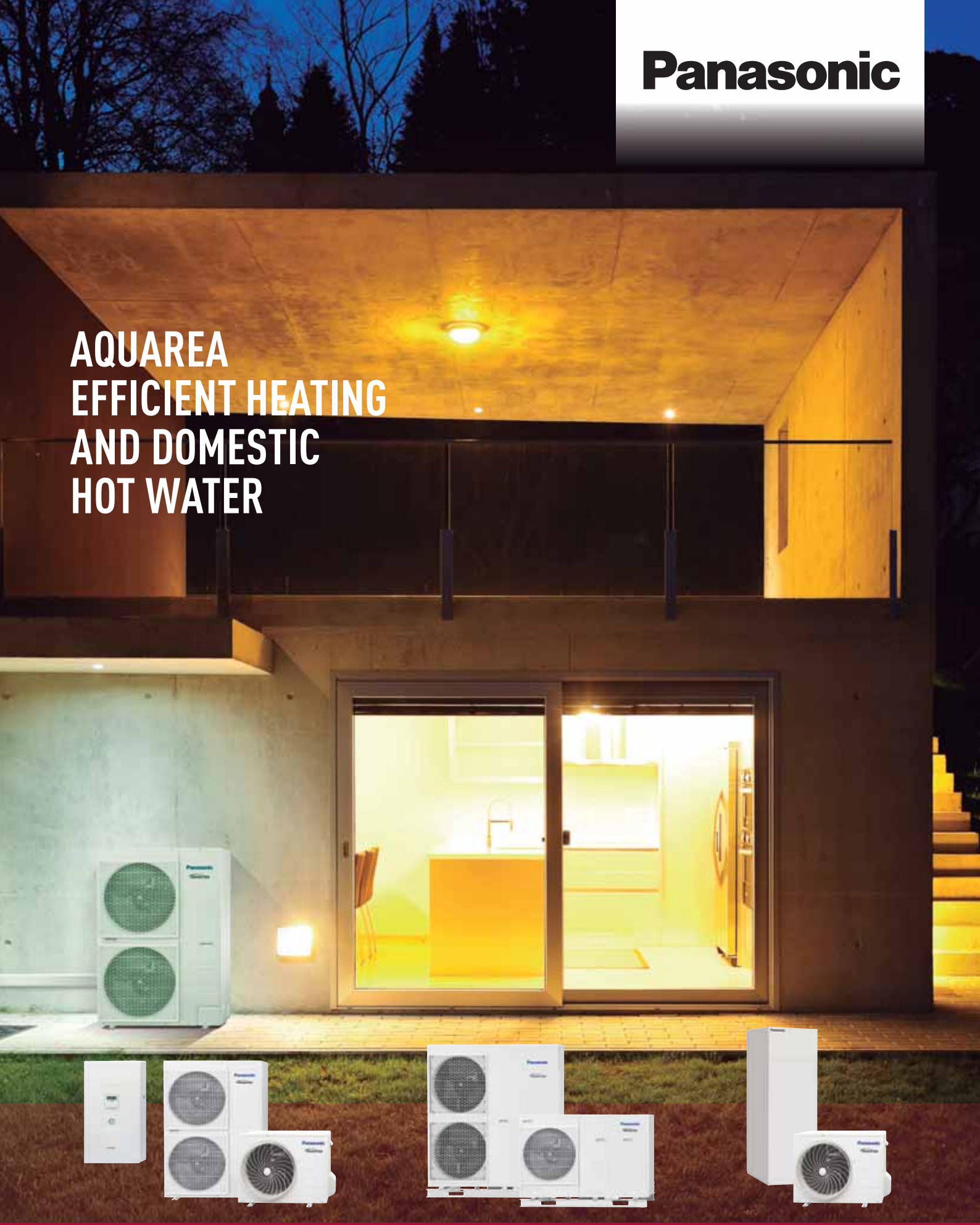
Panasonic

AQUAREA EFFICIENT HEATING AND DOMESTIC HOT WATER



NEW AQUAREA AIR TO WATER HEAT PUMP 2014 / 2015

heatingandcoolingsystems

AQUAREA

A class pump

AQUAREA THE BEST SEASONAL EFFICIENCY

Panasonic's new Aquarea air to water works even at temperatures of -20ºC

Panasonic's new Aquarea system, based on high-efficiency heat pump technology, not only heats your home and produces hot water, but also can cool your home in summer with incredible operating performance. This creates perfect comfort whatever the weather conditions, even at outdoor temperatures as low as -20°C. Panasonic new heat pumps are designed in response to the new demand for low consumption housing, with high efficiency and low running costs.

NF HEAT PUMPS

APPROVED PRODUCT MCS

* Not all products certified. As the certification process is on-going and the list of certified products constantly changing, please check for latest details on the official websites.

Up to 80% energy savings*

At the forefront of energy innovation, Aquarea is positioned as a "green" heating system. Aquarea is part of a new generation of heating and domestic hot water production systems that use a renewable and free energy source as the air to heat or produce domestic hot water for your home. The Aquarea heat pump is a much more flexible and cost-effective alternative to any traditional fueled boiler.

Why air source heat pumps?

- Reduced heating bills and maintenance costs
- Savings of up to £1,400 a year are possible
- Reduce your carbon footprint (1)
- Simple to integrate into most heating systems
- Efficient energy alternative to oil, LPG, gas and electric systems
- Highly compatible with other efficient energy sources as solar panels

Air source heat pumps – Quick facts

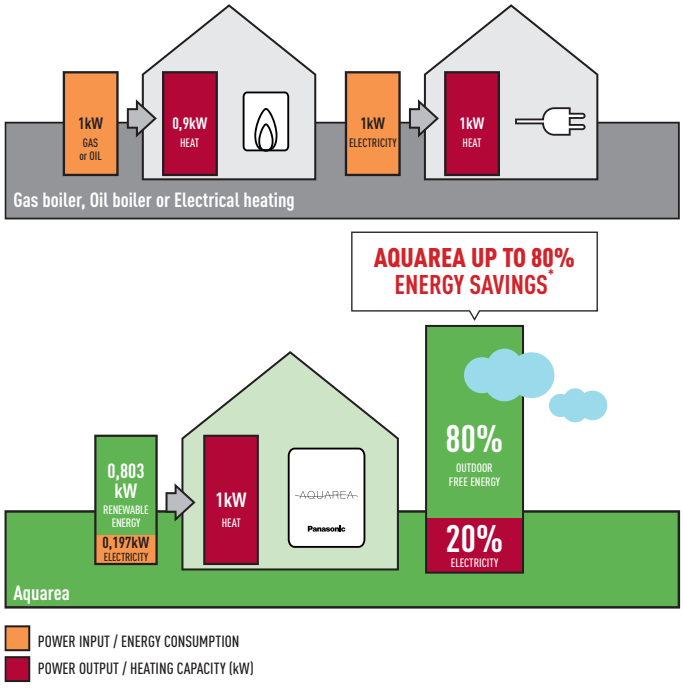
- Provides sustainable heating, cooling and domestic hot water for your home
- 30%-40% reduction in annual energy bills
- Ideal for properties without access to mains gas
- Operates even in freezing temperatures (-20°C).
- The monobloc model is externally positioned saving valuable internal living space
- Proven technology from Panasonic

"Green" High-efficiency heating with Panasonic's new Air to Water Heat Pump Systems

Panasonic's Aquarea Heat Pump provides savings of up to 80% on heating costs compared to electrical heaters. For example, the Aquarea 5kW system has a COP of 5,08. This is 4,08 more than a conventional electrical heating system which has a maximum COP of 1. This is equivalent to an 80%* saving. Consumption can be further reduced by connecting photovoltaic solar panels to the Aquarea system.

Impressive Energy Savings

Panasonic's Aquarea Heat Pump provides savings of up to 80% on heating expenses compared to electrical heaters.



* Up to 80% of the heat produced by a heat pump is free, since it comes from the outdoor air. 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
Based on 170m² 3 bedroom house in Birmingham versus electric heating element. Calculations were carried using Panasonic's Aquarea Designer software, available from the PRO Club website (www.panasonicproclub.com).

"We expect to save around £1,000 a year on fuel costs and we've been able to get rid of a large ugly oil tank in the garden thanks to the new Aquarea."
Aquarea Customer, Surrey[1]

1) Information provided by Aquarea customer, August 2012.

The Panasonic Aquarea Heat Pumps are designed and produced by Panasonic and not by other companies.

With more than 40 years of experience, selling to more than 120 countries, Panasonic is one of the leaders in the heating and cooling sector. With a diverse network of production and R&D facilities, Panasonic delivers innovative products incorporating cutting-edge technologies that set the standard for heat pumps worldwide.

100% Panasonic: we control the process

The company is also a world leader in innovation as it has filed more than 91,539 patents to improve its customers' lives. In all, the company has produced more than 200 million compressors and its products are manufactured in 294 plants which are located all over the world. You can be assured of the extremely high quality of Panasonic's heat pumps.
This wish to excel has made Panasonic the international leader in heating and turn-key heating and air conditioning solutions for homes, medium-sized buildings such as offices and restaurants, and large-scale buildings. These offer maximum effectiveness, comply with the strictest environmental standards and meet the most avant-garde construction requirements of our time.
At Panasonic we know what a great responsibility it is to install heating and cooling systems. Because offering you the best solutions in heating and cooling matters

Best Global Green Brand 2013

We were recently awarded Interbrand's 4th Best Global Green Brand 2013 – the highest of any consumer electronics brands. This is the result of our commitment to energy efficient products, reduction in CO_2 emissions, kids school 'eco learning' programme and much more.

PANASONIC OFFERS A LARGE RANGE OF SOLUTIONS HELPING TO MAKE YOUR HOME MORE EFFICIENT WITH A CHEAPER AND EASIER INSTALLATION.

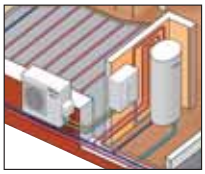
There are several types of heat pump available:

- The Monobloc (1a) system: This only has an outdoor unit. The installation doesn't require a refrigerated connection and is only connected to the heating and/or hot water.
- The Bi-Bloc system: (1b) The system has separated indoor and outdoor unit. The indoor unit connects to the heating and/or domestic hot water system.
- New All in One: Hydromodule + 200l tank.Panasonic has developed a highly efficient solution, easy to install. (1c)

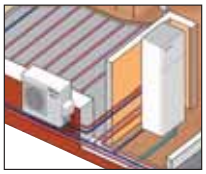
A wide range from 3 to 16kW, Single and Three Phase, Mono-Bloc and Bi-Bloc. 3 Versions:

- Aquarea High Performance: From 3 to 16kW
- Aquarea T-CAP: From 9 to 16kW
- Aquarea HT: From 9 to 12kW

1b
Bi-Bloc option



1c
New All in One option



1a 1b 1c

Aquarea air to water heat pumps
Panasonic has developed an extensive range of air-to-water heat pumps designed to efficiently convert free air into sustainable heating and hot water. Fitted externally to your home and designed to operate in all year round weather conditions (-20°C), it's the smart alternative to oil, LPG ,gas and electric heating systems.

2

Aquarea Heat Pump Manager (Optional)
This new generation of smart controllers for eco-efficient heating, features our versatile stand-alone controller not only for our heat pump systems, but also your gas, oil boiler and all other devices installed on your heating system.

KNX
Modbus®
ZigBee Control your world

3

Heating control App for smartphone, tablet or computer (Optional)
The heating control App allows you to control the heating and hot water system via your smart phone, tablet or computer with ease, whether at home or away.
The heat pump can be also connected to house management system using KNX, Modbus or Zig Bee interfaces.

4

High Efficiency tanks (Optional)

- High efficient tank solution: specially designed to improve the efficiency of the domestic hot water production.
  - Low energy losses
  - High exchange surface for high efficiency and short time to heat up the water.

5

Aquarea Air. High efficient radiators for heating and cooling (Optional)

- High efficient radiators working with water at 35°C.
- No need for two kits if both floor heating and radiators are required.
- As the product is efficient, it opens the possibility to also provide cooling while still meeting construction requirements.

Panasonic offers a cooling mode within its heat pump range for low consumption homes.

6

Heat Pump + HIT Photovoltaic solar panel (Optional)
Photovoltaic solar panels: the best solution for big savings.
Combining photovoltaic solar panels with your heat pump can help to further reduce your electrical consumption and CO_2 emissions.
Additionally, with the unique HIT photovoltaic solar panel technology from Panasonic, you can produce more electricity per square metre, helping you to increase your energy savings still further.

3 Aquarea solutions

Aquarea High Performance for low energy consumption houses. From 3 to 16kW

For a house with low temperature radiators or under-floor heating, our high performance Aquarea HP is a good solution. This solution can work as a stand-alone unit or can be combined with an existing gas or oil fired boiler system depending on requirements. This new solution is ideal for low energy consumption homes.

1) For WH-MDC05F3E5.

Aquarea T-CAP. From 9 to 16kW

If the most important aspect is to maintain nominal heating capacities even at temperatures as low as -15°C, select the Aquarea T-CAP. This ensures that there is always enough capacity to heat the house without help from an external boiler – even at extremely low temperatures. Aquarea T-CAP always has high efficiency and high heating capacity even at extremely low temperatures. With Aquarea T-CAP, you can always enjoy high savings.

Aquarea HT. From 9 to 12kW

For a house with traditional high-temperature radiators (such as cast iron radiators), the Aquarea HT Solution is the most appropriate as the Aquarea HT can deliver water temperatures of 65°C even at outdoor temperatures as low as -20°C maintaining the capacity up to -7°C.

Aquarea range: 3 line ups to fit to your requests

Aquarea all in one bi-bloc (inverter)

HIGH PERFORMANCE	3kW	5kW	7kW	9kW	12kW	14kW	16kW
T-CAP (High Capacity for cold areas)				9kW	12kW		16kW

Aquarea bi-bloc (inverter)

HIGH PERFORMANCE	3kW	5kW	7kW	9kW	12kW	14kW	16kW
T-CAP (High Capacity for cold areas)				9kW	12kW		16kW
AQUAREA HT				9kW	12kW		

Aquarea monobloc (inverter)

HIGH PERFORMANCE	5kW	6kW	9kW	12kW	14kW	16kW
T-CAP (High Capacity for cold areas)			9kW	12kW		
AQUAREA HT			9kW	12kW		

NEW HIGH PERFORMANCE HEAT PUMPS FOR LOW CONSUMPTION HOMES FROM 3 TO 16 KW

Maximum savings, maximum efficiency, minimum CO_2 emissions, minimum of space.

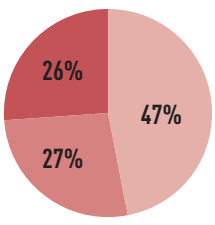
Panasonic has designed the new Aquarea Bi-Bloc and Monobloc heat pumps for homes which have high performance requirements.

Whatever the weather, Aquarea can work even at -20 °C! The New Aquarea is easy to install on new or existing installations, in all types of properties.

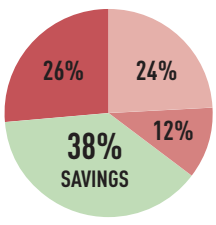
New High Performance helps you to meet strict building requirements and reduce building costs

Total energy consumption of a conventional house, compared to the energy consumption with Panasonic heat pumps

TOTAL ENERGY CONSUMPTION OF A CONVENTIONAL HOUSE[1]



ENERGY CONSUMPTION WITH PANASONIC HEAT PUMPS[2]



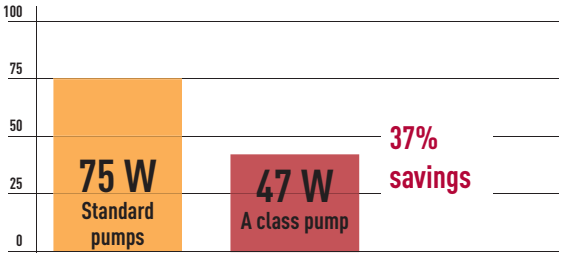
Heating | Domestic Hot Water | Domestic Appliances[3]

1. Source: IDEA, European values 2010. Consumption of a conventional house of 80 kWh/(m².year).
2. Source: Panasonic, RT2012 simulation, house of 50 kWh/(m².year) per year, equipped by Panasonic heat pump. 3. Eg. Fridge telephone, oven,...

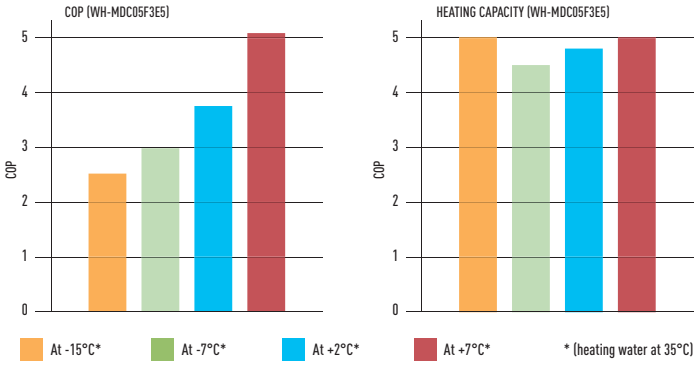
A new A-class Pump with Constant water flow (Dynamic pump control) for 5kW Mono-Bloc

A Class pump adapts water pressure according to demand, reducing energy consumption, noise on the valves, and makes installation easy.

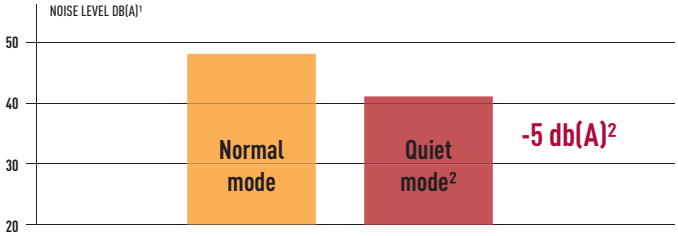
Comparison of energy consumption - Standard pumps vs A class pump



The new Panasonic High Connectivity house extremely high performance even at low temperature



Special attention has been given to noise levels - Panasonic created a night mode to reduce the noise when it's needed.



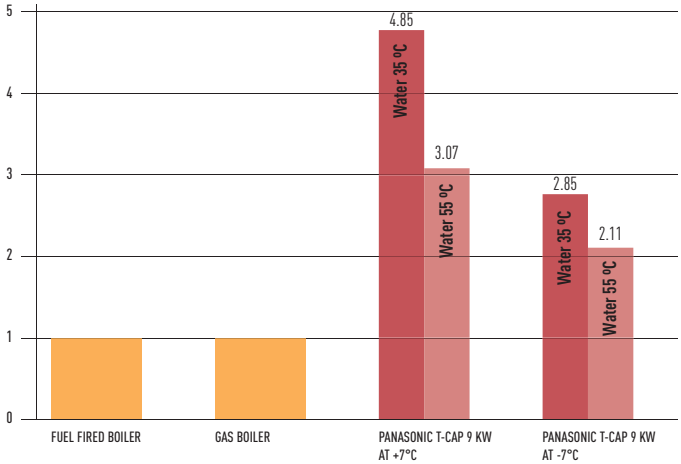
1. Sound pressure measured at 1 m from the outdoor unit and at 1.5 m height.
2. At standard condition working at heating capacity at +7°C (heating water at 35°C) for two fans outdoor units. For one fan outdoor units, night mode reduction is 3dB(A).

NEW T-CAP FOR EXTREMELY LOW TEMPERATURES AREAS FROM 9 TO 16 KW

The whole T-CAP line-up is designed for extremely cold areas in applications with under floor heating, low temperature radiators or even fan-coil heaters. This range can also be connected to a solar kit in order to increase efficiency and minimise the impact on the ecosystem. Finally, it is possible to connect a room thermostat for even better heating or cooling control and management.

- T-CAP stands for Total Capacity. This line-up is able to maintain the same nominal capacity even at -15°C without the help of an electrical booster heater.
- High heating capacity even at low ambient temperatures.
- The New 16kW 3 phase maintains capacity of 16 kW until -15°C outdoor temperature. Adding many new functions: Auto mode, Holiday mode, power consumption display.

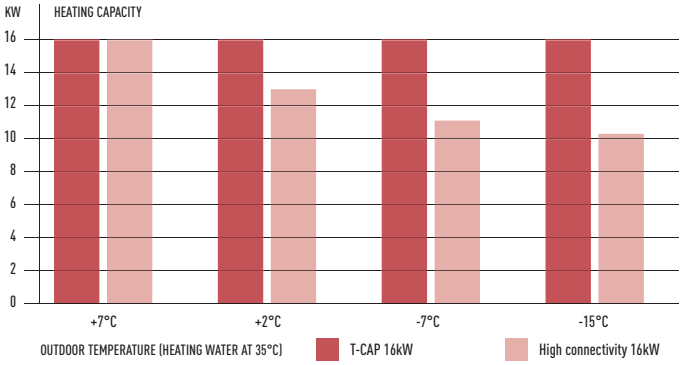
Best efficiency compared to other heating systems
Panasonic heat pumps have a maximum COP of 4.85 at + 7 °C which makes them much more efficient than fossil fuel fired boilers and electrical heaters.



Aquarea T-CAP maintains the nominal capacity until -15°C
The T-CAP line-up is able to maintain the same nominal capacity even at -15°C without the help of an electrical booster heater. T-CAP is also able to provide extremely high efficiencies, whatever the outside or the water temperature. Panasonic has now extended the range with the new three phase 16kW.

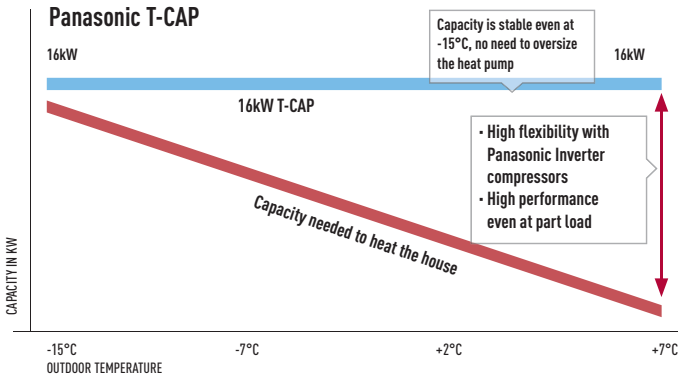
- Backup heater capacity can be selected (3/6/9kW)
- Cooling mode activation possible by software*

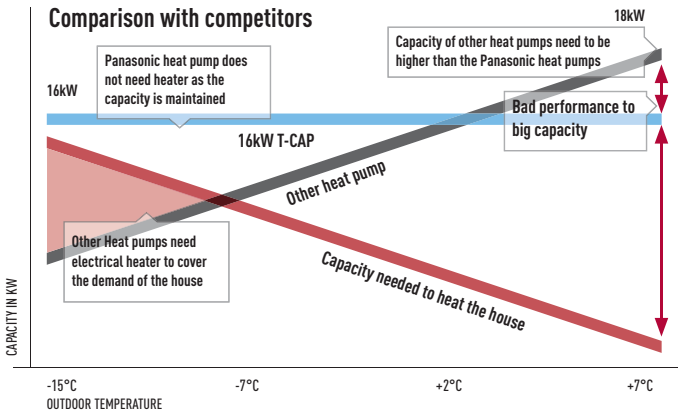
* This activation can only be done by service partner or installer



With a Panasonic T-CAP heat pump, there is no need to oversize the heat pump to reach the required capacity at low temperatures.

- No need for an additional expansion vessel, as the unit already has a 10l expansion vessel
- No buffer tank required as the Panasonic heat pump has an inverter compressor which can regulate the capacity. (Please check on the service manual the minimum volume of water needed on the circuit)
- 3, 6 or 9kW electrical heater is included on the heat pump
- Panasonic heat pumps can work in outdoor temperatures as low as -20°C and guarantee the capacity without backup heating down to -15°C
- Panasonic heat pumps are very quiet and have a night mode program for even lower noise with 35ºC water temperature flow. See noise calculator on www.panasonicproclub.com

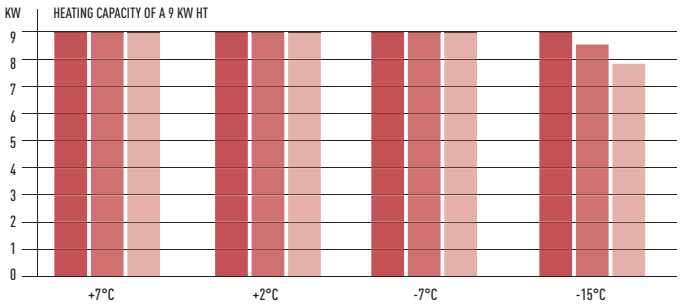




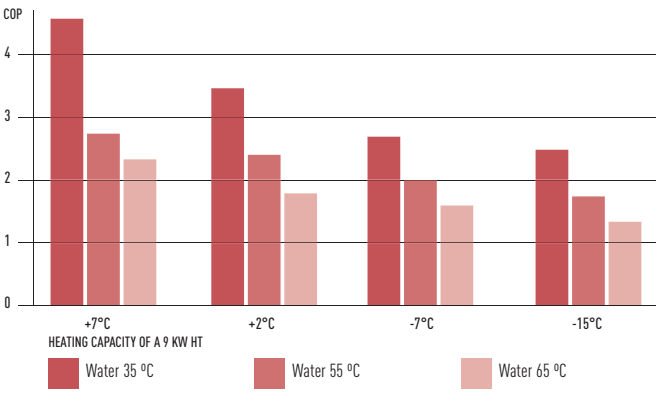
NEW AQUAREA HT IDEAL FOR RETROFIT: GREEN ENERGY SOURCE WORKS WITH EXISTING RADIATORS. FOR 9 AND 12 KW

Replace a traditional heating source (such as oil or gas) with Aquarea HT, but keep existing old style radiators for minimum disruption to the home. From 9 to 12kW. For a house with traditional high-temperature radiators (such as cast iron radiators), the Aquarea HT Solution is the most appropriate as the Aquarea HT provides output water temperatures of 65°C even at outdoor temperatures as low as -15°C. (1)

Panasonic Aquarea HT is super efficient even at low temperature.



HIGH COP (Coefficient of Performance) During all year and always better than Gas or Oil burning

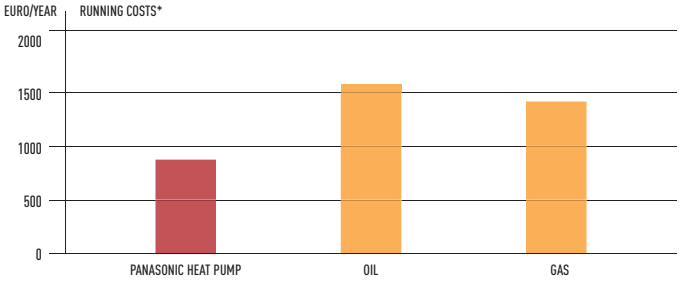


(1) with the RHI the maximum water flow temperature allowed is 50ºC

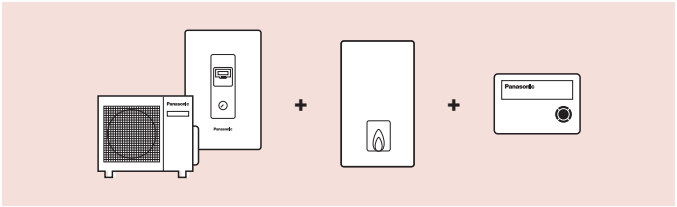
Aquarea HT: High savings and low CO_2

The results of replacing traditional heating systems with Aquarea HT are clear: lowest running cost and lowest CO_2 emissions. Panasonic heat pumps are much more efficient than boilers and help you to reach your house energy targets easier.

Yearly savings with Aquarea HT



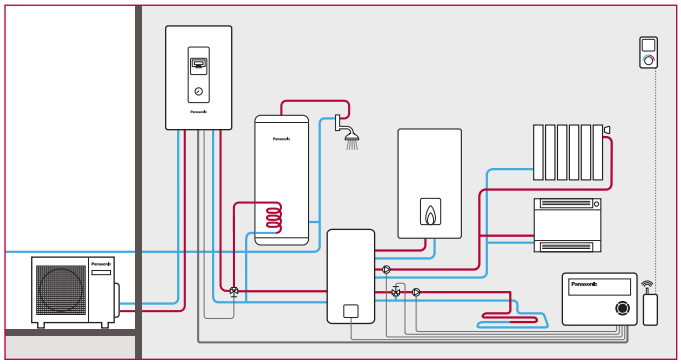
* For a 170 m² house and 40 W/m² energy losses in central Europe Conditions, outside minimum conditions -10°C.

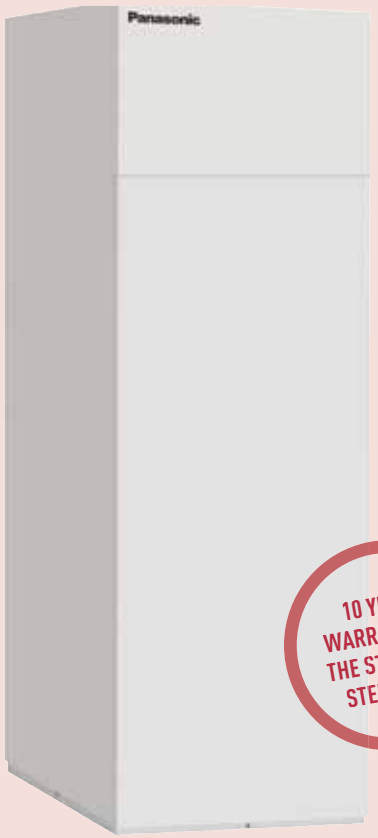


Smart Bivalent/Hybrid operation

Thanks to Aquarea HPM (Heat Pump Manager), it is possible to combine different heat sources and use the most appropriate source, depending on user's preferences. This control will interface between the different heat sources.
Thus, if it is necessary to combine a secondary heating source with heat pump, Aquarea HPM is simply the best solution.

Heat Pump + Boiler Management with DHW with PAW-HPM12ZONELCD-U





10 YEARS WARRANTY OF THE STAINLESS STEEL TANK

* Preliminary design. Significant changes may occur.

NEW ALL IN ONE. NICE DESIGN, EASY TO INSTALL, HIGH PERFORMANCES. FROM 3 TO 16 KW.

New All in One hydromodule + 200l tank

Easy to instal highly efficient solution, reducing installation time, thanks to the fitted at the factory piping and electric connection between the hidrobox and the tank.

All in One is a also a space saving solution, perfect to install in the kitchen due to its stylish design. Furthermore, Panasonic has developed a range of controllers which allows the control of 2 heating zones, bivalent/hybrid and cascade systems.

1. Highly efficient solution
2. A easy installation
3. A class pump
4. 200l Tank included
5. Easy integration of the HPM remote control

High efficiency solution

The best of Panasonic:

- Stainless steel tank with high insulation to reduce energy losses
- High exchange surface area to increase efficiency
- Best performing Aquarea hydraulic module to heat the water.

Connectivity Possibilities

3 different remote control options:

- New Remote control. New function for customer:
  - Auto Mode for Heating and Cooling mode
  - How to show Energy Consumption
  - How to set Holiday Mode
- Heat pump Manager for more then up to 610 prefiguration installations available on www.panasonicproclub.com possible (as 2 zone control, Bivalent/Hybrid, etc.)
- Heat pump Manager with touch screen LCD.

Line up: 3, 5, 7, 9kW with 12, 14, 16 kW Single Phase and 9, 12, 14, 16kW Three Phase.

+

SOLAR PHOTOVOLTAIC PANELS + HPM

Heat and produce Domestic Hot Water for free

Panasonic has developed an innovative algorithm for its HPM (Heat Pump Manager) which drastically improves the Heat Pump's use of self-generated electricity from connected Photovoltaic panels. The Heat Pump will take the electricity generated by the solar system into consideration for the heating system and the domestic hot water production, without reducing comfort in the house.

The HPM (Heat Pump Manager) activates the heat pump based on:
- Energy produced by the photovoltaic system.
- The consumption requirement of the house, eg if a washing machine is working, the heat pump will not draw electricity from the photovoltaic system to avoid net increases on overall energy consumption and hence maximise efficiency.
- Heating demand of the house (in case of high electricity production, the house can be overheated by 1 or 2 degrees, or reduced by 1 or 2 degrees if low production of electricity).

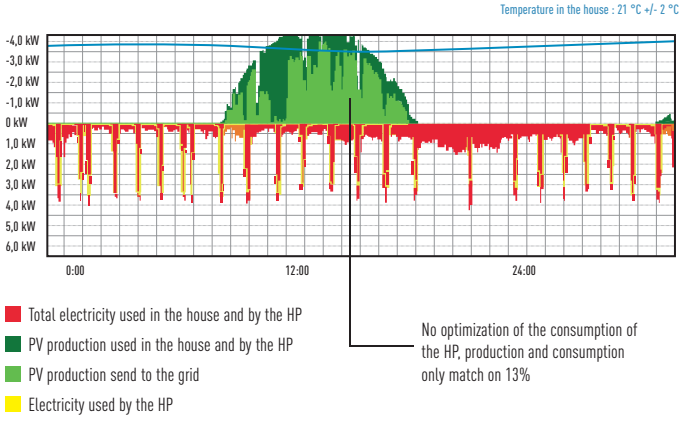
As the production of domestic hot water is linked to the level of electricity generated by the solar system, if this was too low, the heat pump would start a normal process to maintain maximum comfort in the house for a given set time (defined by the user).

Key points
- Increases the amount of self-consumed electricity from the solar system up to 120%.
- Control the heat pump's energy consumption according to the output of electricity from the PV considering the electric energy consumtion requirement of the house.
- Innovative algorithm balancing the consumption of the heat pump and the comfort in the house based on the outside temperature and the energy demand of the building.
- Easy configuration of the Heat Pump manager system with the PV system.

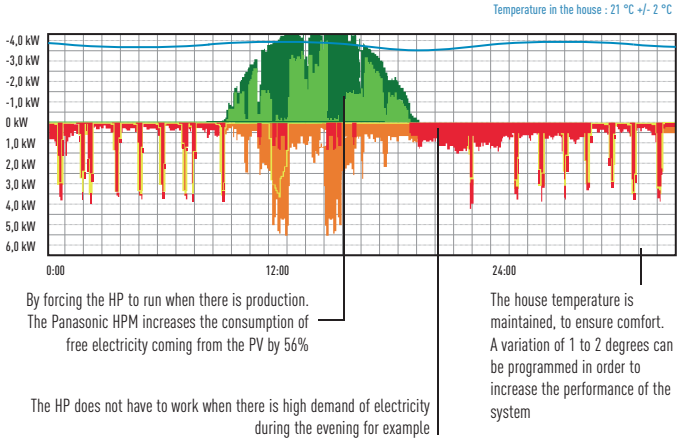
*Results of simulations for new housing (see next page)

Standard combination PV+HP. Why the Panasonic HPM can increase by 120% the performance of the combination PV+HP

Typical Electricity consumption and production profile WITHOUT Panasonic HPM



Typical Electricity consumption and production profile optimize by the Panasonic HPM



NEW REMOTE CONTROL*

For 2014, Panasonic has introduced a new remote controller to improve performance, enhance comfort and deliver maximum savings.

New function for installer

- Floor heating concrete dry mode
- How to unlock Cool Mode
- Class A Pump management with 7 speeds

New function for end user

- Auto Mode for Heating and Cooling mode
- Show Energy Consumption
- Set Holiday Mode

Floor heating concrete dry mode: Allows slow increase in temperature of floor heating via software.
Heating and Cooling Mode: Authorised service partner or Authorised installer can enable the cooling mode through a special operation via the remote controller on site.
Pump with 7 speeds: Pump speed can be selected on the remote control.

* F Series model units

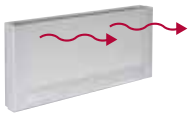
AQUAREA AIR RADIATORS

The slimline Panasonic Aquarea Air radiators deliver high efficiency climate control. With a depth of just under 13 cm they are at the cutting edge of the market. Blending easily into the home, Aquarea Air's elegant design and product refinements are clear to see in every detail.

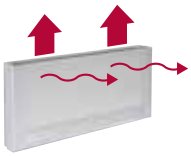
Panasonic has developed a new radiator line up working with water at 35°C in order to:

- Make the installation easier, with 2 zones kits and additional pumps
- Increase the efficiency by 32% over standard radiators working at 45°C
- Makes cooling operation possible to increase comfort

A selection tool is available on www.panasonicproclub.com
Heating, cooling and dehumidification functions (drain pipe for cooling and dehumidification is needed)



Operating on heating mode with radiator using only radiant effect



Operating on heating mode with radiant effect and fan mode

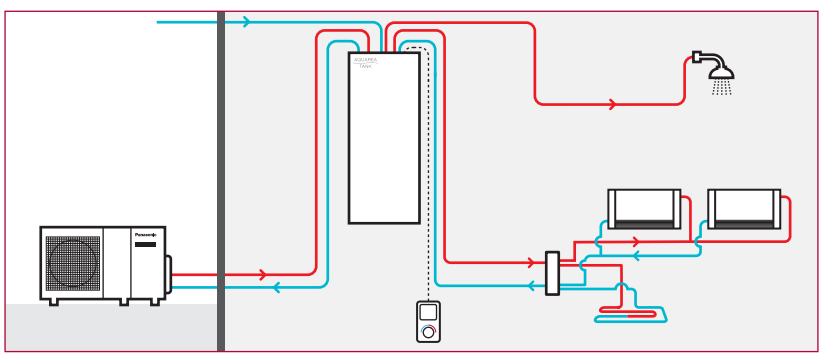
Operating on cooling mode with fan

NEW AQUAREA TANK

New DHW Tank with buffer tank PAW-TD20B8E3-NDS

Designed for retrofit applications, the new 200l DHW tank with a 80l buffer tank is particularly suitable for fast integration on an existing installation.

Panasonic has developed a New tank with 80l Buffer tank and 200l Domestic hot water cylinder. This tank includes a 3-way valve and an A Class pump. Easy to install, nice looking, high efficiency for DHW production and for heating.



PANASONIC IS OFFERING 7 YEARS WARRANTY EXCLUSIVELY TO INSTALLATIONS CARRIED OUT BY A PANASONIC PRO PARTNER

The process is simple:

1. The installation must be carried out by a PRO Partner
2. Commissioning documentation must be submitted via the PRO Club
3. Once the commissioning is approved, the warranty documentation will be automatically generated and sent to the PRO Partner and can then be supplied to the end user.
4. The warranty status can be checked at any time via the web at www.aircon.panasonic.co.uk/warranty. Simply enter the postcode and serial number of the Aquarea Heat Pump

* subject to conditions

RENEWABLE HEAT INCENTIVE (RHI)

The Renewable Heat Incentive (RHI) is a Government scheme set up to encourage uptake of renewable heat technologies among householders, communities and businesses through the provision of financial incentives.
The UK Government expects the RHI to make a significant contribution towards their 2020 ambition of having 12 per cent of heating coming from renewable sources. The Renewable Heat Incentive is the first of its kind in the world.
RHI domestic scheme will support Heat Pumps, Biomass, Micro CHP and Solar Thermal panels. The announcement follows extensive consultation on how a financial incentive would work best for householders and takes into account lessons learned from the Renewable Heat Premium Payment grant scheme (RHPP) and the RHI non domestic scheme.

Panasonic's Aquarea range of air to water heat pumps are already proving extremely popular with homeowners, specifiers and contractors looking for reliable, easy to use heating and hot water systems offering maximum energy efficiency.
Aquarea is the most comprehensive, versatile and cost-effective range of air-to-water heat pumps on the market. It features heat pumps from 3 to 16 kW, single and three-phase alongside stand-alone and split-units.

Who will be eligible to receive the RHI payment?

Open to owner occupiers, private and social landlords, third party owners of heating systems and people who build their own homes. Anyone who has installed a renewable heat technology since 15 July 2009 and meets the scheme eligibility criteria will also be able to apply.

Tariff payments

Payments will be made on a quarterly basis for seven years. In most cases, payments will be made based on estimated heat demand of the property combined with the estimated system performance, and will be made on the portion of renewable energy generated. An energy meter may also be installed under the metering and monitoring package, which offers an extra payment of £230 per annum. Metering is a criteria, which is necessary for second homes and bi-valent installations.

Scheme requirements

Applicants will need to complete a Green Deal Assessment before submitting their application. They must certify that the property is their main residence and that they have basic energy efficiency measures in place, such as 250mm of loft insulation and cavity wall insulation, where appropriate. All installations and installers must be MCS certified (or certified by an equivalent scheme).

About the Green Deal

The Green Deal is an innovative financing mechanism that lets people pay for energy-efficiency improvements through savings on their energy bills. Green Deal was launched in January 2013 and applies to both the domestic and non-domestic sector. It replaces current policies such as the Carbon Emissions Reduction Target (CERT) and the Community Energy Saving Programme (CESP).

Assessment

This is carried out in your home or business premises by a Green Deal Advisor or Assessor, and may be subject to a charge. They will:

- Use software to identify what energy efficiency or microgeneration improvements you can make and advise what the financial savings would be
- Outline how the payments will work
- Identify which improvements are likely to be cost effective
- Produce a Green Deal advice report outlining your options
- Declare any links they have with Green Deal Providers
- Supply an EPC with a deemed energy figure for the property, RHI will be paid out on this figure.

Finance (optional)

Once the Green Deal Advisor has given you your report, you can take it to one or more Green Deal Providers who can arrange and fund the improvements. If you decide to take up a Green Deal offer you will then sign a Green Deal Plan, which is a contract between your properties energy saving and the Green Deal Provider. (It stays with the property if you move).

A TYPICAL EXAMPLE OF SAVINGS AND EFFICIENCIES THAT AQUAREA CAN OFFER TO YOU

A 170m² house in Birmingham

The example below shows a typical 3 bedroom UK home and highlights the potential savings that can be achieved with Panasonic's Aquarea heat pump. *

Building data	
Address	Birmingham (GB)
Building area	170 m²
Standard heating requirement	6.8 kW
Internal gains	5100 kWh/year
Solar gains (windows)	3060 kWh/year
Indoor design temperature	20 °C
Outdoor temp. limit for heating 'on'	15 °C
Heat distribution	Underfloor heating by 100 %
	Radiator heating by -- %
	Wall heating by -- %
Max. flow water temperature	35 °C
Max. return water temperature	30 °C
Solar collector area	-- m²

Service hot water	
Type of service	Hot water with heat pump
Tank volume	300 Litre
Average daily need	200 Litre
Cold water inlet temperature	10 °C
Target tank temperature	50 °C
Exchange loss	5 K
Electrical auxiliary heating necessary	no

Climatic data				
Climatic location	Birmingham (GB)			
Monthly average temperatures in °C	Jan	3.4	Jul	16.0
	Feb	3.6	Aug	15.9
	Mar	5.7	Sep	13.7
	Apr	8.0	Oct	10.4
	May	11.2	Nov	6.7
	Jun	14.1	Dec	4.6

Rate data		
Description	UK (Panasonic)	
Shut off times total	0.0 h/day	
Weekends with shut off times	yes	
Daytime rate of heat pump	Time for daytime rate	
	5 - 19 o'clock	14.0 pence/kWh
Nighttime rate of heat pump	Time for nighttime rate	
	19 - 5 o'clock	14.0 pence/kWh
Heat circulation pump(s)	like heat pump: yes	-- pence/kWh
Heating element for monoenergetic operation	Like heat pump: yes	-- pence/kWh
Heating element for post heating of hot water	like heat pump: yes	-- pence/kWh

Used Panasonic heat pump	
Description	WH-MHF09D3E5
Sanitary tank	WH-TD30E3E5
Heat pump type	air / water
Wattage at 2/35	heat: 9.0 kW, electric: 2.5 kW
Recommended flow-through of air	4600.0 m³/h
Max. flow temperature	65 °C
Mode of operation	monovalent
Design/Bivalent temperature	-10.0 °C
Number of heat pumps used	1
Wattage of fan (included in heat pump performance data: yes)	60 W
Wattage of heat circulation pump(s)	180 W

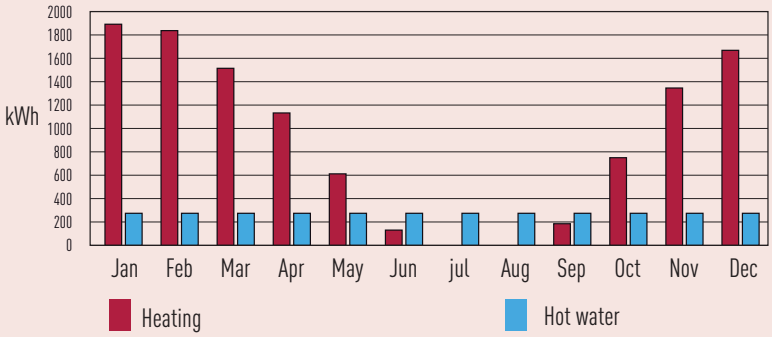
* Calculations were carried using Panasonic's Aquarea Designer software, available from the PRO Club website (www.panasonicproclub.com).

Calculation results

Monthly heat consumption in kWh

Annual energy costs	
Caused by heat producers	
Heat pump	638 £
Hot water heating rod	0 £
Caused by heat consumers	
Space heating	330 £
Cooling	0 £
Service hot water	174 £
Heat circulation pump(s)	134 £
Total	**638 £**

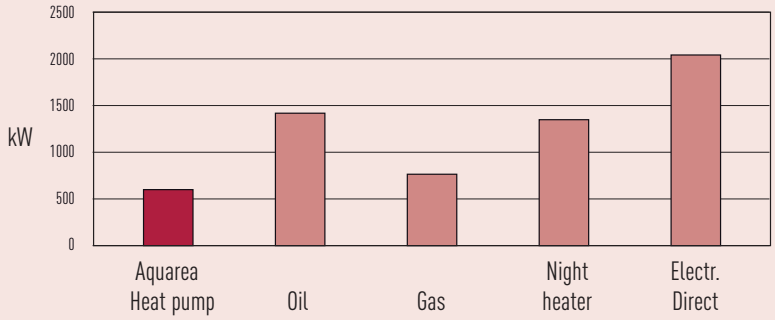
Annual C.O.P.	
Auxiliary power included: Heating elements	4.0
With cooling	--



Comparison of running costs

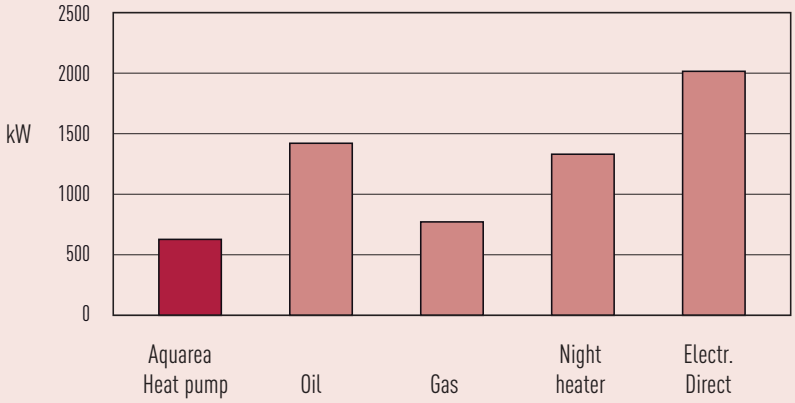
Operational costs

Type of heating	Price in pence/kWh	Efficiency [%]	Additional costs in £/year	Total costs in £/year
Heat pump			0	638
Oil	8.0	90	0	1426
Gas	4.0	90	0	779
Electric night storage heater	9.3	100	0	1353
Electric heating element	14.0	100	0	2038
Wood heating	--	--	--	--

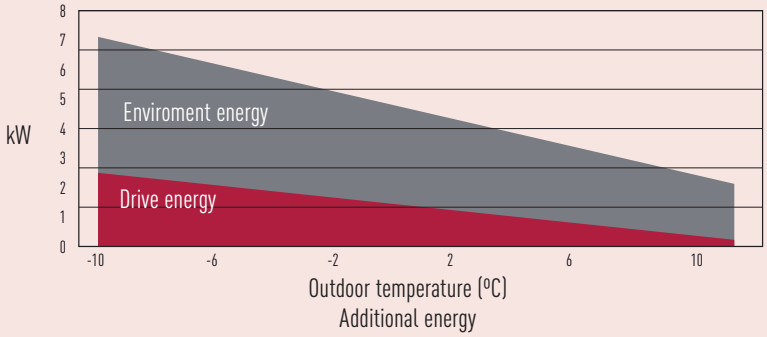


Operational costs

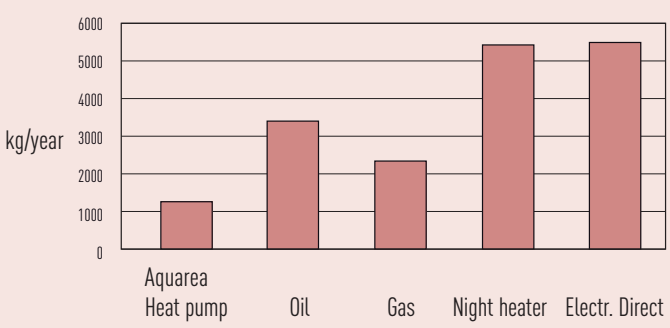
Type of heating	Price in pence/kWh	Efficiency [%]	Additional costs in £/year	Total costs in £/year
Heat pump	--	638	--	--
Oil	--	1426	--	--
Gas	--	779	--	--
Electric night storage heater	--	1353	--	--
Electric heating element	--	2038	--	--
Wood heating	--	--	--	--



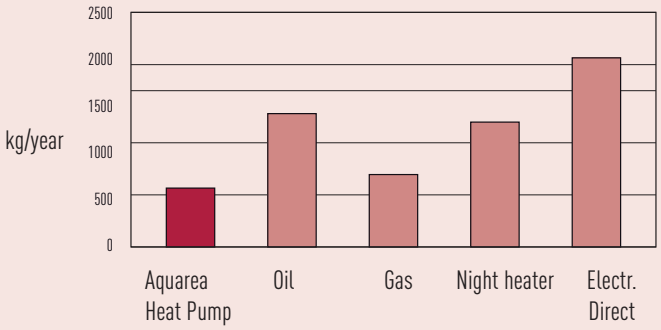
Aquarea energy coverage



Comparison of CO_2 emissions



Comparison of CO_2 savings



AQUAREA RANGE

AQUAREA ALL IN ONE HIGH PERFORMANCE BI-BLOC SINGLE PHASE HEATING AND COOLING													
			Single Phase (Power to indoor)							Three Phase (Power to indoor)			
Kit			KIT-ADC3GE5	KIT-ADC5GE5	KIT-ADC7GE5	KIT-ADC9GE5	KIT-ADC12GE5	KIT-ADC14GE5	KIT-ADC16GE5	KIT-ADC9GE8	KIT-ADC12GE8	KIT-ADC14GE8	KIT-ADC16GE8
Indoor unit			WH-ADC0309G3E5-UK				WH-ADC1216G6E5-UK			WH-ADC1216G6E5-UK			
Outdoor unit			WH-UD03EE5	WH-UD05EE5	WH-UD07FE5	WH-UD09FE5	WH-UD12FE5	WH-UD14FE5	WH-UD16FE5	WH-UD09FE8	WH-UD12FE8	WH-UD14FE8	WH-UD16FE8
Heating capacity at +7°C		kW	3,20	5,00	7,00	9,00	12,00	14,00	16,00	9,00	12,00	14,00	16,00
COP at +7°C (heating water at 35°C)			5,00	4,63	4,46	4,13	4,75	4,57	4,28	4,85	4,75	4,57	4,28
Heating capacity at +2°C		kW	3,20	4,20	6,55	6,70	11,40	12,40	13,00	9,00	11,40	12,40	13,00
COP at +2°C (heating water at 35°C)			3,56	3,11	3,34	3,13	3,45	3,36	3,29	3,59	3,45	3,36	3,29
Heating capacity at -7°C		kW	3,20	4,20	5,15	5,90	10,00	10,70	11,40	9,00	10,00	10,70	11,40
COP at -7°C			2,69	2,59	2,68	2,52	2,74	2,71	2,68	2,85	2,74	2,71	2,68
Cooling capacity at 35°C		kW	3,20	4,50	6,00	7,00	10,00	11,50	12,20	7,00	10,00	11,50	12,20
EER at 35°C (cooling water at 7 / 12°C)			3,08	2,69	2,63	2,43	2,81	2,64	2,57	3,17	2,81	2,64	2,57
Dimensions (Indoor)	H x W x D	mm	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720	1.827x600x720
Dimensions (Outdoor)	H x W x D	mm / kg	622 x 824 x 298 / 39		795 x 900 x 320 / 66		1.340 x 900 x 320 / 106						
Sound pressure level		dB(A)	47	48	48	49	50	51	53	49	50	51	53
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA ALL IN ONE T-CAP BI-BLOC SINGLE PHASE / THREE PHASE HEATING AND COOLING							
			Single Phase (Power to indoor)		Three Phase (Power to indoor)		
Kit			KIT-AXC9GE5	KIT-AXC12GE5	KIT-AXC9GE8	KIT-AXC12GE8	KIT-AXC16GE8
Indoor unit			WH-ADC1216G6E5-UK	WH-ADC1216G6E5-UK	WH-ADC1216G6E5-UK	WH-ADC0916G9E8-UK	WH-ADC0916G9E8-UK
Outdoor unit			WH-UX09FE5	WH-UX12FE5	WH-UX09FE8	WH-UX12FE8	WH-UX16FE8
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00	16,00
COP at +7°C (heating water at 35°C)			4,85	4,75	4,85	4,75	4,28
Heating capacity at +2°C		kW	9,00	12,00	9,00	12,00	16,00
COP at +2°C (heating water at 35°C)			3,59	3,44	3,59	3,44	3,10
Heating capacity at -7°C		kW	9,00	12,00	9,00	12,00	16,00
COP at -7°C			2,85	2,72	2,85	2,72	2,49
Cooling capacity at 35°C		kW	7,00	10,00	7,00	10,00	12,20
EER at 35°C (cooling water at 7/12°C)			3,17	2,81	3,17	2,81	2,57
Dimensions (Indoor)	H x W x D	mm	1.827 x 600 x 720	1.827 x 600 x 720	1.827 x 600 x 720	1.827 x 600 x 720	1.827 x 600 x 720
Dimensions (Outdoor)	H x W x D	mm / kg	1.340 x 900 x 320 / 107	1.340 x 900 x 320 / 107	1.340 x 900 x 320 / 110	1.340 x 900 x 320 / 110	1.340 x 900 x 320 / 110
Sound pressure level		dB(A)	49	50	49	50	50
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA HIGH PERFORMANCE BI-BLOC SINGLE PHASE HEATING ONLY - SDF HEATING AND COOLING - SDC 3 AND 5kW						
			Single Phase Heating Only		Single Phase Heating and Cooling	
Kit			KIT-WF03C3E5	KIT-WF05C3E5	KIT-WC03C3E5	KIT-WC05C3E5
Indoor unit			WH-SDF03E3E5	WH-SDF05E3E5	WH-SDC03E3E5	WH-SDC05E3E5
Outdoor unit			WH-UD03EE5	WH-UD05EE5	WH-UD03EE5	WH-UD05EE5
Heating capacity at +7°C		kW	3,20	5,00	3,20	5,00
COP at +7°C (heating water at 35°C)			5,00	4,63	5,00	4,63
Heating capacity at +2°C		kW	3,20	4,20	3,20	4,20
COP at +2°C (heating water at 35°C)			3,56	3,11	3,56	3,11
Heating capacity at -7°C		kW	3,20	4,20	3,20	4,20
COP at -7°C			2,69	2,59	2,69	2,59
Cooling capacity at 35°C		kW	-	-	3,20	4,50
EER at 35°C (cooling water at 7/12°C)			-	-	3,08	2,69
Dimensions (Indoor)	H x W x D	mm / kg	892 x 502 x 353 / 43	892 x 502 x 353 / 43	892 x 502 x 353 / 44	892 x 502 x 353 / 44
Dimensions (Outdoor)	H x W x D	mm / kg	622 x 824 x 298 / 39	622 x 824 x 298 / 39	622 x 824 x 298 / 39	622 x 824 x 298 / 39
Sound pressure level		dB(A)	47	48	47	48
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA HIGH PERFORMANCE BI-BLOC SINGLE PHASE / THREE PHASE HEATING AND COOLING - SDC												
			Single Phase (Power to indoor)					Three Phase (Power to indoor)				
Kit			KIT-WC07F3E5[1]	KIT-WC09F3E5[1]	KIT-WC12F6E5[2]	KIT-WC14F6E5[2]	KIT-WC16F6E5[2]	KIT-WC09F3E8[3]	KIT-WC12F9E8[3]	KIT-WC14F9E8[3]	KIT-WC16F9E8[3]
Indoor unit			WH-SDC07F3E5	WH-SDC09F3E5	WH-SDC12F6E5	WH-SDC14F6E5	WH-SDC16F6E5	WH-SDC09F3E8	WH-SDC12F9E8	WH-SDC14F9E8	WH-SDC16F9E8
Outdoor unit			WH-UD07FE5	WH-UD09FE5	WH-UD12FE5	WH-UD14FE5	WH-UD16FE5	WH-UD09FE8	WH-UD12FE8	WH-UD14FE8	WH-UD16FE8
Heating capacity at +7°C		kW	7,00	9,00	12,0	14,00	16,00	9,00	12,00	14,00	16,00
COP at +7°C (heating water at 35°C)			4,46	4,13	4,74	4,56	4,28	4,84	4,14	4,56	4,28
Heating capacity at +2°C		kW	6,55	6,70	11,40	12,40	13,00	9,00	11,40	12,40	16,00
COP at +2°C (heating water at 35°C)			3,34	3,13	3,44	3,36	3,28	3,59	3,44	3,36	3,28
Heating capacity at -7°C		kW	5,15	5,90	10,00	10,70	11,40	9,00	10,00	10,70	11,40
COP at -7°C (heating water at 35°C)			2,68	5,52	2,73	2,70	2,68	2,85	2,23	2,70	2,68
Cooling capacity at 35°C		kW	6,00	7,00	10,00	11,50	12,20	7,00	10,00	11,50	12,20
EER at 35°C (cooling water at 7°C)			2,61	2,41	2,81	2,64	2,56	3,17	2,81	2,64	2,56
Dimensions (Indoor)	H x W x D	mm / kg	892 x 502 x 353 / 43	892 x 502 x 353 / 43	892 x 502 x 353 / 45	892 x 502 x 353 / 46	892 x 502 x 353 / 46	892 x 502 x 353 / 46	892 x 502 x 353 / 46	892 x 502 x 353 / 47	892 x 502 x 353 / 47
Dimensions (Outdoor)	H x W x D	mm / kg	795 x 900 x 320 / 66		1.340 x 900 x 320 / 101						
Sound pressure level		dB(A)	48	49	50	51	53	49	50	51	53
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

1) Available from September 2014. 2) Available from May 2014

AQUAREA T-CAP BI-BLOC SINGLE PHASE / THREE PHASE HEATING AND COOLING - SXC							
			Single Phase (Power to indoor)		Three Phase (Power to indoor)		
Kit			KIT-WXC09F3E5	KIT-WXC12F6E5	KIT-WXC09F3E8	KIT-WXC12F9E8	KIT-WXC16F9E8
Indoor unit			WH-SXC09F3E5	WH-SXC12F6E5	WH-SXC09F3E8	WH-SXC12F9E8	WH-SXC16F9E8
Outdoor unit			WH-UX09FE5	WH-UX12FE5	WH-UX09FE8	WH-UX12FE8	WH-UX16FE8
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00	16,00
COP at +7°C (heating water at 35°C)			4,84	4,74	4,84	4,74	4,28
Heating capacity at +2°C		kW	9,00	12,00	9,00	12,00	16,00
COP at +2°C (heating water at 35°C)			3,59	3,44	3,59	3,44	3,10
Heating capacity at -7°C		kW	9,00	12,00	9,00	12,00	16,00
COP at -7°C (heating water at 35°C)			2,85	2,72	2,85	2,72	2,49
Cooling capacity at 35°C		kW	7,00	10,00	7,00	10,00	12,20
EER at 35°C (cooling water at 7°C)			3,17	2,81	3,17	2,81	2,57
Dimensions (Indoor)	H x W x D	mm / kg	892 x 502 x 353 / 44	892 x 502 x 353 / 45	892 x 502 x 353 / 45	892 x 502 x 353 / 46	892 x 502 x 353 / 52
Dimensions (Outdoor)	H x W x D	mm / kg	1.340 x 900 x 320 / 107	1.340 x 900 x 320 / 107	1.340 x 900 x 320 / 109	1.340 x 900 x 320 / 109	1.340 x 900 x 320 / 110
Sound pressure level		dB(A)	49	50	49	50	53
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA HT BI-BLOC SINGLE PHASE / THREE PHASE HEATING ONLY - SHF						
			Single Phase (Power to indoor)		Three Phase (Power to indoor)	
Kit			KIT-WHF09F3E5	KIT-WHF12F6E5	KIT-WHF09F3E8	KIT-WHF12F9E8
Indoor unit			WH-SHF09F3E5	WH-SHF12F6E5	WH-SHF09F3E8	WH-SHF12F9E8
Outdoor unit			WH-UH09FE5	WH-UH12FE5	WH-UH09FE8	WH-UH12FE8
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00
COP at +7°C (heating water at 35°C)			4,64	4,46	4,64	4,46
Heating capacity at +2°C		kW	9,00	12,00	9,00	12,00
COP at +2°C (heating water at 35°C)			3,45	3,26	3,45	3,26
Heating capacity at -7°C		kW	9,00	12,00	9,00	12,00
COP at -7°C (heating water at 35°C)			2,74	2,52	2,74	2,52
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00
COP at +7°C (heating water at 65°C)			2,25	2,20	2,25	2,20
Heating capacity at +2°C		kW	9,00	10,30	9,00	10,30
COP at +2°C (heating water at 65°C)			1,88	1,83	1,88	1,83
Heating capacity at -7°C		kW	8,90	9,60	8,90	9,60
COP at -7°C (heating water at 65°C)			1,64	1,61	1,64	1,61
Dimensions (Indoor)	H x W x D	mm / kg	892 x 502 x 353 / 46	892 x 502 x 353 / 47	892 x 502 x 353 / 47	892 x 502 x 353 / 48
Dimensions (Outdoor)	H x W x D	mm / kg	1.340 x 900 x 320 / 104	1.340 x 900 x 320 / 104	1.340 x 900 x 320 / 110	1.340 x 900 x 320 / 110
Sound pressure level		dB(A)	49	50	49	50
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA RANGE

AQUAREA HIGH PERFORMANCE MONO-BLOC SINGLE PHASE HEATING ONLY - MDF HEATING AND COOLING - MDC							
			Single Phase Heating Only		Single Phase Heating and Cooling		
			WH-MDF06E3E5	WH-MDF09E3E5	WH-MDC05F3E5	WH-MDC06E3E5	WH-MDC09E3E5
Heating capacity at +7°C		kW	6,00	9,00	5,00	6,00	9,00
COP at +7°C (heating water at 35°C)			4,48	4,15	5,08	4,48	4,15
Heating capacity at +2°C		kW	5,00	7,45	4,80	5,00	7,45
COP at +2°C (heating water at 35°C)			3,45	3,14	3,75	3,45	3,14
Heating capacity at -7°C		kW	5,15	7,70	4,50	5,15	7,70
COP at -7°C (heating water at 35°C)			2,68	2,12	2,98	2,68	2,12
Cooling capacity at 35°C		kW	–	–	4,50	5,50	7,00
EER at 35°C (cooling water at 7°C)[1]			–	–	3,33	2,74	2,44
Sound pressure level		dB(A)	47	49	47	47	49
Dimensions	H x W x D	mm	865 x 1283 x 320	865 x 1283 x 320	865 x 1.283 x 320	865 x 1.283 x 320	865 x 1.283 x 320
Weight		kg	112	112	107	112	112
Pump	No. of Speed		Variable Speed	Variable Speed	7	Variable Speed	Variable Speed
	Input power	W	Min: 21 W at 10l/min / Max: 135 W at 53.8l/min				
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA HIGH PERFORMANCE MONO-BLOC SINGLE PHASE / THREE PHASE HEATING ONLY - MDF HEATING AND COOLING - MDC								
			Single Phase			Three Phase		
Outdoor unit Heating Only			WH-MDF12C6E5	WH-MDF14C6E5	WH-MDF16C6E5	WH-MDF09C3E8	WH-MDF12C9E8	WH-MDF14C9E8	WH-MDF16C9E8
Outdoor unit Heating and Cooling			WH-MDC12C6E5	WH-MDC14C6E5	WH-MDC16C6E5	WH-MDC09C3E8	WH-MDC12C9E8	WH-MDC14C9E8	WH-MDC16C9E8
Heating capacity at +7°C		kW	12,00	14,00	16,00	9,00	12,00	14,00	16,00
COP at +7°C (heating water at 35°C)			4,67	4,50	4,23	4,74	4,67	4,50	4,23
Heating capacity at +2°C		kW	11,40	12,40	13,00	9,00	11,40	12,40	13,00
COP at +2°C (heating water at 35°C)			3,41	3,32	3,25	3,53	3,41	3,32	3,25
Heating capacity at -7°C		kW	10,00	10,70	11,40	9,00	10,00	10,70	11,40
COP at -7°C (heating water at 35°C)			2,70	2,68	2,65	2,81	2,70	2,68	2,65
Cooling capacity at 35°C		kW	10,00	11,50	12,20	7,00	10,00	11,50	12,20
EER at 35°C (cooling water at 7°C)[1]			2,78	2,61	2,54	3,11	2,78	2,61	2,54
Sound pressure level		dB(A)	50	51	53	49	50	51	53
Dimensions	H x W x D	mm	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320
Weight		kg	153	153	153	157	157	157	157
Pump	No. of Speed		3	3	3	3	3	3	3
	Input power (Max.)	W	190	190	190	190	190	190	190
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA T-CAP MONO-BLOC SINGLE PHASE / THREE PHASE HEATING ONLY - MXF HEATING AND COOLING - MXC						
			Single Phase		Three Phase	
Outdoor unit Heating Only			WH-MXF09D3E5	WH-MXF12D6E5	WH-MXF09D3E8	WH-MXF12D9E8
Outdoor unit Heating and Cooling			WH-MXC09D3E5	WH-MXC12D6E5	WH-MXC09D3E8	WH-MXC12D9E8
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00
COP at +7°C (heating water at 35°C)			4,74	4,67	4,74	4,67
Heating capacity at +2°C		kW	9,00	12,00	9,00	12,00
COP at +2°C (heating water at 35°C)			3,53	3,40	3,53	3,40
Heating capacity at -7°C		kW	9,00	12,00	9,00	12,00
COP at -7°C (heating water at 35°C)			2,81	2,70	2,81	2,70
Cooling capacity at 35°C		kW	7,00	10,00	7,00	10,00
EER at 35°C (cooling water at 7°C)			3,11	2,78	3,11	2,78
Sound pressure level		dB(A)	49	50	49	50
Dimensions	H x W x D	mm	14.10 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320
Weight		kg	155	155	158	158
Pump	No. of Speed		3	3	3	3
	Input power (Max.)	W	190	190	190	190
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35

AQUAREA HT MONO-BLOC SINGLE PHASE / THREE PHASE HEATING ONLY - MHF						
			Single Phase		Three Phase	
			WH-MHF09D3E5	WH-MHF12D6E5	WH-MHF09D3E8	WH-MHF12D9E8
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00
COP at +7°C (heating water at 35°C)			4,55	4,40	4,55	4,40
Heating capacity at +2°C		kW	9,00	12,00	9,00	12,00
COP at +2°C (heating water at 35°C)			3,40	3,23	3,40	3,23
Heating capacity at -7°C		kW	9,00	12,00	9,00	12,00
COP at -7°C (heating water at 35°C)			2,70	2,50	2,70	2,50
Heating capacity at +7°C		kW	9,00	12,00	9,00	12,00
COP at +7°C (heating water at 65°C)			2,25	2,20	2,25	2,20
Heating capacity at +2°C		kW	9,00	10,30	9,00	10,30
COP at +2°C (heating water at 65°C)			1,88	1,83	1,88	1,83
Heating capacity at -7°C		kW	8,90	9,60	8,90	9,60
COP at -7°C (heating water at 65°C)			1,62	1,61	1,62	1,61
Sound pressure level		dB(A)	49	50	49	50
Dimensions	H x W x D	mm	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320	1.410 x 1.283 x 320
Weight		kg	155	155	158	158
Pump	No. of Speed		3	3	3	3
	Input Power (Max.)	W	190	190	190	190
Operation range	Outdoor ambient	°C	-20 to 35	-20 to 35	-20 to 35	-20 to 35

FAN COILS

Fan Coils for Heat Pump application			PAW-AAIR-200					PAW-AAIR-700					PAW-AAIR-900				
Without radiant heating			PAW-AAIR-200L					PAW-AAIR-700L					PAW-AAIR-900L				
Total heating capacity		W	138	160	217	470	570	223	360	708	1.032	1.188	273	475	886	1.420	1.703
Water flow		kg/h	23,7	27,5	37,3	80,8	98,0	38,4	61,9	121,8	177,5	204,3	47,0	81,7	152,4	244,2	292,9
Water pressure drop		kPa	0,1	0,2	0,4	2,0	2,9	0,1	0,1	0,3	0,8	1,0	0,1	0,2	0,5	1,6	2,2
Air flow		m^3/h	28	37	55	113	162	44	84	155	252	320	54	110	248	367	461
		Speed	Main Fan Off	Super Min	Min	Med	Max	Main Fan Off	Super Min	Min	Med	Max	Main Fan Off	Super Min	Min	Med	Max
Maximum input power		W	2	5	7	9	13	3	9	14	18	22	3	11	16	20	24
Sound pressure level		dB(A)	17,6	18,8	24,7	33,2	39,4	18,4	19,6	25,8	34,1	40,2	18,4	22,3	26,2	34,4	42,2
Inlet water temperature		°C	35	35	35	35	35	35	35	35	35	35	35	35	35	35	35
Outlet water temperature		°C	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
Inlet air temperature		°C	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
Outlet air temperature		°C	34,5	32,6	38,9	32,0	30,0	34,9	32,4	33,3	31,8	30,6	34,8	32,5	30,2	31,1	30,6
Dimensions (H x W x D) / Weight		mm / kg	735 x 576 x 129 / 17					935 x 579 x 129 / 20					1.135 x 579 x 129 / 23				
3 ways valve included / Touch screen thermostat			Yes / Yes					Yes / Yes					Yes / Yes				

TANKS

Tanks			Stainless Steel Tank		AQUAREA Slimline HP Tank	AQUREA HEAT PUMP TANK		
Model			KIT-TD20E3E5-G3	KIT-TD30E3E5-G3	PAW-TE18C2E3HI-UK	PAW-TE18C2E3STD-UK	PAW-TE30C2E3STD-UK	PAW-TE40C2E3STD-UK
Indoor			WH-TD20E3E5-UK	WH-TD30E3E5-UK				
Outdoor			PAW-G3KIT	PAW-G3KIT				
								
Water volume		L	200	300	180	180	300	400
Maximum water temperature		°C	75	75	95	95	95	95
Dimensions	Hight / Diameter	mm	1,150 / 580	1,600 / 580	1,790 / 475	1,295 / 550	2,020 / 550	2,040 / 630
Weight		kg	49	65	33	33	49	61
Electric heater		kW	3	3	3	3	3	3
Power supply		V	230	230	230	230	230	230
Material inside tank			Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Exchange surface		m^2	1.4	1.8	3.01	1.36	2.04	2.91
Secondary Coil Exchange surface		m^2				0.68	0.97	1.27
Energy loss at 65°C[1]		kWh/24h	1.90	2.30	2.01	1.40	1.93	3.33
3 Way valve included			Yes	Yes	Yes	Yes	Yes	Yes
20 m temperature sensor cable included			Yes	Yes	Yes	Yes	Yes	Yes
Heat up time		Valuation	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Energy losses		Valuation	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Efficiency of the tank		Valuation	★★★★	★★★★	★★★★	★★★★	★★★★	★★★★
Warranty			10 years	10 years	10 years	10 years	10 years	10 years
Maintenance required			No	No	Yearly	Yearly	Yearly	Yearly

1) Insulated tested under EN12897.

CONTROL & CONNECTIVITY

The next generation of Aquarea Manager

This new generation of smart controllers for eco-efficient heating features our versatile stand-alone controller for heating and domestic hot water.
Panasonic offers:
Trends. Statistics. Consumption Energy Management-Optimization. Alarm. Handling + Maintenance. Complete documentation etc.
Connected to a router, all information of the heating system controlled by the HPM is available from internet. Installers, service companies and end user can monitor the installation remotely. Panasonic has developed a new easy start up mode for the HPM. Start your bivalent/hybrid system in just 10 minutes!

Internet Control. Easy to install. Maximum benefit

Internet Control is a next generation system providing user-friendly remote control of heat pump units from anywhere, using a simple Android or iOS smartphone, tablet or PC via internet.
A simple Installation:
Just connect the Internet Control device to the heat pump with the supplied wire and then link it to your WIFI Access point.

Connectivity: Great flexibility for integration into your KNX / Zig Bee / Modbus projects allows fully bi-directional monitoring and control of all the functioning parameters

Panasonic works with partners to ensure the optimum solutions for our clients. Our partner has designed a range of interfaces specifically for Panasonic to provide complete monitoring, control and full functionality of the entire Aquarea line-up from KNX, Zig Bee and Modbus installations.

Panasonic®

Panasonic Air Conditioning
Panasonic House
Willoughby Road
Bracknell // Berkshire // RG12 8FP
Telephone: 01344 853182
uk-aircon@eu.panasonic.com

heatingandcoolingsystems