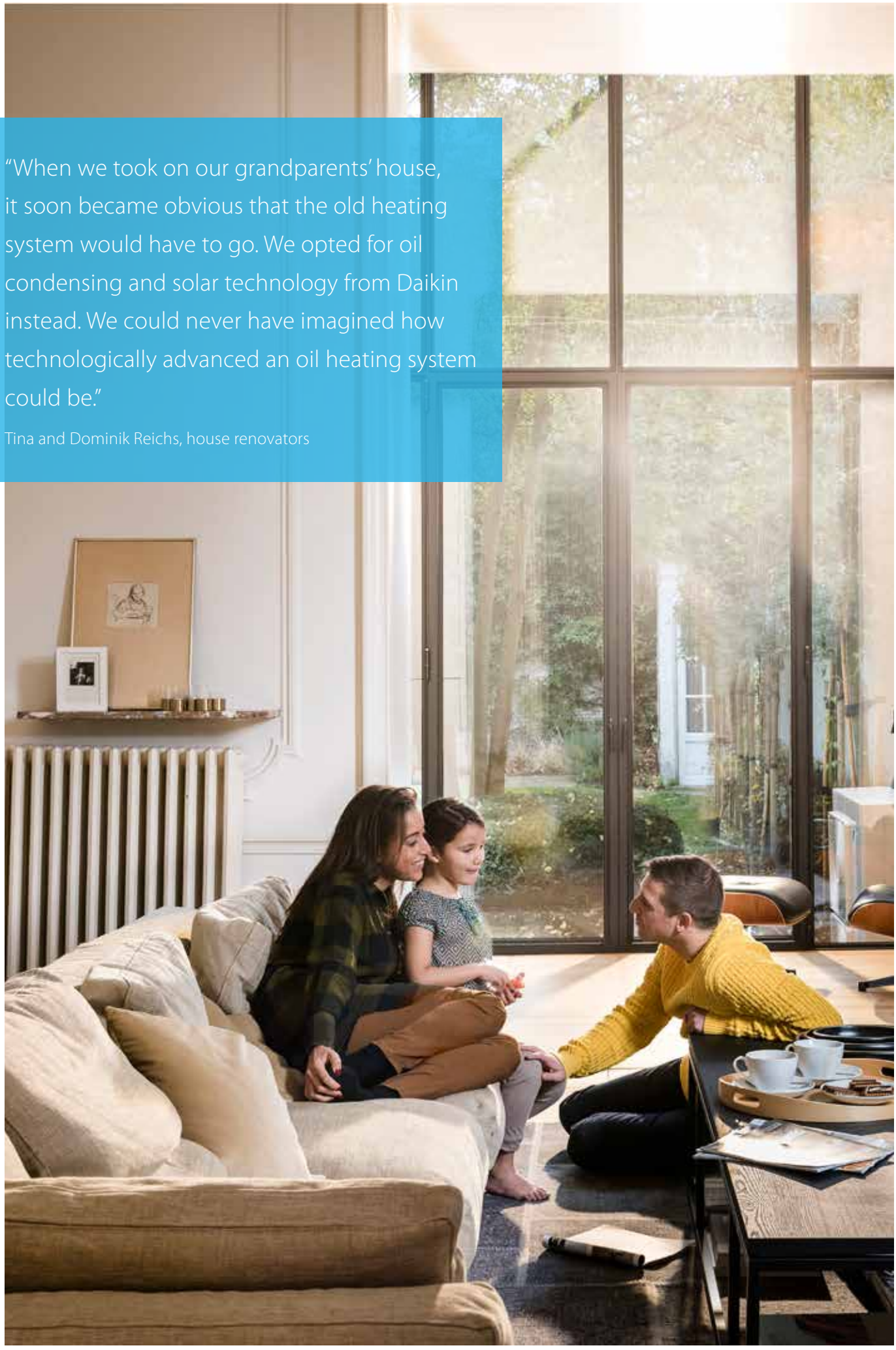
Advanced oil heating system

Daikin A2 oil condensing boiler

The Daikin A2 oil condensing boiler with a large modulation range



"When we took on our grandparents' house, it soon became obvious that the old heating system would have to go. We opted for oil condensing and solar technology from Daikin instead. We could never have imagined how technologically advanced an oil heating system could be."

Tina and Dominik Reichs, house renovators

Our mission:

to keep you cosy and warm and bring oil heating into the 21st century

Daikin's oil condensing technology is a worthwhile investment

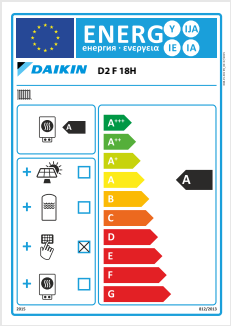
Choosing the right boiler for your oil heating system is a decision that will affect your future. Over this period, the cost of the fuel used will prove to be a much bigger outlay than the boiler's original purchase price. Therefore, this is the area where you can make the greatest savings.

Advanced oil heating system

A modern oil heating system will fit seamlessly into your home. Oil condensing boilers minimise emissions, are very easy to operate and convert fuel into available heat with virtually no losses. The fuel supply can be stored in the same room as the boiler thanks to modern safety tanks which are fitted with odour barriers. Combining the boiler with a solar thermal system and hygienic thermal store add the perfect finishing touches.

Daikin's advanced oil heating system

- A2 oil condensing boiler
- Hygienic thermal store
- Solar thermal system
- Safety fuel oil tank



Safe in the knowledge it's Daikin

All Daikin products are tested and proven to meet criteria set by the EU Ecodesign Directive. We guarantee our individual products and packaged solutions offer maximum convenience, while upholding the highest safety standards.

How you can benefit from the Daikin A2 oil condensing boiler

Outstanding efficiency

- Energy saving condensing technology
- Optimum heat transfer due to innovative flue gas turbulators in the boiler body

Space saving

- Small installation area of 0.43 m^2
- Oil tanks designed to site safely beside the boiler

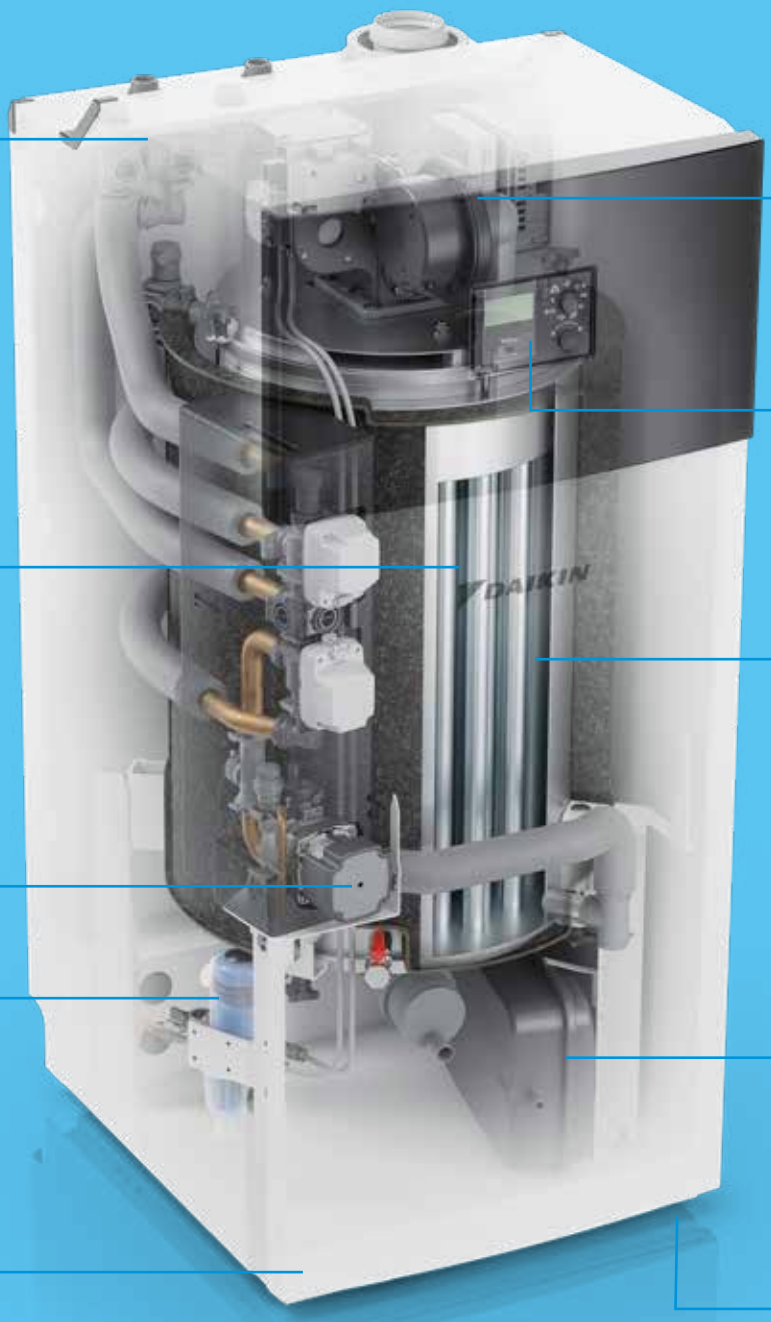
Innovative technology

- Next generation modulating burner (1:2.5)
- Smart Start function offers modulation of 1:64 from 0,5 to 32 kW and intelligent storage management (ISM)
- Intuitively operated electronic control unit
- Ready for bio-oil (B10) and all commercially available fuel oils

Meets your needs

- Ideal for replacing an existing oil boiler
- Straightforward chimney refurbishment
- Easy maintenance
- Odour-proof flexible pipes prevent the smell of fuel oil
- If used with a Daikin thermal store, possibility of direct combination with a solar thermal system or woodburning stove with back boiler

New design



Smart Start function with 1:64 modulation and intelligent storage management (ISM)

Modulating blue flame burner

Digital control unit can be controlled via app in combination with the gateway

Stainless steel boiler body

Innovative flue gas turbulators

High-efficiency pump

Oil filter including air ventilation

Optional integrated expansion vessel (12L)

Integral condensate treatment in slot-in unit

Small installation area 60 x 71,6 cm

Ideal replacement

of an exisiting oil boiler

Daikin A2 – ideal for boiler replacements in existing systems

The Daikin A2 is ideally suited to replacing older boilers, thanks to the great flexibility it offers when integrated into existing systems, plus its low weight and compact dimensions.

A boiler with a large modulation range

The heat demand of a building varies widely depending on weather conditions and utilisation patterns. The modulating A2 constantly adjusts its output in line with demand. This ensures optimum energy utilisation. It has a particularly large modulation range of 1:2,5. This can even be broadened to 1:64 with the new Smart Start function.

1:64 = 32 kW
1:48 = 24 kW
1:36 = 18 kW

Smart Start function and intelligent storage management (ISM)

With the optional Smart Start kit, the A2 can deliver 0-100 percent output to meet demand and provide continuous heat distribution. The content of the thermal store then serves as an active buffer, including for the heating system. With ISM optimisation, even the lowest heat requirements of 500 watts or more can be covered in the building, yet you can still have as much hot water as you need. Frequent cycling is avoided by optimising the oil condensing boiler's burner runtimes. Fewer burner starts mean much lower emissions of harmful substances and increased energy efficiency.

With this optimisation, Daikin is well able to meet the steadily increasing need for a constant and immediate supply of hot water – especially with the trend for ever more luxurious bathrooms and multiple shower units in our homes, but decreasing heating requirements as building insulation improves.


DAIKIN
Sanicube Solaris
DAIKIN

Smart technology
for your convenience

Intelligent Store Management (ISM)

By using ISM for your oil condensing boilers and thermal stores, you can adapt the heating system to your renovated house. The more you insulate your house, the lower the heat demand is thanks to ISM adjusting the system to your need. You can also achieve::

› Maximum energy efficiency, heating and DHW convenience
› Meet the energy demands of new builds and low-energy houses
› Reduce emissions and increase the efficiency of older systems

Provides clean and hygienic domestic hot water at all times

The Daikin thermal store is the perfect complement to the Daikin A2 heating system, having been designed with the latest heating technology and domestic hot water hygiene standards in mind. It has been specially engineered to guarantee domestic hot water of the highest quality. Sludge and rust deposits, sedimentation and even the growth of dangerous legionella bacteria, such as can be found in many large tanks, cannot occur here.

Everything under control

Our Daikin Heating Controller helps you achieve the best indoor climate. With this controller, you can easily set the operation mode yourself or with the support of our heating engineers.

This control system can:

› Regulate water temperature
› Automatically adjust the heating mode depending on the season
› Uses timers to control the heating circuit and DHW
› Features a remote controller to help you easily manage your system

Daikin Online Controller

Always in control

The Daikin Heating Controller helps you manage your Daikin A2 to attain the highest energy efficiency levels for heating and hot water. Available as an app, you can easily control and monitor your Daikin A2 from your smartphone.

The perfect combination: Oil condensing and solar

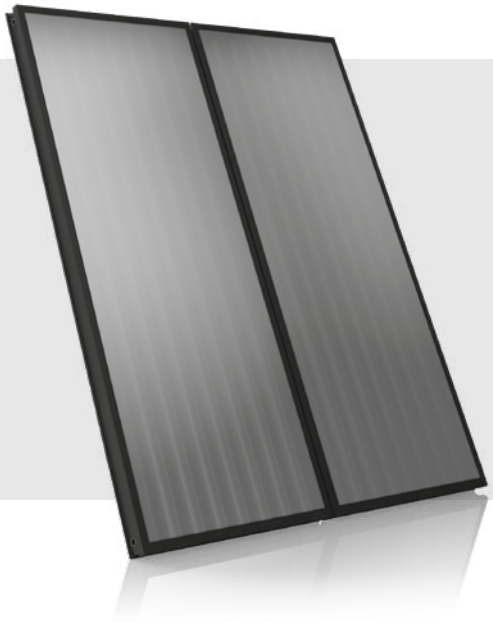
The power of solar energy and oil

Our solar panels are also a great alternative to support your heating system. At peak level, 80% of our systems can convert solar energy into heat. Our Daikin A2 uses the powerful combination of solar and oil energy to achieve more energy efficiency at a low cost.

Solar energy is also available for domestic hot water heating and as a backup for central heating. Alongside solar DHW heating, solar central heating can connect to a Daikin A2 with a 500-litre tank to store large amounts of solar energy. Heat for DHW or central heating is available up to a day later.

The advantages of Daikin solar panels

- Efficiently use solar energy for heating and hot water
- Provides fresh, clean and healthy hot water
- Optimum temperature stratification in thermal store increases solar use
- Perfectly incorporates diverse heating systems



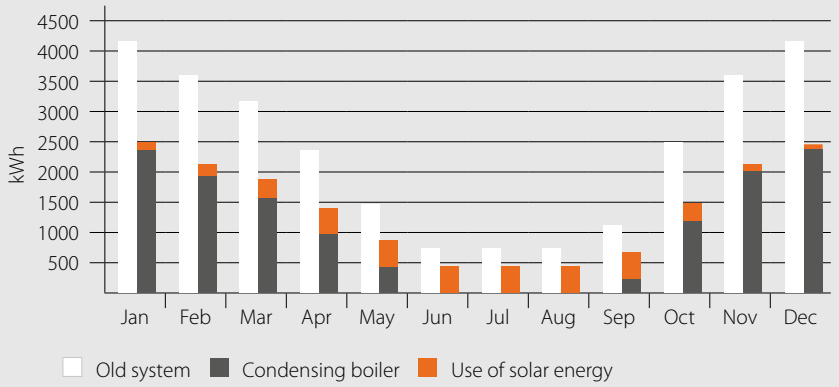
Flexible installation

Since all buildings are different, we offer three different sizes and a range of installation options to adapt our solar panels to your roof. Our solar panels are available for tiles (on roof), into the roof itself or with a special substructure for a flat roof.

How the system works

Our solar panels are only effective if there is enough heat from the sun and if the thermal store can absorb heat. The fully-automatic control system operates the system independently to ensure optimal use of solar energy.

› If there is not enough sunlight, or if the thermal store does not require additional heat, the feed pump switches off and the entire solar system drains into the thermal store
› The principle function for the drain-back system only works if pipes in the building and roof include a constant gradient. If this is not possible, the pressurised system is an ideal alternative.



Monthly energy consumption of an average single-family house

The diagram shows the monthly energy consumption of an average single-family home. It compares two system types:
The white bar represents the energy consumption using an old boiler.
The grey/yellow bar shows a system with the Daikin A2 with 4 solar panels.

Clean water is a prerequisite for life

Fresh hot water is a basic necessity in every home, be it for showering, bathing, cooking or handwashing. These days we could not imagine living without a steady supply of hot water, readily available whenever we want it. And naturally, we also expect this water to be hygienic.
Conventional water heaters can often fall short in this respect. That is why we have made it our business to focus on water hygiene!

Optimum water hygiene – day after day

The Daikin thermal store has been designed with the latest heating technology and domestic hot water hygiene standards in mind. It is fundamentally different in design from conventional high volume domestic hot water tanks. Sludge and rust deposits, sedimentation and even the growth of dangerous legionella bacteria, such as can be found in many large tanks, cannot occur here. Its design concept means that it can provide 100 % hygienic domestic hot water at all times.

The domestic hot water is contained in a high performance indirect coil made from durable stainless steel (INOX). Your hot water will always be perfectly hygienic.

The storage tank only needs to be filled with water once, when it is commissioned, and then simply provides thermal storage. The water is neither replaced nor consumed. The interior and exterior walls of the tank are made from shock- and impact-resistant polypropylene and the space in between is filled with highly effective foam insulation. This results in excellent insulation values and minimum surface losses.

D9HA

Oil condensing boiler

A2				D9HA2018A	D9HA2024A	D9HA2032A
Boiler	Nominal power DIN-EN 303		kW	18	24	31
	Stanadard capacity range		kW*	7,5-18	10-24	13-32
	Water source		l	60	56	50
Heat loss	Standing losses EN 304		kW	0.1 (1)		
Dimensions	Unit	Height	mm	1,360		
		Width	mm	606		
		Depth	mm	754		
Weight	Unit		kg	97	102	111
Pump	Type			Controlled high efficiency		
	Speed			PWM controlled		
	Max. power input		W	60		
Flue gas	Connection		mm	80		
	Max. temperature	80/60 °C	° C	68 (2)	70 (2)	72 (2)
Inlet air	Connection		mm	125		
Water circuit - Central heating	Temperature	max.	° C	85		
Central heating	Water pressure	max.	bar	3		
Sound power	Nominal		dbA	63	65	66
Power supply	Frequency		Hz	50		
	Voltage		V	230		
	Phase			1~		
Current	Fuse		A	6		

(1) EN 303-2: Heating boilers with forced draught burners - Special requirements for boilers with atomizing oil burners
(2) According to EN 304

EKHWP-B/EKHWP-PB

Thermal store

Accessory				EKHWP	300B	500B	300PB	500PB
Casing	Colour				Traffic white (RAL9016) / Dark grey (RAL7011)			
	Material				Impact resistant polypropylene			
Dimensions	Unit	Width	mm		595	790	595	790
		Depth	mm		615	790	615	790
		Height	mm		1,650	1,660	1,650	1,660
Weight	Unit	Empty	kg		58	82	58	89
Tank	Water volume		l		294	477	294	477
	Material				Polypropylen			
	Maximum water temperature		°C		85			
	Insulation	Heat loss	kWh/24h		1.5	1.7	1.5	1.7
	Energy efficiency class				B			
	Standing heat loss		W		64	72	64	72
	Storage volume		l		294	477	294	477
Heat exchanger	Domestic hot water	Quantity			1			
		Tube material			Stainless steel (DIN 1.4404)			
		Face area	m^2		5.600	5.800	5.600	5.900
		Internal coil volume	l		27.1	28.1	27.1	28.1
		Operating pressure	bar		6			
		Average specifc thermal output	W/K		2,790	2,825	2,790	2,825
	Charging	Quantity			1			
		Tube material			Stainless steel (DIN 1.4404)			
		Face area	m^2		3	4	3	4
		Internal coil volume	l		13	18	13	18
		Operating pressure	bar		3			
		Average specifc thermal output	W/K		1,300	1,800	1,300	1,800
	Pressurised solar	Average specifc thermal output	W/K		-		390.00	840.00
	Auxiliary solar heating	Tube material			-	Stainless steel (DIN 1.4404)	-	Stainless steel (DIN 1.4404)
		Face area	m^2		-	1	-	1
		Internal coil volume	l		-	4	-	4
		Operating pressure	bar		-	3	-	3
		Average specifc thermal output	W/K		-	280	-	280

EKHWC-B/EKHWCB-B/EKHWCB-PB/EKHWCH-B/
EKHWCH-PB

Domestic hot water tank

EKHWC500B

Accessory				EKHWC	500B	500B	500PB	300B	500B	300PB	500PB
Casing	Colour				Traffic white (RAL9016) / Dark grey (RAL7011)						
	Material				Impact resistant polypropylene						
Dimensions	Unit	Width	mm			790		595	790	595	790
		Depth	mm			790		615	790	615	790
		Height	mm			1,660		1,650	1,660	1,650	1,660
Weight	Unit	Empty	kg		69	80	86	51	74	53	79
Tank	Water volume		l			477		294	477	294	477
	Material				Polypropylen						
	Maximum water temperature		°C		85						
	Insulation	Heat loss	kWh/24h			1.7		1.5	1.7	1.5	1.7
	Energy efficiency class				B						
	Standing heat loss		W			72		64	72	64	72
	Storage volume		l			477		294	477	294	477
Heat exchanger	Domestic hot water	Quantity			1						
		Tube material			Stainless steel (DIN 1.4404)						
		Face area	m²		4.900	5.300		3.800	4.900	3.800	4.900
		Internal coil volume	l		23.8	25.8		18.6	23.8	18.6	23.8
		Operating pressure	bar		6						
		Average specifc thermal output	W/K		2,450	2,580		1,890	2,450	1,890	2,450
	Charging	Quantity			-	1					
		Tube material			-	Stainless steel (DIN 1.4404)					
		Face area	m²		-	2					
		Internal coil volume	l		-	9					
		Operating pressure	bar		-	3					
		Average specifc thermal output	W/K		-	1,030		920	1,030	920	1,030
	Pressurised solar	Average specifc thermal output	W/K		-	840.00		-		390.00	-
	Auxiliary solar heating	Tube material			Stainless steel (DIN 1.4404)			-	Stainless steel (DIN 1.4404)	-	Stainless steel (DIN 1.4404)
		Face area	m²		1			-	1	-	1
		Internal coil volume	l		4			-	4	-	4
		Operating pressure	bar		3			-	3	-	3
		Average specifc thermal output	W/K		350			-	350	-	350

Innovative heat storage concept - Hygienic, flexible and sustainable
All Daikin products with the ECH2O label are characterized by a unique heat storage principle.
Particularly space-saving, with the highest DHW comfort and open for additional heat sources.

EKSV-P/EKSH-P

V21P

V26P

H26P

Solaris Flat panels				V21P	V26P	H26P
Dimensions		Height	mm	2000	2000	1300
		Width	mm	1006	1300	2000
		Depth	mm	85	85	85
Weight			kg	35	42	42
Volume			l	1.3	1.7	2.1
Surface	Outer		m²	2.01	2.6	2.6
Coating				Micro-therm (absorption max. 96 %, Emission ca. 5% +/- -2%)		
Absorber				Harp-shaped copper pipe register with laser-welded highly selective coated aluminium plate		
Glazing				Single pane safety glass, transmission +/- 92 %		
Allowed roof angle		Min.	°	15	15	15
		Max.	°	80	80	80

The solar panels are standstill resistant in the long-term and are tested for thermal shock.
Minimum collector yield over 525 kWh/m² at 40% covering proportion, (location Würzburg, Germany).

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