DAIKIN

altherma

HIGH TEMPERATURE HEATING SYSTEM

AIR TO WATER HEAT PUMPS

Renovation - Heating - Domestic hot water

DAIKIN ALTHERMA

HEAT PUMPS

THE SOLUTION WITH AN EYE TO THE FUTURE

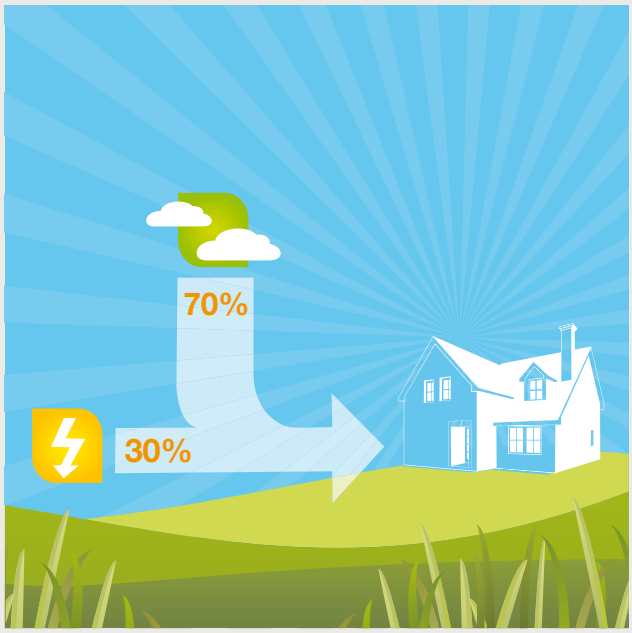
Renovating your heating system and wanting to reduce your energy costs? Interested in a heating solution with lower energy costs? The heat pump is currently the most efficient indoor comfort system on the market: a cutting-edge technology with clear benefits for you and the environment.

HEAT PUMP BASICS

Daikin Altherma is a highly flexible, energy efficient home heating system that extracts the heat from the outside air, raises this heat to a higher temperature and distributes the warmth throughout the home. The heart of the system is an air-to-water heat pump.

With the technologically advanced Daikin Altherma system, 70% of the heat generated comes from a renewable energy source — the air around us — and therefore is absolutely free of charge! The Daikin Altherma air-to-water heat pump is today's answer to current and future problems associated with conventional heating systems such as increasing primary energy costs and unacceptably high environmental impact.

→ A RENEWABLE RESOURCE



DAIKIN HEAT PUMP EXPERIENCE

Daikin has more than 50 years of experience with heat pumps, and supplies more than one million of them to homes, shops and offices each year. This success is not just a quirk of fate: Daikin has always been at the cutting edge of technology and its goal is to provide you with turn-key comfort. Only a market leader can guarantee you this level of service and quality control!

HIGH EFFICIENCY MEANS LOW ENERGY COSTS

Heating system efficiency is measured using the Coefficient of Performance or COP, which is the ratio of heat produced to energy consumed. Depending on the installation, the COP for Daikin's heat pumps is approximately 3, which means they provide you with 3 times more energy than they consume.

AIR AS RENEWABLE ENERGY SOURCE

The European RES directive* recognises air as a renewable energy source. One of the goals of this directive is that by 2020, 20% of the total energy production needs to be produced with a renewable energy source. As a result, several heat pump incentives are already available to homeowners.

*EU objective COM (2008) /30

DAIKIN ALTHERMA

HIGH TEMPERATURE

THE NEW STANDARD IN HEATING

1/ KEEP YOUR EXISTING RADIATORS

When replacing an existing heating system with the Daikin Altherma High Temperature, radiators do not need to be replaced! Daikin Altherma High Temperature replaces your conventional boiler and perfectly supports existing high temperature radiators with water temperatures up to 80°C if required.

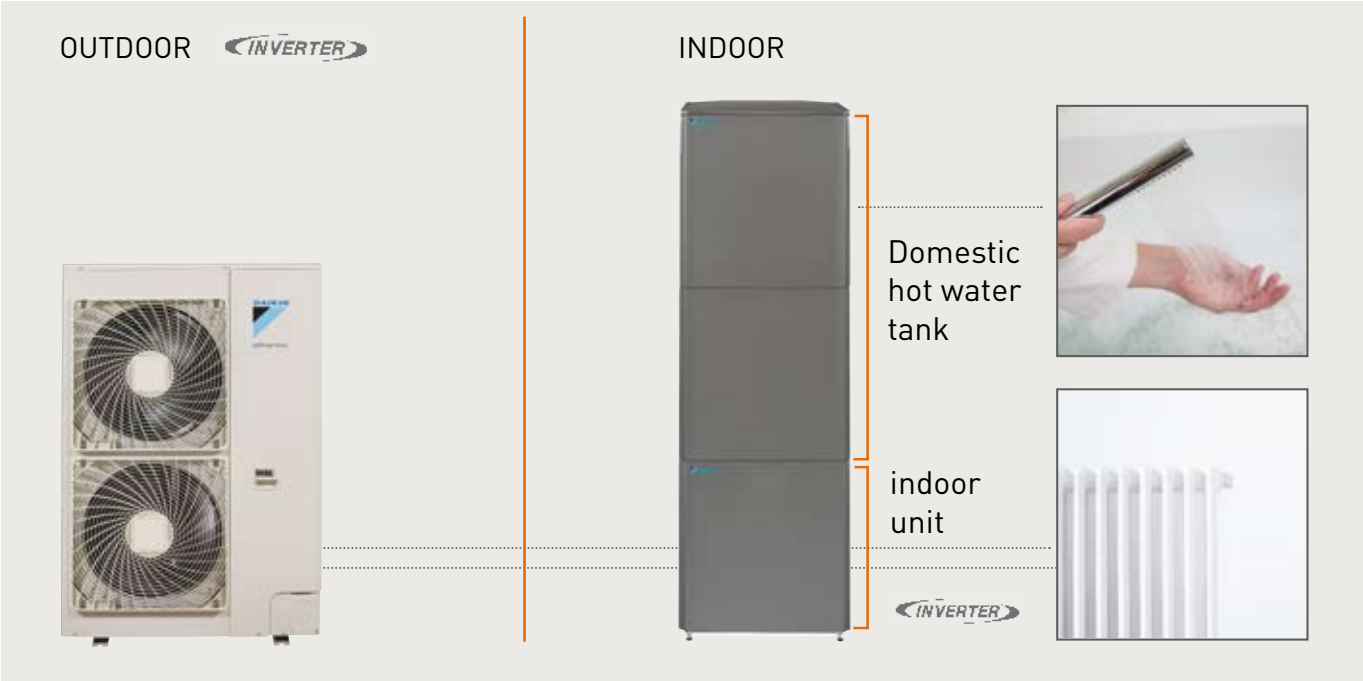
2/ COMPLETE COMFORT FOR YOUR FAMILY

Daikin Altherma High Temperature meets all the heating needs for your home, even on the coldest days of the year. The heat pump extracts heat from the air, maintaining full heating capacity (water temperatures up to 80°C) at outdoor temperatures down to -7°C. Daikin Altherma High Temperature's fully integrated control system provides you with consistent comfort and optimum efficiency.

3/ HIGH PERFORMANCE

Daikin Altherma High Temperature uses 100% thermodynamic energy to obtain water temperatures up to 80°C without using an additional electric heater. Daikin Altherma has amongst the highest COPs on the market, in high temperature applications.

DAIKIN ALTHERMA SYSTEM



* For more information on inverter control, see p 7

DAIKIN ALTHERMA

HIGH TEMPERATURE

HEATING AND DOMESTIC HOT WATER

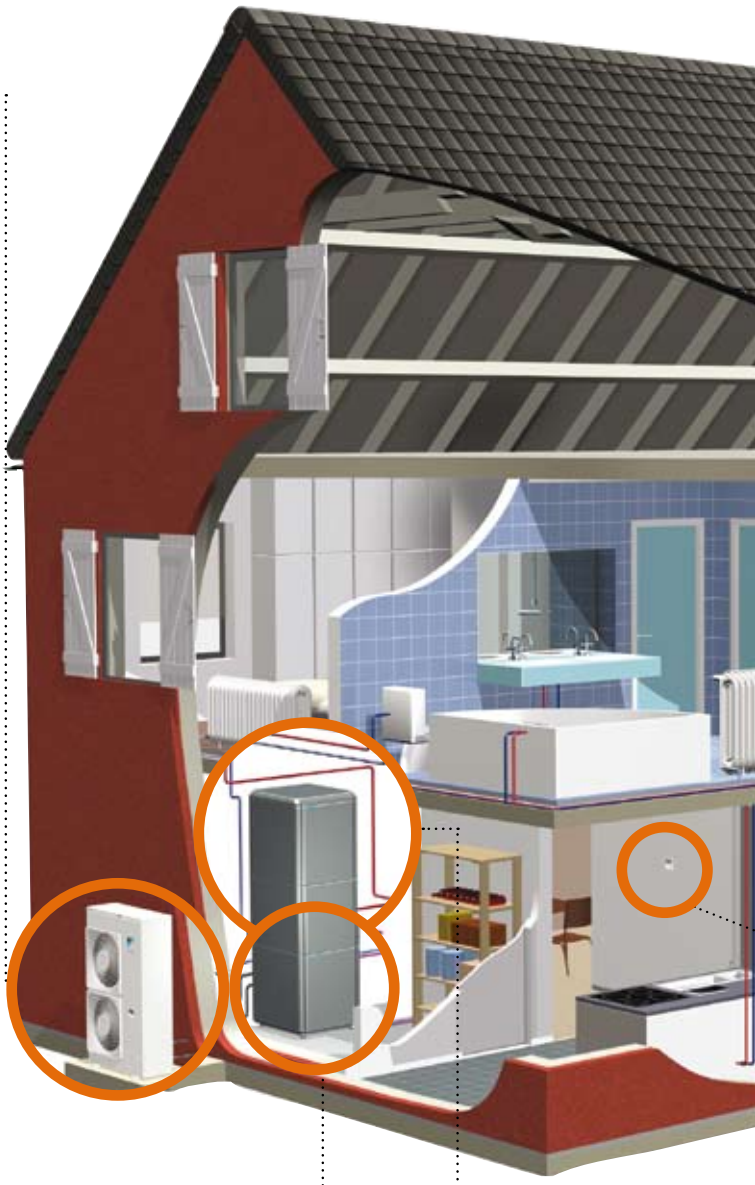
1/ AIR TO WATER HEAT PUMP

1A / Outdoor unit: an efficient use of energy from the air

The outdoor unit extracts heat from the ambient outdoor air. This heat is transferred to the indoor unit via refrigerant piping.

1B / Indoor unit: the heart of the Daikin Altherma system

The indoor unit receives the heat from the outdoor unit and further increases the temperature, allowing water temperatures up to 80°C for heating through radiators and for domestic hot water use. Daikin's unique cascade compressor approach to the heat pumps (one in the outdoor unit/one in the indoor unit) means optimum comfort at even the coldest outdoor temperatures, without the need for an electric back up heater.



2/ DOMESTIC HOT WATER TANK: FOR LOW ENERGY CONSUMPTION

Daikin Altherma's high water temperature is ideal for heating domestic hot water without the need for an additional electric heater. Rapid heating of domestic hot water also means smaller boilers are needed. For a family of approximately 4 people, the standard tank is the best solution. Should you require more hot water, a larger tank is also available.

3/ USER INTERFACE

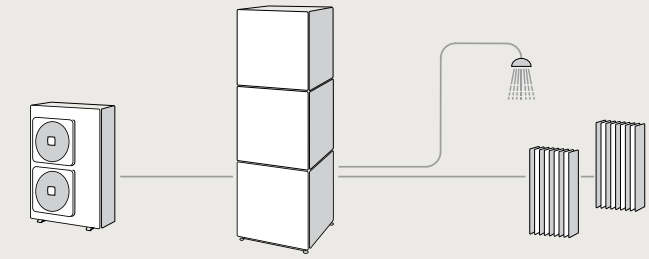
With Daikin Altherma's user interface, the ideal temperature can be easily, quickly and conveniently regulated. It allows for more precise measurement and can regulate your comfort even more optimally and energy efficiently.

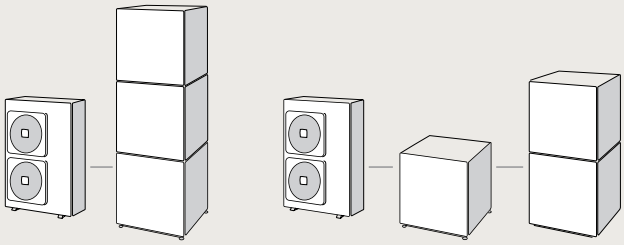
FLEXIBLE SOLUTION

Daikin Altherma High Temperature is a modular system, capable of flexibly meeting all your needs (heating only, or with domestic hot water) and interfacing with your current heating system components.

HEATING AND DOMESTIC HOT WATER

Daikin Altherma High Temperature can also provide efficient domestic hot water. The complete system integrates seamlessly with your existing radiators and hot water facilities.

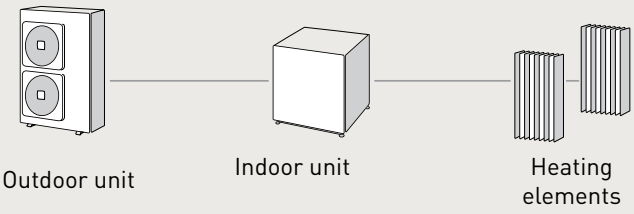




The indoor unit and domestic hot water tank can be stacked to save space, or installed next to each other. if only limited height is available for installation

HEATING ONLY

For comfort heating only, an outdoor unit and indoor unit are required. The system connects seamlessly to your existing radiators.



UNIQUE DAIKIN ALTHERMA

HIGH TEMPERATURE BENEFITS

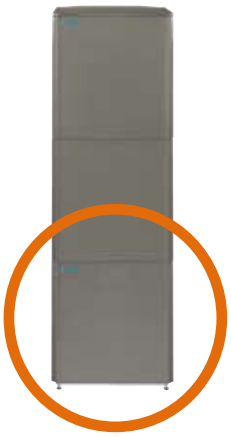
- 100% thermodynamic: water temperatures up to 80°C can be reached without an additional electric heater.
- Flexible installation possibilities
- Daikin inverter technology guarantees a high 'seasonal COP' :
  Heating efficiency can vary depending on outdoor conditions. 'Seasonal COP' is the yearly average ratio of generated heat to consumed electricity. It accurately reflects the performance gains you can expect over an entire year: winter, spring, summer and autumn.
- Low operating costs and minimum maintenance
- No fuel storage tanks, gas supply or ventilation required

DID YOU KNOW THAT...

Daikin Altherma is also available in a low temperature range combinable with under floor heating, low temperature radiators and fan coil units? This system can also provide you with domestic hot water and can even cool in summer.

SPECIFICATIONS

INDOOR UNIT INVERTER



			SINGLE PHASE			THREE PHASE		
			EKHBRD011AV1	EKHBRD014AV1	EKHBRD016AV1	EKHBRD011AY1	EKHBRD014AY1	EKHBRD016AY1
Function			Heating only			Heating only		
Dimensions	HxWxD	mm	705x600x695			705x600x695		
Leaving water temperature range	heating	°C	25~80			25~80		
Material			Precoated sheet metal			Precoated sheet metal		
Colour			Metallic grey			Metallic grey		
Sound power level		dBA	59	60	60	59	60	60
Sound pressure level [1]		dBA	38	39	42	38	39	42
Sound pressure level [2]		dBA	43	43	43	43	43	43
Weight		kg	144.25			147.25		
Refrigerant	Type		R-134a			R-134a		
	Charge	kg	3.2			3.2		
Power supply			1~/50Hz/220-240V			3~/50Hz/380-415V		
Recommended fuses		A	32			16		

[1] Measuring conditions: EW: 55°C, LW: 65°C; 1m in front of unit; integrated design (+ tank)
[2] Measuring conditions: EW: 70°C, LW: 80°C; 1m in front of unit; integrated design (+ tank)

OUTDOOR UNIT INVERTER

			SINGLE PHASE			THREE PHASE		
WITH BOTTOM PLATE HEATER[3]			ERRQ011AV1	ERRQ014AV1	ERRQ016AV1	ERRQ011AY1	ERRQ014AY1	ERRQ016AY1
WITHOUT BOTTOM PLATE HEATER[3]			ERSQ011AV1	ERSQ014AV1	ERSQ016AV1	ERSQ011AY1	ERSQ014AY1	ERSQ016AY1
Dimensions	HxWxD	mm	1,345x900x320			1,345x900x320		
Nominal capacity	heating	kW	11	14	16	11	14	16
Nominal input [1]	heating	kW	3.57	4.66	5.57	3.57	4.66	5.57
COP [1]			3.08	3.00	2.88	3.08	3.00	2.88
Nominal input [2]	heating	kW	4.40	5.65	6.65	4.40	5.65	6.65
COP [2]			2.50	2.48	2.41	2.50	2.48	2.41
Operation range	heating	°C	-20~20			-20~20		
	domestic water	°C	-20~35			-20~35		
Sound power level	heating	dBA	68	69	71	68	69	71
Sound pressure level	heating	dBA	52	53	55	52	53	55
Weight		kg	120			120		
Refrigerant charge	R-410A	kg	4.5			4.5		
Power supply			1~/50Hz/230V			3~/50Hz/400V		
Recommended fuses		A	32			16		

[1] Measuring conditions: EW: 55°C, LW: 65°C, ΔT = 10°C; ambient conditions: 7°CDB/6°CWB
[2] Measering conditions: EW: 70°C, LW: 80°C, ΔT = 10°C; ambient conditions: 7°CDB/6°CWB
[3] bottom plate heater = anti freeze protection for cold climates

DOMESTIC HOT WATER TANK

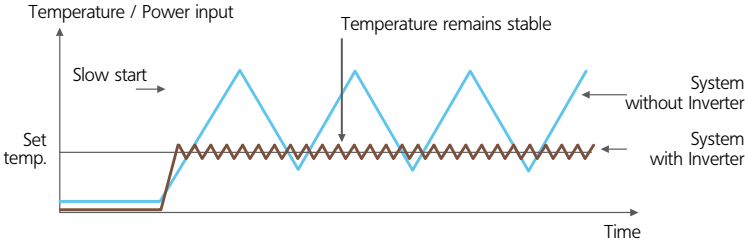
			EKHTS200A	EKHTS260A
Water volume		l	200	260
Max. water temperature		°C	75	
Dimensions	HxWxD	mm	1,335x600x695	1,610x600x695
Dimensions - integrated on indoor unit	HxWxD	mm	2,010x600x695	2,285x600x695
Material outside casing			Precoated sheet metal	
Colour			Metallic grey	
Empty weight		kg	70	78
Tank	Material		Stainless steel (DIN 1.4521)	

Inverter control means even more savings!

The inverter constantly adapts your system to actual heating demand. No need to fiddle with settings: the programmed temperature is optimally maintained regardless of outdoor and indoor factors such as the amount of sunlight, the number of people in the room, etc. This results in unmatched comfort, prolonged system life since it's only in operation when needed, and 30% additional savings in energy costs compared to non-inverter heat pumps.

INVERTER

Heating operation:



DAIKIN, YOUR RELIABLE PARTNER

Daikin is *the* specialist in climate conditioning systems – for private homes as well as for larger commercial and industrial spaces. We make every effort to make sure that your customers 100% satisfied.

HIGH-QUALITY, INNOVATIVE PRODUCTS

Innovation and quality are constantly in the forefront of Daikin's philosophy. The entire Daikin team is continually trained to provide you with optimal information and advice.

A CLEAN ENVIRONMENT

When your customer brings a Daikin product into his home, he is also making a significant contribution to the environment. In producing your customer's comfort system, we strive for sustainable energy consumption, product recycling and waste reduction. Daikin rigorously applies the principles of *eco-design*, thus restricting the use of materials that are harmful to our environment.

In all of us, a green heart

Daikin's unique position as a manufacturer of air conditioning equipment, compressors and refrigerants has led to its close involvement in environmental issues.
For several years Daikin has had the intention to become a leader in the provision of products that have limited impact on the environment.
This challenge demands the eco design and development of a wide range of products and an energy management system, resulting in energy conservation and a reduction of waste.

Daikin Europe N.V. is approved by LRQA for its Quality Management System in accordance with the ISO9001 standard. ISO9001 pertains to quality assurance regarding design, development, manufacturing as well as to services related to the product.

ISO14001 assures an effective environmental management system in order to help protect human health and the environment from the potential impact of our activities, products and services and to assist in maintaining and improving the quality of the environment.

CE

Daikin units comply with the European regulations that guarantee the safety of the product.

Daikin Altherma high temperature units are not in scope of the Eurovent certification programme.

FSC

Daikin products are distributed by:

DAIKIN EUROPE N.V.

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