

# Daikin Altherma M HW

Product catalogue 2021



# New generation of domestic water heat pumps



## Flexibility first

Daikin Altherma M HW is the brand new range of heat pump water heaters with storage tank to generate domestic hot water, suitable for small residential applications.

It's a smart heating solution for domestic water that employs electricity, air and if needed solar thermal and photovoltaic energy without resorting to traditional fuels. Efficiency, an eco-friendly approach, flexibility and a new look are Daikin Altherma M HW's distinctive features, for which it stands out compared to a traditional electrical water heater.



		Capacity (L)	Heat Output (W)	Power input (W)	Solar Thermal Integration	GAS type	ERP class	Load profile	No. of people	
EKHHE-CV3	Floor-standing Operation (-7/38°C)	200	192	1,820	430	NO	R-134a	A <sup>+</sup>	L	3
		260	250	1,820	430	NO	R-134a	A <sup>+</sup>	XL	4
EKHHE-PCV3	Floor-standing Operation (-7/38°C)	200	192	1,820	430	YES	R-134a	A <sup>+</sup>	L	3
		260	250	1,820	430	YES	R-134a	A <sup>+</sup>	XL	4
EKHLE-CV3	Floor-standing Operation (4/43°C)	200	187	1,600	370	NO	R-134a	A <sup>+</sup>	L	3
		260	247	1,600	370	NO	R-134a	A <sup>+</sup>	XL	4

# Features

Daikin Altherma M HW is an air-water heat pump for the production of domestic hot water, storage in a enamelled steel tank, with condenser having an external jacket to guarantee top safety and hygiene.

- ī Maximum temperature of 62°C from renewable energy with heat pump alone or through a Heating Element (up to 75°C)
- ī Programmable digital interface with TOUCH keys
- ī Integration through Solar Thermal energy (LT-S model) or through a Heating Element (up to 75°C) on all models
- ī Integration with Photovoltaic Solar system

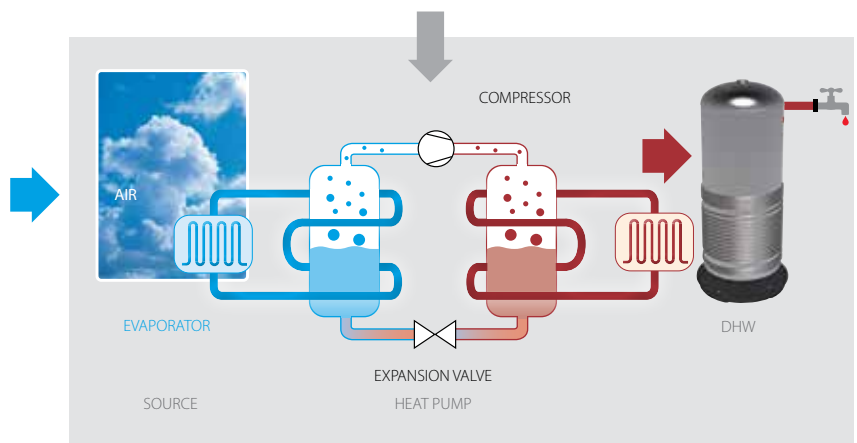


			Optimisation from Photovoltaic	Integrated Solar Thermal Control	Legionella Control Sanitisation	Time slot-based operation	OFF PEAK feature	Defrosting on	Holiday Mode
EKHHE-CV3	Floor-standing	200	•	-	•	•	•	•	•
		260	•	-	•	•	•	•	•
EKHHE-PCV3	Floor-standing	200	•	•	•	•	•	•	•
		260	•	•	•	•	•	•	•
EKHLE-CV3	Floor-standing	200	•	-	•	•	•	-	•
		260	•	-	•	•	•	-	•

## The incentives...

when saving is a must

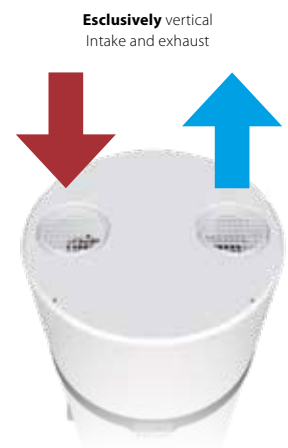
Daikin Altherma M HW makes the most of all the features and technology of air-water heat pumps to produce domestic hot water. Only 25% of the system's energy demand comes from electricity.



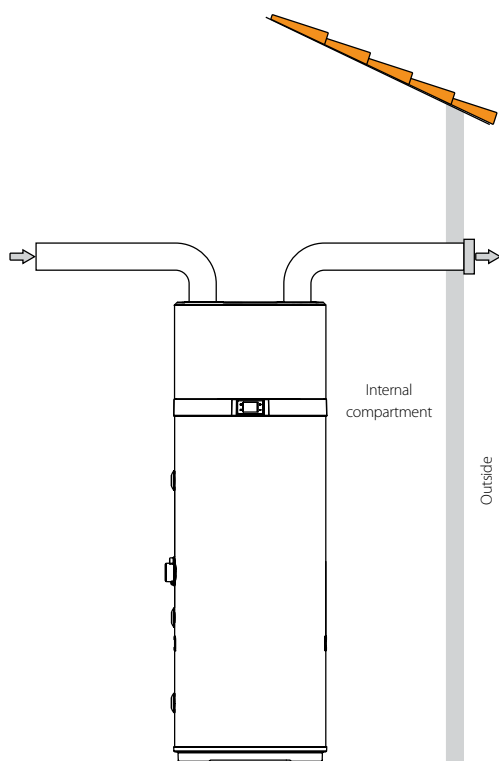
# Installation

## Where would you like me to put it?

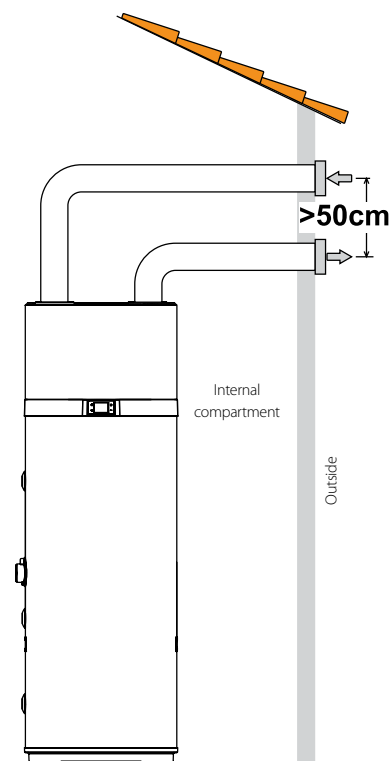
Daikin Altherma M HW can be installed in any room, including non-heated ones like garages and laundry rooms, and does not require any special work, except for the holes for the air intake and exhaust pipes.



## Some installation methods

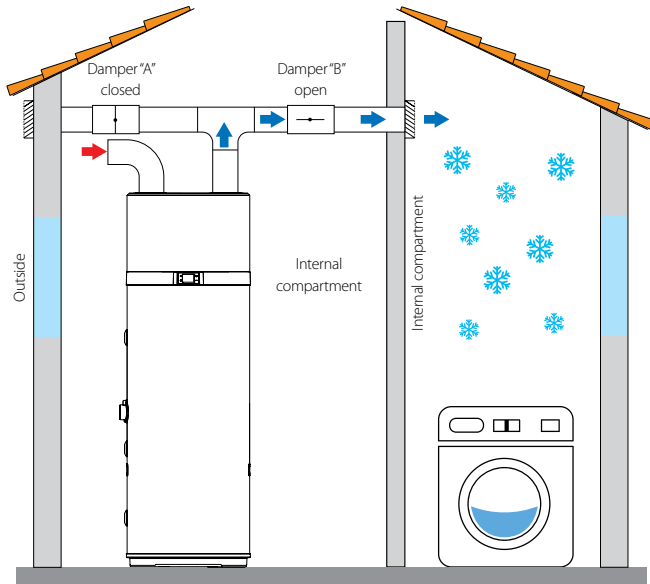


**Fig. 1** - Example of air discharge connection

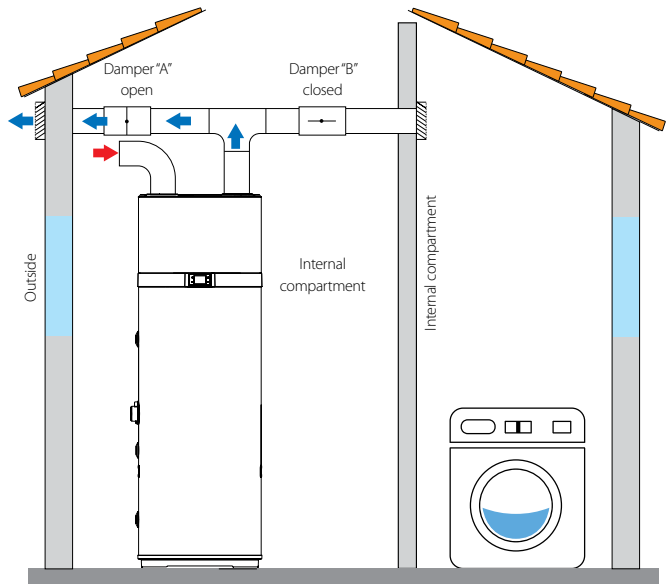


**Fig. 2** - Example of air discharge connection

The heat pump requires suitable air ventilation. A suggested method for a designated air duct is provided in Fig. 1. Plus, it is essential to guarantee suitable ventilation in the room where the appliance is installed. An alternative solution is provided in the picture below (Fig. 2): it involves additional ducting that draws air from outdoors, rather than directly from indoors.



**Fig. 3** - Example of installation in summer



**Fig. 4** - Example of installation in winter

One of the unique features of heat-pump heating systems is the fact that these units considerably reduce the temperature of the air, which is usually ejected outdoors. As well as being colder than the air in the room, the ejected air is also completely dehumidified, which is why the airflow can be conveyed back into the home to cool specific areas or rooms in summer. Installation involves doubling the exhaust pipe, on which two dampers ("A" and "B") are applied to convey the airflow either outside (fig. 3) or inside the house (fig. 4).

## Daikin Altherma M HW in a nutshell



**Optimisation from Photovoltaic**  
When the icon on the display is on, the energy produced by the photovoltaic system is used to heat the water inside the tank.



**Time slot-based operation**  
It lets you set the time and select the time slots to turn the heat pump on and/or off.



**Anti-legionella sanitising**  
If this is turned on every two weeks, a heating/sanitising cycle of the water inside the tank is carried out at the set time by the heating element.



**OFF-PEAK feature**  
When this icon on the display is on, the OFF-PEAK mode has been activated. When the electrical contact closes, the appliance operates during the time slot with the lower tariff.



**Integrated Thermal Solar Control**  
When this icon on the display is on, the energy produced by the solar system is used to heat the water inside the tank (LT-S models).



**Key lock on**  
The key lock is activated in any status, 60 seconds after any of the four keys on the user interface is pressed. This is to avoid potential interaction with the water heater, for example by children.



**Defrosting on**  
Mode during which the Unit detects a defrosting temperature  $\leq 1^{\circ}\text{C}$  and activates all the procedures to turn on the compressor, fan and pump in order to restore optimal operating conditions.



**Holiday Mode**  
This mode is helpful when you need to go away for a limited period of time, after which you want to find the appliance operating in automatic mode.



**Alarm**  
Signals a fault of the unit or the "active protection" status, during which the Unit stops as a protective measure after detecting a serious failure.



**Operation with Heat Pump**  
With this mode, only the heat pump is used within the operating limits of the product to guarantee the highest possible energy savings.



**Operation with heating element**  
With this mode, only the heating element is used within the operating limits of the product and is useful when the incoming air is cold.



**Antifreeze protection**  
This protection prevents the water temperature inside the tank from reaching values close to zero. With the appliance in stand-by, when the water temperature inside the tank is below or equal to  $5^{\circ}\text{C}$  (setting available on the installer menu), this triggers the antifreeze protection, which turns on the heating element until the temperature reaches  $12^{\circ}\text{C}$  (setting available on the installer menu).



**ON/OFF key**  
Used to turn the Unit on/off, set it to stand-by, activate the key lock and save edited settings.



**SET key**  
Used to select the various features/operating modes, select the settings and confirm the edits.

# The electronics, it couldn't be easier!






## Daikin Altherma M HW's user interface has a very simple and intuitive display

- White backlit LEDs to control temperature and features
- Red backlit LEDs for alarm warnings
- The 4 side TOUCH keys turn Daikin Altherma M HW on/off (⏻); keys to browse through the MENU (SET) and increase (+) or decrease (-) settings















### Operating modes

To meet the widest range of needs, Daikin Altherma M HW has 5 different operating modes:

<b>Eco mode</b>		<b>Renewable energy only</b> Daikin Altherma M HW only works in heat pump mode. The additional heater turns on as a support only if the outdoor temperature is outside the operating range (setpoint 62°C).
<b>Auto mode</b>		<b>Renewable energy as the preferred option</b> Daikin Altherma M HW works in heat pump mode by default. The additional heater turns on as a support only if the tank temperature increase is too slow (>4°C/30 min.) Or the outdoor temperature is outside the operating range (setpoint 62°C).
<b>Boost mode</b>	 Flashing	<b>Combined use of renewable and electrical energy</b> Daikin Altherma M HW simultaneously operates as a heat pump and with the additional heater. Setpoint can be up to 75°C.
<b>Electric mode</b>		<b>Electrical energy only</b> Daikin Altherma M HW only works with the additional heater. Set point can be up to 75°C.
<b>Fan mode</b>		<b>Air recirculation only</b> Daikin Altherma M HW only works in ventilation mode. The heat pump and additional heater are off.



-  Alarm
-  Heat pump
-  Heating element on
-  Defrost
-  Antifreezing
-  Legionella control
-  Key lock
-  Time slots
-  Photovoltaic
-  Thermal solar / hot water
-  Holiday
-  Off-peak

# Daikin Altherma M HW Second Generation

- ī Available in wall mounted (200-260 L)
- ī Compact modern design
- ī Anti-legionella cycle
- ī Scheduled operation
- ī Integrated solar thermal control (EKHHE-PCV3)
- ī Suitable for warm climate (EKHLE-CV3)



Indoor unit				EK	HHE200CV3	HHE260CV3	HHE200PCV3	HHE260PCV3	HLE200CV3	HLE260CV3	
Heat up time	Max.		hh:mm		08:17 / 06:01	10:14 / 07:39	08:17 / 06:01	10:14 / 07:39	07:16 / 09:01	09:44 / 11:38	
COP					3.23 / 3.49	3.38 / 3.59	3.23 / 3.49	3.38 / 3.59	2.8 / 2.5	3.1 / 2.6	
Domestic hot water	Output	Nom	kW	1.82				1.60			
Equivalent hot water	Max		l	192	250	187	247	192	250		
Dimensions	Unit	Height	mm	1,607	1,892	1,607	1,892	1,607	1,892		
		Diameter	mm	Top: 621, Bottom: 628							
Weight	Unit	Empty	kg	85	97	96	106	86	98		
Installation place					Indoor						
IP class					IP24						
Refrigerant	Type			R-134a							
	GWP			1,430							
	Charge		TCO2Eq	1.43							
	Charge		kg	1							
Heat pump	Casing	Colour		White							
	Defrost method				Hot-gas				-	-	
	Automatic defrost start			°C	-2				-	-	
	System pressure			Max.	7						
	Operation range	Ambient	Min.	°CDB	-7				4		
			Max.	°CDB							
	Power supply	Phase			1						
		Frequency		Hz	50						
		Voltage		V	230						
		Maximum running current		A	2.43				2.3		
Tank	Integrated heating element power	Nom.	kW	1.5							
	Casing	Material		Enamel steel tank							
	Installation	Solar thermal connection possible		-	-	Yes	Yes	-	-		
	Standing heat loss			W	63	71	63	71	60	70	
	Power supply	Phase			1						
		Frequency		Hz	50						
		Voltage		V	230						
Domestic hot water heating	General	Declared load profile		L	XL	L	XL	L	XL		
		Water heating energy efficiency class		A+							
		Thermostat temperature setting		55							
	Average climate	AEC (Annual electricity consumption)	kWh	758	1,203	758	1,203	883	1,315		
		η <sub>wh</sub> (water heating efficiency)	%	135	139	135	139	116	127		
	Cold climate	AEC (Annual electricity consumption)	kWh	979	1,672	979	1,672	883	1,315		
		Warm climate	AEC (Annual electricity consumption)	kWh	698	1,132	698	1,132	883	1,315	
Sound power level	Domestic hot water heating		dBA	50				52			



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