

**Panasonic**

**New Aquarea L Generation**  
Air to water heat pumps

AQUAREA

Panasonic



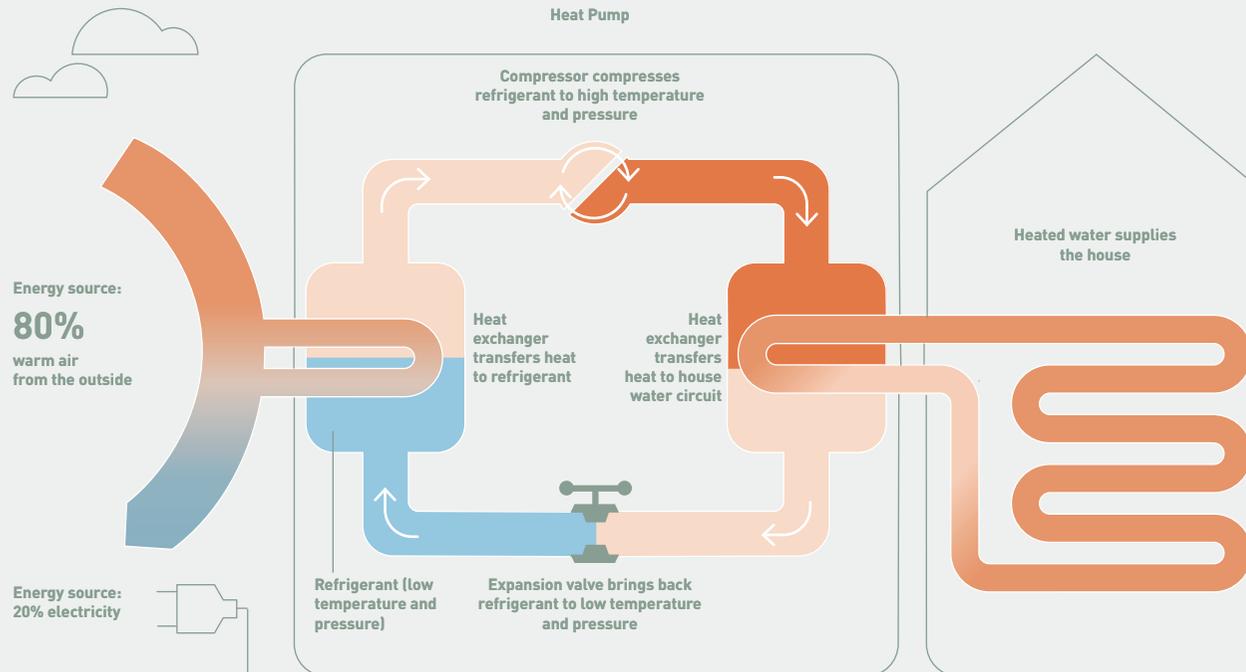


# AQUAREA

What kind of world will our children—and their children—inherit? Along with a growing global population coupled with rapid economic development, CO<sub>2</sub> emissions continue to increase year after year. At the current rate, it is estimated that the average global surface temperature will rise by 4 °C over the next 100 years.

To help prevent this, we have been engaged in a variety of initiatives over the past several decades. One of our solutions is an indoor heating and cooling system that leverages our heat pump technology. Protecting the world of today means protecting the children of tomorrow. That's why we are committed to offering solutions that provide comfort and help us fulfil our responsibility to the environment.

*A heat pump turns heat energy outside into warmth inside*



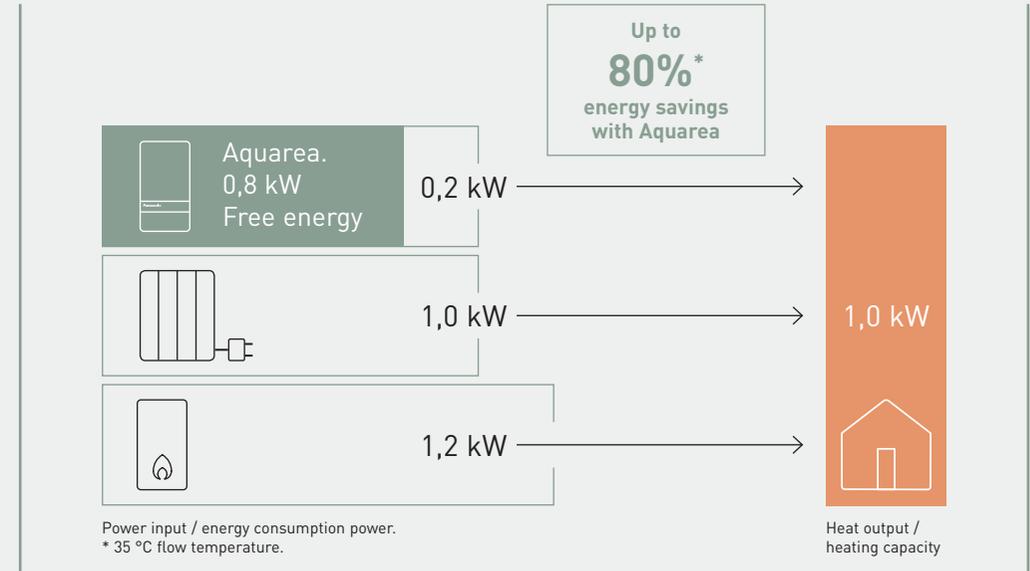
With Aquarea, up to 80% of the heat energy required is taken from the ambient air. Aquarea captures latent heat energy from the ambient air and transfers it to heat the water needed to warm your home or for domestic hot water and even to cool the house if required.

## Contributing to a decarbonised society.

Aquarea air to water heat pumps range is a ground breaking low energy system for heating, cooling and domestic hot water production that delivers outstanding performance, aligning with our vision of a carbon-free society and our GREEN IMPACT plan.

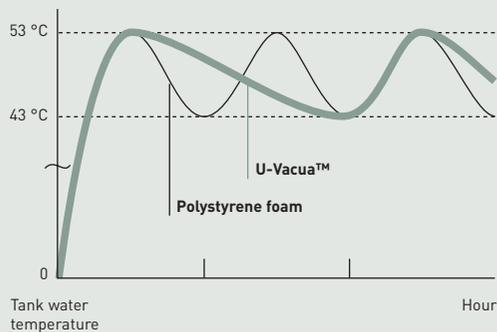
As much as 79% of the energy consumption of European homes comes from heating and producing DHW\*. That's why, compared to conventional boilers and electric heaters, highly efficient Panasonic air to water heat pump technology can make a significant difference. Moreover, by converting heat energy in the air into household warmth, this technology helps reduce CO<sub>2</sub> emissions and environmental impact.

\* <https://ec.europa.eu/eurostat>.



### U-Vacua™: Vacuum insulation panel (VIP) technology developed by Panasonic.

Because they leverage VIP technology, U-Vacua™ panels offer 19 times the insulation performance of polystyrene foam. Since the system retains heat longer, it needs to heat up fewer times each day, resulting in energy savings.



### Natural refrigerant GWP3. Save CO<sub>2</sub>.

A next generation environment friendly heat pump that uses a low GWP refrigerant as a product that represents the Panasonic environmental concept of GREEN IMPACT.



U-Vacua™: Vacuum insulation panel





*The Aquarea line up  
meets the highest  
rank of energy  
efficiency criteria of  
European energy  
rating system.*

Energy Labelling Regulation (EU) No. 811/2013.

**Panasonic**

## A low energy system for heating and domestic hot water production.

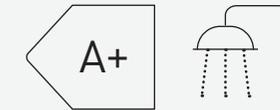
Aquarea is a ground breaking low energy system for heating, cooling and domestic hot water production that delivers outstanding performance, even at extreme outdoor temperatures.

The peak of comfort, efficiency and zero CO2 emissions emissions at point of use. Using heat pump technology and our unique expertise, Panasonic has been working for many years to help realise a sustainable society and enrich people's lives. The wide range of Aquarea products makes possible optimum solutions that are tailored to individual lifestyles while offering outstanding environmental performance.



Panasonic has more than 60 years of heat pump experience, having produced an exceptional amount of compressors. Quality is what Panasonic stands for and this is a key factor for succeeding in the European market.

As a member of the European Heat Pump Association, the production of Aquarea in Europe and maintaining high security protocols in European servers for the Aquarea Smart Cloud, makes Panasonic a trusted heating partner.



**Energy efficiency class up to A+.**  
**Scale from A+ to F.**



**ErP 35 °C.**  
**Energy efficiency class up to A+++.**  
**Scale from A+++ to D.**

\* Rating conditions: Heating: Inside air temperature: 20 °C Dry Bulb / Outside air temperature: 7 °C Dry Bulb / 6 °C Wet Bulb.  
Conditions: Water input temperature: 30 °C / Water output temperature: 35 °C. These energy efficiency might not apply to all models.

*The peak of comfort,  
efficiency and zero  
CO2 emissions at  
point of use.*



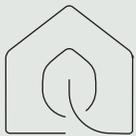
# Introducing the new Aquarea L Generation of air to water heat pumps.

Aquarea L Generation is engineered with industry leading R290 natural refrigerant. It is the perfect solution for renovations, where a high water outlet temperature is required, or customers looking for an avantgarde heat pump with natural refrigerant.



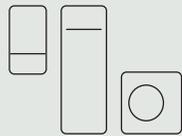
R290  
NATURAL REFRIGERANT

Wi-Fi adapter included



Natural refrigerant

Using natural refrigerant R290 with GWP 3.



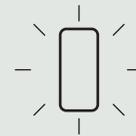
Improved clean design

Refined outdoor design to be blended to the environment.



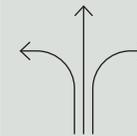
Remote control and maintenance

Aquarea Smart Cloud. Aquarea Service Cloud.



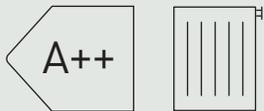
High tank insulation performance

Tank boasts high heat retention thanks to U-Vacua™<sup>1)</sup>.



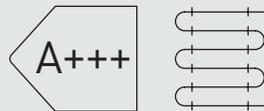
Further flexibility

- Hydro connection between Indoor and outdoor units
- Less frequent maintenance with pre-installed large magnetic filter
- Operational output without the use of backup heater down to -25 °C<sup>3)</sup>
- Water outlet temperature maximum 75 °C at -10 °C outside temperature
- Can supply 55 °C domestic hot water even at -25 °C outside temperature<sup>3)</sup>
- Bluefin treatment protection on outdoor heat exchanger for air quality.



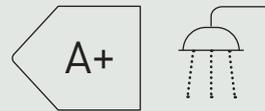
High energy efficiency for retrofit projects

A++ energy class at 55 °C water outlet temperature.



High energy efficiency for new buildings

Top class ErP for heating at 35 °C water outlet temperature<sup>2)</sup>.



High energy efficiency for domestic hot water

DHW COP up to 3,6<sup>2)</sup>.



Further energy savings

Domestic hot water up to 65 °C without heater for tank sterilisation.

1) U-Vacua™ is a vacuum insulation panel (VIP) technology. 2) Scale from A+++ to D. Might not apply to all the models. 3) Tentative feature

*A revolution in design,  
efficiency, connectivity  
and sustainability.*



## Harmony between technology and home.

In our daily lives, technology is attuned to you and the environment around you, without overstating the device or interface. Just as the air is always around you even if you're not aware of it, Panasonic's technology continues to be in tune with your environment and your life.

### Harmony with the environment. Save livingspace.

A premium white, faithful to the Aquarea spirit underlined by the seamlessly integrated controller which provides a sleek black band across the unit.



All in One unit and Bi-bloc indoor unit are designed to blend into your interior space effortlessly.



GOOD DESIGN AWARD 2022

**BEST 100**

Like the indoor equipment, the outdoor unit is designed to harmonise with architecture and the environment while quietly supporting the precious time spent with the family.

The outdoor units come with an all NEW innovative design, complimented by a NEW colour finish of anthracite grey, that will blend seamlessly into all areas.



*The outdoor unit is designed to harmonise with architecture and the environment with a quiet operation.*



**Panasonic's unique low noise architecture.** The compressor, which is a major source of noise, is equipped with a double-bottomed structure to provide a safe, quiet structure that does not disturb neighbours in crowded residential areas.

## The new Aquarea All in One Compact, the ultimate space-saving solution.

With its small 598 x 600 mm footprint, the new All in One Compact can be neatly lined up with other big appliances like a refrigerator and/or washing machine to reduce the space required for installation. And thanks to its low height, it can be installed with a ventilation unit on top.



Fits beautifully in any space.

**U-Vacua™; Vacuum insulation panel. Significant energy savings with world-leading insulation performance.**

Because they leverage VIP technology, U-Vacua™ panels offer 19 times the insulation performance of polystyrene foam. Since the system retains heat longer, it needs to heat up fewer times each day, resulting in energy savings.

## Super slim!

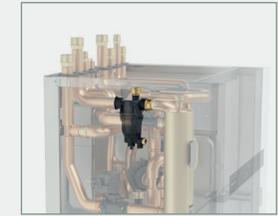


### Great serviceability.

- Easy maintenance concept is retained
- Easy access to hydraulic part thanks to door opening mechanism
- No buffer tank required, reducing space, cost and installation time
- All sensors can be checked from the remote controller (new)
- Water pressure sensor (new)



Slimmer, yet same tank capacity. Piping layout at the top in order to maintain large 185 L tank capacity.

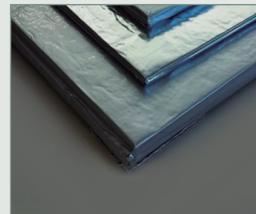


### Improved water filter for less maintenance.

Dirt removal capacity of the water filter has been increased 5 times. Less frequent filter cleaning means more convenience.

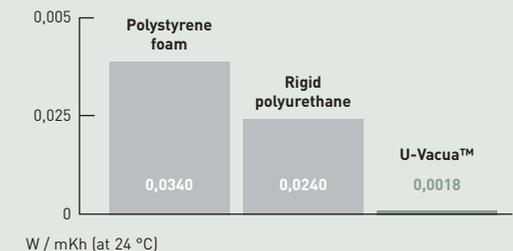


Robust body for top ventilation unit. Strengthening the body and top surface with a frame enables installation of a top ventilation unit. For safety, it's secured with bolts to prevent it falling.



U-Vacua™ VIPs consist of a unique fiberglass core encased in a laminate film made up of several layers that include nylon, aluminium, and a protective layer. Interior pressure is reduced to a vacuum of 1-20 Pa, thereby minimizing thermal conductivity.

## Comparison of thermal conductivity.



*Aquarea All in One: the best Panasonic technology for your home.*

AQUAREA



## Aquarea L Generation gives you even more.

Highly efficient Panasonic solutions can help to significantly reduce the energy consumption of the house, at the same time a high level of comfort and good indoor air quality are kept.

### Ventilation unit on top for a low-energy house.

Heat recovery ventilation units are ideal for homes, for these owners who are looking for high performance and maximum comfort.

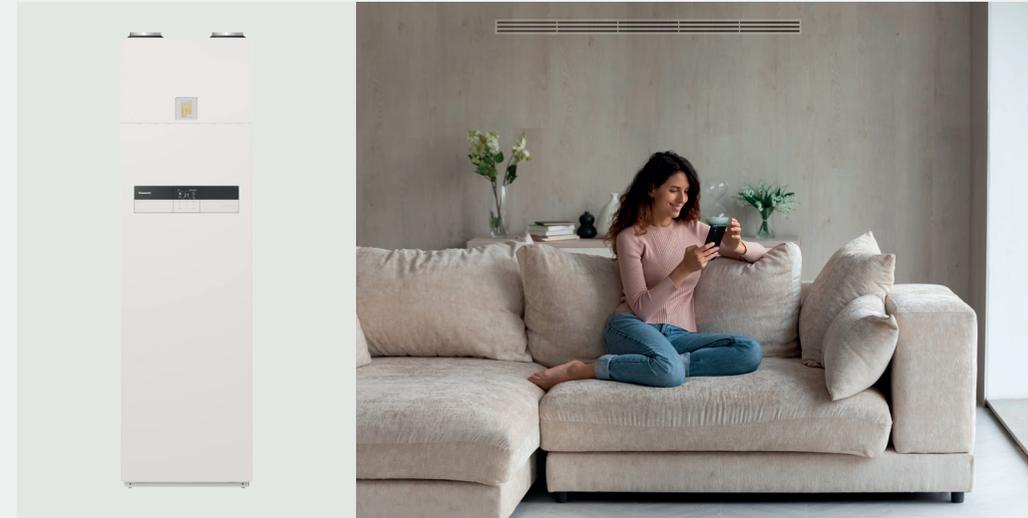
Combine the Residential ventilation unit with Panasonic Aquarea for an space saving and highly efficient solution for heating, cooling, ventilation and DHW.

### Aquarea + PV panels.

Aquarea heat pumps can synchronise with PV panels, using the optional PCB CZ-NS5P. Thanks to this feature, demand of heating, cooling and domestic hot water production is adapted to the PV panel production.

### Smart Grid Ready.

Aquarea L Generation heat pumps in combination with the optional PCB CZ-NS5P hold the SG Ready function, allowing the heat pump to be connected in an intelligent grid control.



Combine the Residential ventilation unit with Panasonic Aquarea for an space saving and highly efficient solution for heating, cooling, ventilation and DHW.



### Dual controller system.

A dual controller system, for independent control of two zones, within the home.

## New remote controller.

New remote controller designed in harmony with the whole system, with optimised user interface and improved features.



### Smart bivalency.

Based on tariff rate cost and energy source efficiency.

### Optimised user interface.

Each touch point designed in harmony, with optimised user interface across the range.

*High degree of living  
comfort and energy  
management.*



## Aquarea Smart Cloud.

Aquarea Smart Cloud is a powerful, intuitive and free of charge service designed to help remotely control Aquarea heat pumps from anywhere, 24/7.

**Easy and powerful energy management with convenient remote control via IoT.**  
The Aquarea Smart Cloud is much more than a simple controller for switching a heating device ON or OFF. It is a powerful and intuitive service for remotely controlling the full range of heating and hot water functions, including monitoring energy consumption.

### Aquarea Service Cloud.

The Aquarea Service Cloud allows professionals to take care of their customers' heating systems remotely, engaging in predictive maintenance and system finetuning and respond rapidly to any malfunctions.



Internet adapter included for Wi-Fi and LAN connection

Watch demo



### More possibilities with IFTTT.

IF This Then That: IFTTT service enables user to automatically trigger actions for Aquarea system based on other apps, web services or devices.



## AQUAREA+

### Get the most out of your Aquarea Heat Pump.

Aquarea+ offers end user useful information to operate a Panasonic Aquarea Heat Pump to provide heating, cooling and hot water in the most efficient and cost effective way.

Visit Aquarea+







### Aquaarea Hydro Split All in One L Generation Single phase. Heating and Cooling <sup>1)</sup>

			Single phase (power to indoor)		
			KIT-ADC05L3E5UK	KIT-ADC07L3E5UK	KIT-ADC09L3E5UK
<b>Kit 3 kW electric heater</b>					
Heating capacity / COP (A +7 °C, W 35 °C)	kW / COP		5,00/5,05	7,00/4,93	9,00/4,55
Heating capacity / COP (A +7 °C, W 55 °C)	kW / COP		5,00/3,07	7,00/2,98	8,90/3,03
Heating capacity / COP (A +2 °C, W 35 °C)	kW / COP		5,00/3,52	6,85/3,43	7,00/3,41
Heating capacity / COP (A +2 °C, W 55 °C)	kW / COP		5,00/2,34	6,25/2,34	7,00/2,41
Heating capacity / COP (A -7 °C, W 35 °C)	kW / COP		5,00/3,01	5,80/3,01	7,00/2,80
Heating capacity / COP (A -7 °C, W 55 °C)	kW / COP		5,00/2,12	5,80/2,12	7,00/2,13
Cooling capacity / EER (A 35 °C, W 7 °C)	kW / EER		5,00/3,23	7,00/3,03	8,20/2,82
Cooling capacity / EER (A 35 °C, W 18 °C)	kW / EER		5,00/5,00	7,00/4,73	9,00/4,19
Heating average climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	5,06/3,63(200/142)	4,96/3,62(195/142)	4,84/3,67(190/144)
	Energy class <sup>2)</sup>		A+++ / A++	A+++ / A++	A+++ / A++
Heating warm climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	6,00/4,27(237/168)	6,31/4,52(249/178)	6,44/4,50(255/177)
	Energy class <sup>2)</sup>		A+++ / A+++	A+++ / A+++	A+++ / A+++
Heating cold climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	4,25/3,28(167/128)	4,25/3,29(167/129)	4,31/3,33(170/130)
	Energy class <sup>2)</sup>		A++ / A++	A++ / A++	A++ / A++
<b>Indoor unit 3 kW electric heater</b>			<b>WH-ADC0509L3E5UK</b>	<b>WH-ADC0509L3E5UK</b>	<b>WH-ADC0509L3E5UK</b>
Sound pressure	Heat / Cool	dB(A)	28/28	28/28	28/28
Dimension	HxWxD	mm	1642x599x602	1642x599x602	1642x599x602
Net weight		kg	93(3 kW)/94(6 kW)	93(3 kW)/94(6 kW)	93(3 kW)/94(6 kW)
Water volume		L	185	185	185
Maximum DHW temperature		°C	65	65	65
Material inside tank			Stainless steel	Stainless steel	Stainless steel
Tapping profile according EN16147			L	L	L
DHW tank ERP efficiency average / warm / cold <sup>3)</sup>		A+ to F	A+ / A+ / A	A+ / A+ / A	A+ / A+ / A
DHW tank ERP average climate η / COPdHW		η <sub>wh</sub> % / COPdHW	146/3,60	146/3,60	146/3,60
DHW tank ERP warm climate η / COPdHW		η <sub>wh</sub> % / COPdHW	160/4,00	160/4,00	160/4,00
DHW tank ERP cold climate η / COPdHW		η <sub>wh</sub> % / COPdHW	112/2,80	112/2,80	112/2,80
<b>Outdoor unit</b>			<b>WH-WDG05LE5</b>	<b>WH-WDG07LE5</b>	<b>WH-WDG09LE5</b>
Sound power <sup>4)</sup>	Heat	dB(A)	52	53	54
Dimension / Net weight	HxWxD	mm / kg	996x980x430/98	996x980x430/98	996x980x430/97
Refrigerant (R290) / CO <sub>2</sub> Eq.		kg / T	0,96/0,003	0,96/0,003	1,00/0,003
Water pipe connector (indoor / outdoor units)		Inch	1/1	1/1	1/1
Pipe length range standard / maximum		m	5/30	5/30	5/30
Elevation difference (in / out)		m	10	10	10
Operating range - outdoor ambient	Heat	°C	-25 ~ +35	-25 ~ +35	-25 ~ +35
	Cool	°C	+10 ~ +43	+10 ~ +43	+10 ~ +43
Water outlet	Heat / Cool	°C	20 ~ 75/5 ~ 20	20 ~ 75/5 ~ 20	20 ~ 75/5 ~ 20

### Aquaarea Hydro Split Bi-bloc L Generation Single phase. Heating and Cooling

			Single phase (power to indoor)		
			KIT-WC05L3E5	KIT-WC07L3E5	KIT-WC09L3E5
<b>Kit 3 kW electric heater</b>					
Heating capacity / COP (A +7 °C, W 35 °C)	kW / COP		5,00/5,00	7,00/4,76	9,00/4,48
Heating capacity / COP (A +7 °C, W 55 °C)	kW / COP		— / —	— / —	— / —
Heating capacity / COP (A +2 °C, W 35 °C)	kW / COP		4,20/3,18	6,85/3,41	7,00/3,40
Heating capacity / COP (A +2 °C, W 55 °C)	kW / COP		— / —	— / —	— / —
Heating capacity / COP (A -7 °C, W 35 °C)	kW / COP		— / —	— / —	— / —
Heating capacity / COP (A -7 °C, W 55 °C)	kW / COP		— / —	— / —	— / —
Cooling capacity / EER (A 35 °C, W 7 °C)	kW / EER		4,50/3,00	6,70/3,03	8,20/2,72
Cooling capacity / EER (A 35 °C, W 18 °C)	kW / EER		— / —	— / —	— / —
Heating average climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	5,07/3,47(200/136)	4,90/3,32(193/130)	4,90/3,32(193/130)
	Energy class <sup>2)</sup>		A+++ / A++	A+++ / A++	A+++ / A++
Heating warm climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	6,20/4,20(245/165)	5,75/4,07(227/160)	5,75/4,07(227/160)
	Energy class <sup>2)</sup>		A+++ / A+++	A+++ / A+++	A+++ / A+++
Heating cold climate (W 35 °C / W 55 °C)	Seasonal energy efficiency	SCOP (η <sub>s</sub> %)	4,00/2,83(157/110)	4,18/2,98(164/116)	4,18/2,98(164/116)
	Energy class <sup>2)</sup>		A++ / A+	A++ / A+	A++ / A+
<b>Indoor unit 3 kW electric heater</b>			<b>WH-SDC0509L3E5</b>	<b>WH-SDC0509L3E5</b>	<b>WH-SDC0509L3E5</b>
Sound pressure	Heat / Cool	dB(A)	28/28	30/30	30/31
Dimension	HxWxD	mm	892x500x348	892x500x348	892x500x348
Net weight		kg	42	42	42

Tentative data

1) Kit 3 kW electric heater available in 2 zones and with Electrical Anode models. 2) Scale from A+++ to D. 3) Scale from A+ to F. 4) The sound power level is measured with accordance to EN12102 under conditions of the EN14825 (part load). \* EER and COP calculation is based in accordance to EN14511. \*\* This product is designed to comply with the European Water Quality Directive 98/83/EC amended by 2015/1787/EU. The lifespan of the product is not guaranteed in the case of the use of groundwater, such as spring water or well water, the use of tap water when salt or other impurities are contained, nor in areas of acidic water quality. Maintenance and warranty costs related to these cases are the customer's responsibility.



### Aquarea Quick Selector.

Helping you to find the Aquarea Heat Pump for your home in just a few clicks!

Visit Aquarea Quick Selector



### AR Heat Pump Viewer.

This tool allows you to see how a Panasonic Aquarea Heat Pump looks in a home, utilising augmented reality.

Visit AR Heat Pump Viewer



**Natural refrigerant R290 with GWP 3.**  
The new construction ensures a reduced noise level and increased safety for the use of R290.



**Better efficiency and value for medium temperature applications.**  
Energy efficiency class up to A++ in a scale from A+++ to D.



**Better efficiency and Value for low temperature applications.**  
Energy efficiency class up to A+++ in a scale from A+++ to D.



**Better efficiency and Value for domestic hot water.**  
Energy efficiency class up to A+ in a scale from A+ to F.



**Inverter Plus.**  
Panasonic Inverter Plus compressors are designed to achieve outstanding level of performance.



**A class water pump.**  
Aquarea are built-in with A class energy efficiency water pump. High efficiency circulating the water in the heating installation.



**DHW.**  
With Aquarea you can also heat your domestic hot water at a very low cost with the optional hot water cylinder.



**Down to -25 °C in heating mode.**  
The heat pumps work in heating mode with an outdoor temperature is as low as -25 °C.



**Water filter with magnet.**  
Easy access and fast clip technology



**75 °C output water.**  
Reaches water outlet temperature up to 75 °C.



**Electric flow sensor.**



**Renovation.**  
Our Aquarea Heat Pumps can be connected to an existing or new boiler for optimum comfort even at very low outdoor temperatures.



**Internet control.**  
A next generation system providing user-friendly remote control of air conditioning or heat pump units from everywhere, using a simple Android™ or iOS smartphone, tablet or PC via the internet.



**BMS connectivity.**  
The communication port can be integrated into the indoor unit and provides easy connection to, and control of, your Panasonic heat pump to your home or Building Management System.

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# Panasonic®

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