female)					
(=	Hot water out	inch		3/4 (female)	-				

Daikin Altherma LT Monobloc

Technical data



MONOBLOC 6kW-8kW			EBHQ006BBV3	EBHQ008BBV3	
Dimensions	HxWxD	mm	805 x 11	90 x 360	
Veight kg			95		
Naminal Caracity	Heating (a/b)	kW	6.00 / 3.77	8.85 / 5.26	
Nominal Capacity	Cooling	kW	5.12	6.08	
Naminallania	Heating (a/b)	kW	1.41 / 1.88	2.21 / 2.56	
Nominal Input	Cooling	kW	2.16	2.75	
COP	Heating (a/b)		4.26 / 2.00	4.00 / 2.05	
EER	Cooling		2.37	2.21	
	Heating	°C	-15	~ 25	
Operation Range	Cooling	°C	10 ~	~ 43	
	Hot Water	°C	-15 -	~ 35	
Sound Pressure / Power Level	Heating	dBA	48 / 61	49 / 62	
Sound Pressure / Power Level	Cooling	dBA	48 / 63	50 / 63	
Refrigerant Charge (Factory)	R-410A	kg	1.7		
Power Supply	<u> </u>		1-phase / 230V / 50Hz		
Recommended Fuses			20		
Pump	No. of speeds		3		
Expansion Vessel Volume	·	litres	6		
Water Connections	Diameter	inch	1 (male)		
Max Piping Length OU to Cylinder	·	m	10		
Interconnecting Cable			EKCOMCAB1 (12 metres) - Delivered Separately		
BACK UP HEATER KIT (OPTIONAL)			EKMBU	IHB6V3	
	Max depth	mm	17	70	
Dimensions	Max width	mm	38	30	
	Max height	mm	57	75	
Power Supply	·	'	1-phase / 2	30V / 50Hz	
Recommended Fuses		А	32 (6kV	V BUH)	
Water Connections	Diameter	inch	1 1/4 (1	male)	
CONTROL BOX			EKCBH008BCV3	EKCBX008BCV3	
Function			HEATING ONLY	REVERSIBLE	
To use with			EBHQ006	~008BBV3	
	NA	mm	100 (excluding	user interface)	
Discouries	Max depth	mm	120 (including user interface)		
Dimensions	Max width	mm	41	12	
	Max height	mm	390		



			ŀ	IEATING ONL	Υ		REVERSIBLE		
MONOBLOC 11-	16kW		EDHQ011BB6V3	EDHQ014BB6V3	EDHQ016BB6V3	EBHQ011BB6V3	EBHQ014BB6V3	EBHQ016BB6V3	
Dimensions	HxWxD	mm		1418 x 1435 x 382	2		1418 x 1435 x 382		
Weight		kg		180			180		
Nominal Capacity	Heating (a/b)	kW	11.2 / 6.19	14 / 7.72	16 / 8.7	11.2 / 6.19	14 / 7.72	16 / 8.7	
попппагсарасну	Cooling	kW		-		10	12.5	13.1	
Naminal Input	Heating (a/b)	kW	2.56 / 3.21	3.29 / 3.76	3.88 / 4.44	2.56 / 3.21	3.29 / 3.76	3.88 / 4.44	
Nominal Input	Cooling	kW		-		3.69	5.39	5.93	
COP	Heating (a/b)		4.38 / 1.93	4.25 / 2.05	4.12 / 1.96	4.38 / 1.93	4.25 / 2.05	4.12 / 1.96	
EER	Cooling			-		2.71	2.32	2.21	
	Heating	°C	-15 ~ 35			-15 ~ 35			
Operation Range	Cooling	°C		-		10 ~ 46			
	Hot Water	°C		-15 ~ 35		-15 ~ 35			
Sound Pressure /	Heating	dBA	51 / 64	51 / 65	52 / 66	51 / 64	51 / 65	52 / 66	
Power Level	Cooling	dBA		-		50 / 65	52 / 66	54 / 69	
Refrigerant Charge	R-410A	kg		2.95		2.95			
Back-up Heater (Fac	tory)	kW		6			6		
Power Supply			1-phase / 230V / 50Hz			1-phase / 230V / 50Hz			
Recommended	Outdoor Unit	А		32			32		
Fuses	6kW BUH	А		32			32		
Pump	No. of speeds		2 2						
Expansion Vessel Vol	Expansion Vessel Volume litres		10			10			
Water Connections	Diameter	inch	1 ¼ (female)			1 ¼ (female)			
Max Piping Length C)U to Cylinder	m		10			10		

Heat pump convectors



HEAT PUMP CONVECTOR	R	FWXV15AVEB	FWXV20AVEB			
Dimensions	HxWxD		mm	600 x 700 x 210		
	Total capacity	Nom.	kW	1.5	2	
Hastina Camarita	Water Volume	Nom.	m³/h	0.26	0.34	
Heating Capacity	water volume	INOM.	l/min	4.3	5.7	
	Water pressure drop	Nom.	kPa	13	22	
	Total capacity	Nom.	kW	1.2	1.7	
	Sensible capacity	Nom.	kW	0.98	1.4	
Cooling capacity	Water Volume	Nom.	m³/h	0.2	0.29	
		INOM.	l/min	3.4	4.9	
	Water pressure drop	Nom.	kPa	10	17	
Air Flow Rate	Heating	H/M/L/SL	m³/h	318/228/150/126	474/354/240/198	
All Flow Rate	Cooling	H/M/L/SL	m³/h	318/228/150/126	474/354/240/198	
Refrigerant				Wa	ter	
Sound Pressure/Power level	Heating		dBA	19 / 35	29 / 45	
Sound Pressure/Power level	Cooling		dBA	19 / 35	29 / 45	
Weight	Unit		kg	15	15	
Power Supply				1-phase / 2	30V / 50Hz	
Air Filter				Removable/Wash	able/Mildew proof	
Air direction control				Right, Left, Horiz	ontal, Downward	
Temperature control				Microcomp	uter control	

Nominal capacity based on following conditions: Heating: indoor temp. 20°CDB; entering water temp. 45°C, water temperature drop 5K Cooling: indoor temp. 27°CDB; entering water temp. 7°C, water temperature rise 5K

Daikin Altherma HT system

Technical data



OUTDOOR UNIT			ERSQ011AV1	ERSQ014AV1	ERSQ016AV1		
Dimensions H x W x D mm			1345 x 900 x 320				
Weight		kg		120			
Nominal Capacity	Heating (a/b)	kW	11/11	14 / 14	16 / 16		
Nominal Input	Heating (a/b)	kW	3.03 / 3.57	4.07 / 4.66	4.83 / 5.57		
COP	Heating (a/b)		3.63 / 3.08	3.44 / 3.00	3.31 / 2.88		
O	Heating	°C		-20 to +20			
Operation Range	Hot water	°C		-20 to +35			
Sound Pressure / Power Level	Heating	dBA	52 / 68	53 / 69	55 / 71		
Refrigerant Charge	R-410A	kg		4.5			
Liquid		inch		3/8			
Piping Connections Gas		inch	5/8				
Max Piping Length OU to IU		m	50				
Power Supply			1-phase / 230V / 50Hz				
Recommended Fuses		А	25				
INDOOR UNIT (FLOOR ST	ANDING)		EKHBRD011ACV1	EKHBRD014ACV1	EKHBRD016ACV1		
To use with			ERSQ011AV1	ERSQ014AV1	ERSQ016AV1		
Dimensions	HxWxD	mm	705 x 600 x 695				
Weight		kg	144.25				
Leaving Water Temperature Ra	inge	°C	25-80 Without Electrical Heating				
Refrigerant Charge (Factory)	R134a	kg	2.6				
Power Supply		1-phase / 230V / 50Hz					
Recommended Fuses A		25					
Pump	No. of speeds		Inverter Controlled				
Expansion Vessel Volume		litres	12				
Water Connections	Diameter	inch	1 (female)				



Nominal capacity and nominal input tested at the following conditions: a. A7 W45 according to EN14511

b. A7 W65 according to Eurovent rating standard 6/C/003-2006



DOMESTIC HOT WATER CYLINDER		EKHTSU200AC	EKHTSU260AC		
Suitable For			Unvented Systems (EKUHWHT Kit also required)		
Water Volume		litres	200	260	
Max Water Temperature		°C	75		
Dimensions (Cylinder Only)	HxWxD	mm	1335 x 600 x 695	1610 x 600 x 695	
Dimensions (Cylinder Integrated on Hydrobox)	HxWxD	mm	2010 x 600 x 695	2285 x 600 x 695	
Empty Weight		kg	70	78	
Material Inside Cylinder			Stainless	Steel	
	Water inlet H/E	mm	25 (Female quick coupling, supplied, integrated so		
Dining Connections (Discounts)	Water outlet H/E	mm	25 (Female quick coupling, su	pplied, integrated solution)	
Piping Connections (Diameter)	Cold water in	inch	3/4 (fer	male)	
	Hot water out	inch	3/4 (female)		

KITS CONNE	ECTED TO DHW CYLINDER	DOMESTIC HOT WATER CYLINDER EKHTSU
EKFMAHTB	Option Kit for Standalone Cylinder, includes Top Plate and Adaptors (to go from quick couplers to screw connections)	

Daikin solar thermal system

Technical data



SOLAR COLLECTOR			EKSV21P	EKSV26P	EKSH26P		
Orientation			Vertical Horizo				
Dimensions	HxWxD	mm	2006 x 1006 x 85	2000 x 1300 x 85	1300 x 2000 x 85		
Gross Area		m ²	2.1	2	.6		
Net Area		m ²	1.79	2.	35		
Weight		kg	35	4	3		
Water Content		litres	1.3	1.7	2.1		
Absorber			Harp-Shaped Copper Pipe with Laser-Welded Highly Selective Coated Aluminium Plate				
Coating			Micro-Therm (Absorption max. 96%, Emission ca. 5% +/- 2%)				
Glazing			Single Pane Safety Glass, Transmission +/- 92%				
Heat Insulation			Mineral Wool, 50mm				
Max. Pressure Drop at 100l/min		mbar	3.5	3	0.5		
Allowed Roof Angle			15° to 80°				
Max. Standstill Temperature		°C	200				
Max. Operating Pressure bar			6				
Thermal Capacity (*)		кJ/K	7.0				
Zero Loss efficiency (o) Absorber/Gross %			0.784 (78.4%)				
Heat Loss coefficient (a1)	Absorber/Gross	W/m²K	4.25				

The collectors are standstill resistant over a long period and are tested for thermal shock. Minimum collector yield over 525kWh/m² at 40% covering proportion, location Würzburg, Germany. (*) Thermal performance tested according to EN12975-2:2006. Reference surface for o, a1, a2 = absorber surface & gross surface.



SOLAR ENABLING KIT			EKSOLHWAV1		
Dimensions	HxWxD	mm	770 x 305 x 270		
Heat Exchanger	Pressure Drop	kPA	21.5		
	Max. inlet Temp	°C	110		
	Heat Exchange Capacity	W/K	1400		
Ambient Temperature	Max.	°C	35		
	Min.	°C	1		
Power Supply			1-phase / 230V / 50Hz		
Power Supply intake			Indoor Unit		
Weight			8		
Sound Pressure Level dBA		dBA	27		



SOLAR PUMP STATION Mounting Method			EKSRDS1A with controller EKSR3PA		
			On Wall		
Dimensions	ns HxWxD mm		332 x 230 x 145		
Power Supply			1-phase / 230V / 50Hz		
Control			Digital Temperature Difference Controller with Plain Text		
Max. Electric Power Consumption of the Control Unit W			2		
Solar Panel Temperature Sensor			Pt1000		
Storage Tank Sensor		PTC			
Return Flow Sensor		PTC			
Feed Temperature and Flow Sensor (option)			Voltage Signal (3.5V DC)		

Underfloor heating plates

Technical data





UFH SYSTEM PLATES		PROTECT INTEGRAL 33-3 PROTECT 10		PROTECT MINI	PROTECT MINI SOLO			
Part Number		171040	171041	171037	171038			
For Pipe	mm	Dia 14	1/17	DUO 13, Monopex 14				
Pipe Spacing	mm		75, 150, 225, 300					
Height	mm	48	28	25	17			
Insulation Thickness	mm	33-3	10	-	-			
Height With Screed	mm	94	74	-	-			
Plate Dimensions	mm	1200 x 1200	1200 x 1200	1200 x 1200	-			
Package Contents	m ²	8 pcs = 11.71	13 pcs = 19.0	10 pcs = 14.6	10 pcs = 14.6			
Thermal Resistance	m²K/W	0.75	0.29	0.20	-			
Impact Sound Insulation		Yes	-	-	-			



UFH SYSTEM PLATES		MONO 15	COMPACT 45	ISODUR				
Part Number		171010	171010 171017					
For Pipe	mm	Dia 1	4/17	DUO 25				
Pipe Spacing	mm	75, 150,	225, 300	200, 300, 400				
Height	mm	38	67	55				
Insulation Thickness	mm	15	45	25				
Height With Screed	mm	79	108	55				
Plate Dimensions	mm		1200 x 600					
Package Contents	m²	14 pcs = 14.4	11 pcs = 7.92	14 pcs = 10.08				
Thermal Resistance	m²K/W	0.43	1.28	0.85				



SECCO DRY SYSTEM		SECCO ALUMINIUM PLATES			
Part Number		171112 171113			
For Pipe		Monopex 14 Al	DUO 17 Al		
Compatible With		Mono And Comp	no And Compact System Plates		
Material		Galvanised	Sheet Steel		
Pack Area	m ²	5.	35		
Package Contents	mm		70 (qty 8) 70(qty 6)		

Gas Compact Unit

Technical data



Gas Compact Unit	GCU315/315 Bivalent	GCU324/324 Bivalent	GCU515/515 Bivalent	GCU524/524 Bivalent	GCU533/533 Bivalent	
Part Number	157401 / 157402	157409 / 157408	157403 / 157404	157410 / 157406	157405 / 157407	
Total Storage Capacity	litres	300	300	500	500	500
Empty Weight	kg	86	86	124	124	124
Total Filled Weight	kg	386	386	624	624	624
Dimensions (W x D x H)	mm	595x615x1920	595x615x1920	790x790x1920	790x790x1920	790x790x1920
Max. Permissible Storage Tank Water Temperature	°C	85	85	85	85	85
Heat Loss	kWh/24h	1.7	1.7	1.8	1.8	1.8
Drinking Water Heating						
Drinking Water Capacity	litres	19	19	24.5	24.5	24.5
Maximum Operating Pressure	bar	6	6	6	6	6
Drinking Water Heat Exchanger Surface	m²	4	4	5	5	5
Storage Tank Charging Heat Exchanger						
Surface Area Charging Heat Exchanger	m ²	1.9	1.9	2.1	2.1	2.1
Solar Heating Support						
Heat Exchanger Surface Area	m ²	0.8	0.8	1.7	1.7	1.7
Thermal Output Data	Thermal Output Data					
D Value (Specific Water Flow to EN 625*)	l/min	22	24	23	25	27
Max. Draw-Off Rate for a Period of 10min at $(T_{KW} = 10^{\circ}\text{C/T}_{SP} = 60^{\circ}\text{C/T}_{WW} = 40^{\circ}\text{C})$	l/min	19	21	20	23	24
Boiler Data						
Nominal Output kW		5-15	5-24	5-15	5-24	5-33
Device Type		B23 / B23P / B33 / B53 / B53P / C13x / C33x / C43x / C53x / C63x / C83x				
Electrical Data	V/Hz	230/50	230/50	230/50	230/50	230/50
Protection Rating	IP	20	20	20	20	20
Maximum Permissible Operating Pressure	bar	3	3	3	3	3
Maximum Permitted Operating Temperature	°C	85	85	85	85	85
Flue Gas / Air Inlet Connection Diameter	mm		DN60 / 100			
SEDBUK (2009)		TBC				
Piping Connections						
Hot and Cold Water	1					
Heating (Flow And Return)	inch			1		

^{*}The specific water flow as defined in EN 625 is the domestic hot water flow which the Gas Compact Unit can supply at an average temperature increase of 30K with two successive withdrawals of water of ten minutes duration each, assuming a charging temperature of 65°C. An interval of 20 minutes is normally assumed between the $with drawals. The \ {\it Gas}\ {\it Compact}\ {\it Unit}\ achieves\ these\ values\ even\ with\ shorter\ intervals.$

Awards & industry associations

National Heat Pump Awards 2013

In 2013 Daikin Altherma LT Split was highly commended for Product Innovation of the Year Award at the National Heat Pump Awards.



JSHLIGHT AWARDS

Rushlight Awards 2011

In 2011 Daikin Altherma Flex Type won the Ground and Air Source Power award at the Rushlight Awards.

Environmental & Energy Awards 2011

In 2011 the Innovation Award for Environmental Technology at the Environmental & Energy Awards was given to Daikin Altherma Flex Type.



In our efforts to support the industry and drive forward developments of new technology, Daikin UK supports the following organisations:

- > Chartered Institute of Plumbing and Heating Engineers (CIPHE)
- Federation of Environmental Trade Associations (FETA)
- Heat Pump Association (HPA)
- > Micropower Council
- > Heating and Hot Water Industry Council (HHIC)
- > Domestic Heat Pump Association (DHPA)
- > Heating and Ventilating Contractors' Association (HVCA)
- National Energy Action (NEA)
- Northern Housing Consortium
- > Scottish Federation Housing Association (SFHA)
- > Chartered Institute of Building Services Engineers (CIBSE)
- > Building Services Research and Information Association (BSRIA)

National Heat Pump Awards 2011

In 2011 Daikin Altherma Flex Type won another award at the National Heat Pump Awards for Product Innovation of the Year.



Service dedicated to your needs

When you select a Daikin system, you can depend on absolute quality and reliability, both of our products and of our service.

Support at all stages

As part of our commitment to ongoing service and quality, Daikin offers pre-sales and after-sales support and advice at all regional offices, supported by a dedicated heating team.

Design assistance

When designing a Daikin system, Daikin Altherma selection software can show you the heating system required, its typical running costs, energy consumption and CO₂ savings. System schematics and heat loss calculation tools are also available to help you select the best system for your requirements.

Installer training

Daikin UK's customised product training for installers is designed to raise standards, set industry benchmarks and help develop both product and service expertise. We provide the highest quality training and hands on instruction at our industry leading technology centres, throughout the country in Glasgow, Birmingham, Bristol, Manchester and Woking. The centres are fully equipped with the latest range of products installed and fully operational for maximum hands on experience.

Local training centres

Daikin also partners with specialist technical colleges - City of Bath College, College of North West London, Dudley College, West Suffolk College and PGL Training in Exeter – to help raise standards, set industry benchmarks and ensure that Daikin trained heating engineers have the necessary expertise to deliver the highly energy efficient heating systems on which our future homes will depend.

As well as having a range of Daikin UK heating courses accredited by EAL, Daikin UK has also joined forces with the National Skills Academy for Environmental Technologies to create its first national manufacture hub. For more details please view the Daikin UK training brochure.





Daikin Product Warranty

Daikin are pleased to offer industry leading warranties provided that the warranty registration form has been completed and returned, and that the system has been correctly installed and maintained in accordance with our instruction manuals. Full details of the Terms and Conditions are available separately on request.

- The Daikin Altherma heat pump (excluding Daikin Altherma Flex Type) has the benefit of a 3-year parts and labour warranty.
- The Daikin solar panels have the benefit of a 10-year warranty. For the first 3 years, the warranty for the panel will apply to both parts and labour and for the following 7 years, on parts only. In addition, all other solar system accessories have a 3 year warranty.





Comprehensive service support

Daikin UK offers comprehensive service support for all heating and renewable products.

- Expert and experienced advice
- Dedicated technical helpline for warranty calls
- Local fast response
- Nationwide network of Daikin trained service engineers
- Comprehensive warranty offer

Contact Details

Pre-sales enquiries

Please contact your local regional sales office

After sales technical support

0845 641 9200 / 0845 641 9277

Warranty

0845 641 9275

Training

0845 641 9260







Carbon **Balanced Paper**











Daikin Europe N.V. participates in the Eurovent Certification programme for Air conditioners (AC), Liquid Chilling Packages (LCP), Air handling units (AHU) and Fan coil units (FCU), Check ongoing

validity of certificate online; www.eurovent-certification.co

Daikin units comply with the European regulations

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