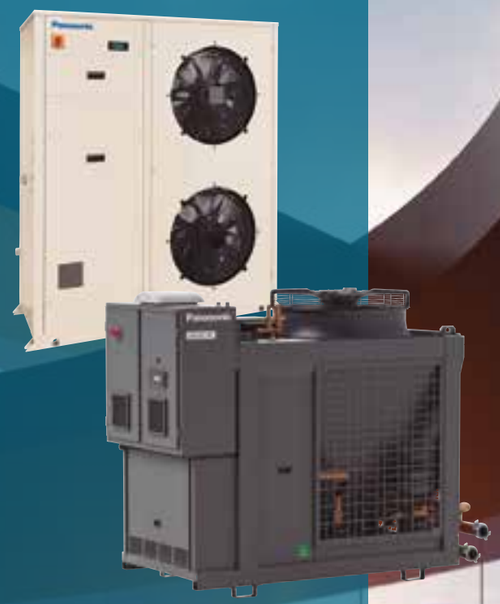
ECO i - W



Chillers, heat pumps and water source heat pumps

These new Series provide a wide variety of HVAC system solutions, to meet all of your commercial and industrial needs.

ABOUT

PRODUCT SPECIFICATIONS

The reasons to choose Panasonic as your partner

Unrivaled reliability and quality.

Panasonic solutions can be enjoyed for years to come, even in the most extreme climates. Panasonic does not compromise on product quality, safety or durability, in order to provide the ultimate comfort when you need it most.

A wide variety of HVAC system solutions

MADE IN EUROPE

Panasonic solutions to suit a variety of commercial and industrial applications. Our systems provide the optimal performance in any climatic conditions.

Air cooled chillers, heat pumps and condensing units - ECOi-W

The ECOi-W hydronic systems are perfect for any type of building. The air cooled chiller variant of the system is also a fundamental part of many industrial processes.

Water cooled chillers, heat pumps and condenserless units - ECOi-W

This system is particularly well suited for applications such as office buildings, hotels, shopping centers and hospitals.

Water source heat pumps - ECOi-LOOP

Water source heat pumps are ideal for best in class hotels, offices or shopping centers. ECOi-LOOP solutions offer improved comfort by having several different indoor climates inside a building, while maintaining the energy through an internal closed water loop.

AC SELECT.

Use AC SELECT to choose and configure your hydronic solution.

Panasonic online selection tool offers an easy and quick solution to specify all the hydronics ranges and rooftops at required conditions.

https://acselect.panasonic.eu/

A wide coverage of applications

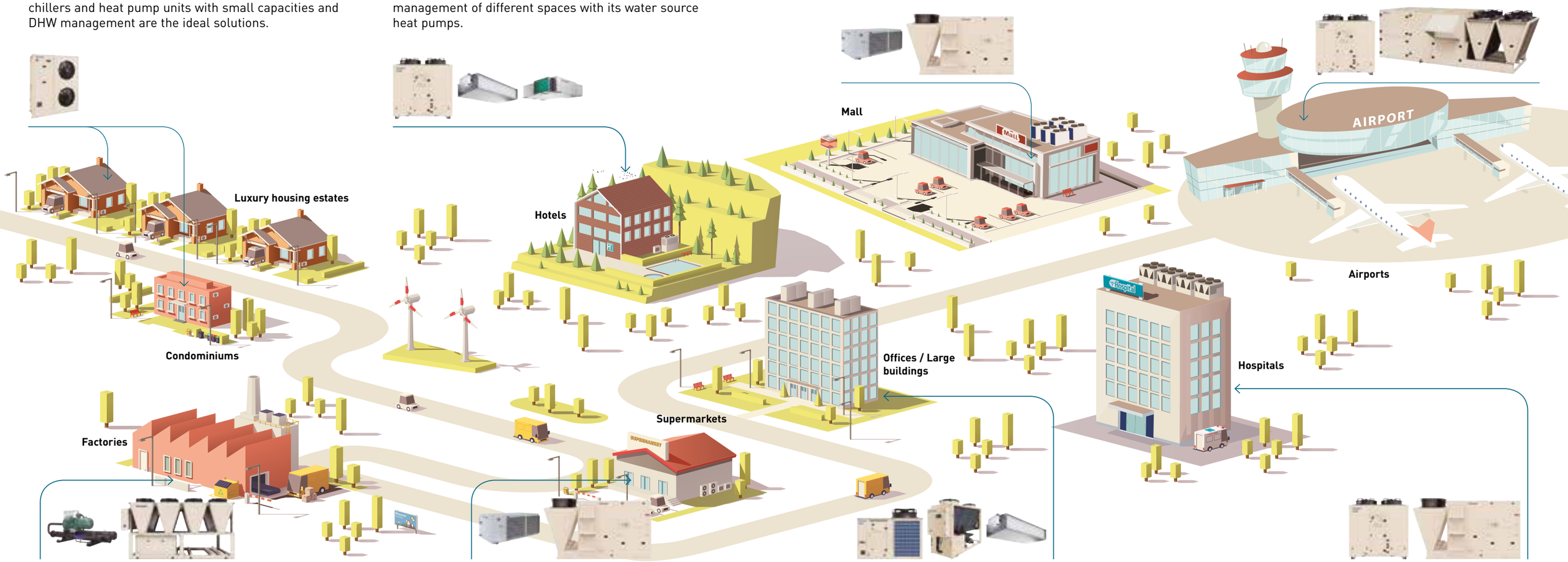
Energy efficiency, high performance and comfort.

Chillers and heat pumps.
In residential applications a good indoor climate is important to ensure greater comfort and well-being. Our chillers and heat pump units with small capacities and DHW management are the ideal solutions.

Chillers and heat pumps, fan coils and water source heat pumps.
Ensuring a comfortable environment for the guests is the main challenge in all the types of hotel.
Panasonic offers a complete system thanks to the wide capacity range of its chillers, the design and low-noise operation of its fan coil units and the zone independent management of different spaces with its water source heat pumps.

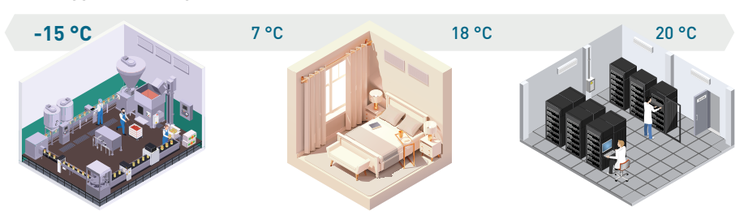
Water source heat pumps and rooftops.
Comfort and air conditioning needs in commercial buildings must take into account the high demand for energy, the high number of people during the day, and the need to heat or cool quickly, changing loads and constantly renewing air. Rooftops are the ideal solutions due to their high capacities and high air flow that ensures better air quality. Water source heat pumps, on the other hand, provide accurate local control of different spaces, with high reliability and allow the overall energy consumption to be broken down by zone.

Chillers and heat pumps, and rooftops.
Energy consumption at airports has significant variability, and the number of users and passengers fluctuates throughout the day. For optimal air quality management and to meet the large energy needs of facilities, Panasonic offers a wide range of solutions like chillers and heat pumps and rooftops that guarantee high-efficiency and minimise waste energy consumption.



Chillers and heat pumps.
Factories have high energy requirements. Panasonic chillers and heat pumps can meet this need due to the available capacity ranges. They also have high seasonal performance and are easy to install and maintain.

Chiller application temperatures.



Process cooling.
Plastic, metalworking, food and beverage, and chemical industries.

Comfort.
Homes, offices, shopping malls, hospitals, schools

IT cooling.
Server rooms, data centres.

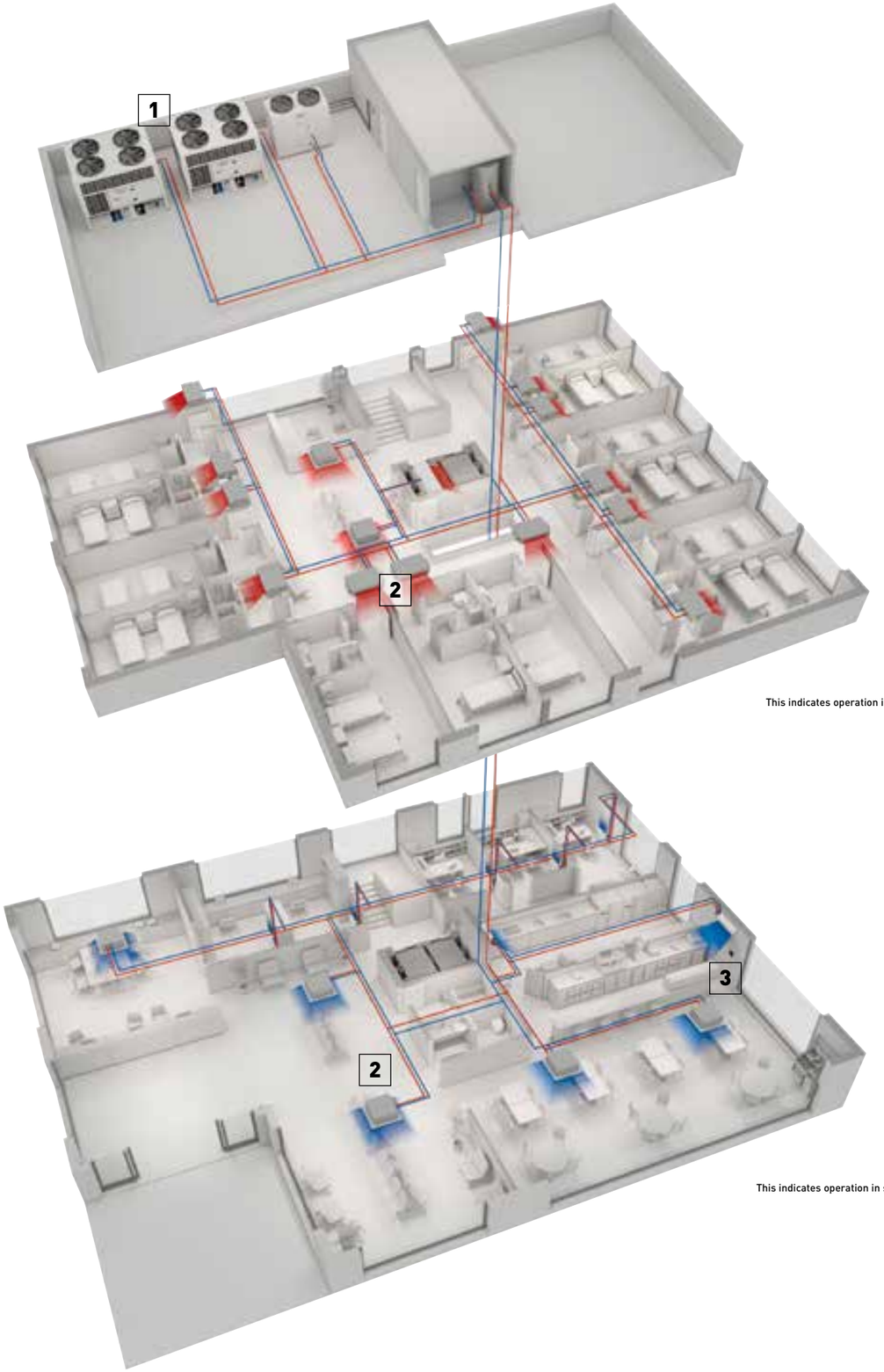
Water source heat pumps and rooftops.
For supermarket applications, Panasonic has a wide range of solutions suitable to satisfy the required conditions: rooftops units can manage indoor ambient temperature and control the air quality, water source heat pumps have high-efficiency and can allow independent zone management.

Chillers and heat pumps, and fan coils.
In offices, indoor climate is important for staff productivity and health. Panasonic chillers, heat pumps and fan coil units help create comfortable environments with high temperature control. Thanks to their natural refrigerant, R290 units are also the best solution for achieving high performance with reduced impact on the environment.

Chillers and heat pumps, and rooftops.
Hospitals require a high level of air quality and precise temperature control. Rooftop units are the best solutions due to their reliability and ability to provide fresh air through cooling, heating and ventilation of the building. The chiller and heat pump ranges help create an optimal indoor climate through their high performance and capacity. Our R32 ranges also have a low impact on the environment due to their low GWP refrigerant.

Solutions for hospitals

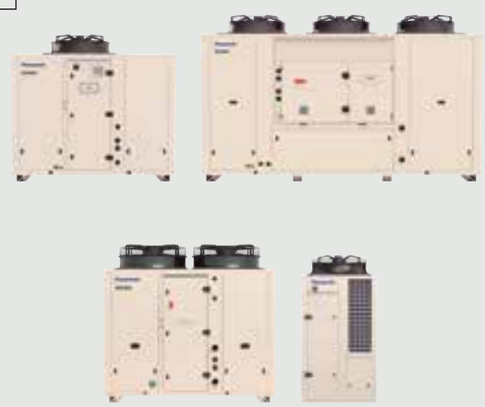
ECOi-W Series offers a reliable solution with an optimised design for service and maintenance, making it ideal for hospital applications. Remote monitoring through the ECOi-W Cloud offers enhanced service support and a highly efficient fan coil range delivers increased comfort.



This indicates operation in winter.

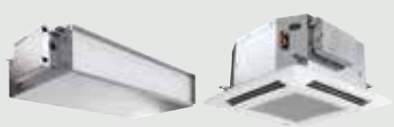
This indicates operation in summer.

1



High quality chillers and heat pumps.
ECOi-W Series provides a fully customisable design to meet the business application needs, with a capacity range from 20 kW to 1650 kW. Reliable quality and an optimised design for service and maintenance are ideal for hospital projects.

2



A wide variety of fan coils.
A wide variety of units to suit your needs, with flexible installation options. High-efficiency and low noise operation allows for optimum comfort.
Operation in both heating and cooling is possible.

3

Intuitive controllers for fan coils.
Controllers with sophisticated designs provide a user-friendly interface. An easy and low cost integration to building management systems.

Air cooled chillers, heat pumps and condensing units

Energy efficiency, high performance and comfort!

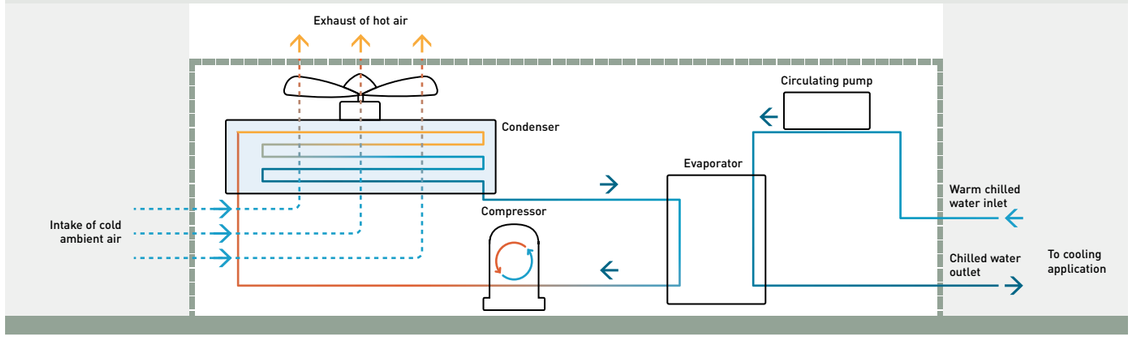
The ECOi-W hydronic systems offer the perfect combination of comfort and high-efficiency. They are perfect for any type of building. The air cooled chiller variant of the system is also a fundamental part of many industrial processes.

An air cooled chiller uses ambient air to cool and condense the hot refrigerant in the condenser.

Advantages:

- **Simple design (no need for cooling systems such as cooling towers), low installation costs**
- **Small footprint, easier to maintain and manage than water cooled systems**
- **Reduced initial cost**

*The below illustration show cooling application.



Compressors and refrigerants combination

Scroll compressors.
Scroll compressors have excellent low vibration and low noise properties.
Compact in size and suitable for designs where space is restricted.

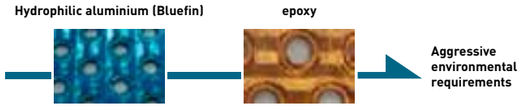
R290 R32 R410A

Screw compressors.
Screw compressors can be operated continuously and are therefore suitable for applications where a constant and consistent cooling load is required.
Due to their high energy efficiency, our products use these compressors in combination with high-efficiency refrigerants.

R513A

In-house manufactured coils

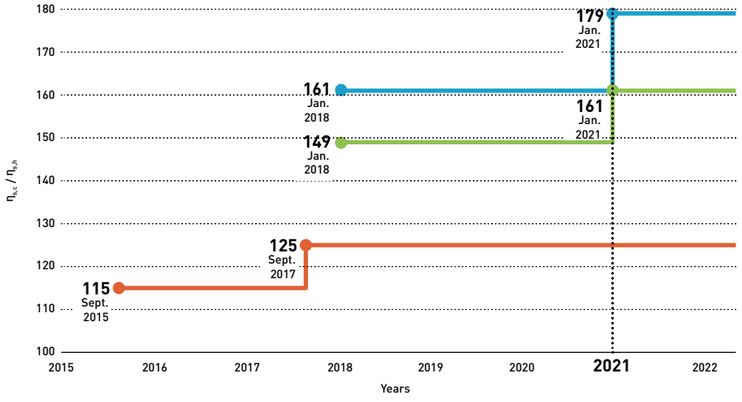
100% quality certified by Panasonic is ensured by coil production in our factory. Hydrophilic aluminium (Bluefin) treatment is available as standard. Special epoxy coating with strong protection against corrosion can be requested as option.



Microchannel coils

Significant reduction on refrigerant charge and operating weight.

Ecodesign



Air to water comfort chiller [1].

≤400 kW.
Minimum $\eta_{s,c}$ to be Ecodesign compliant.
COMMISSION REGULATION (EU) 2016/2281.

>400 kW.
Minimum $\eta_{s,c}$ to be Ecodesign compliant.
COMMISSION REGULATION (EU) 2016/2281.

Air to water heat pumps [2].

≤400 kW.
Minimum $\eta_{s,h}$ to be Ecodesign compliant.
COMMISSION REGULATION (EU) No813/2013.

>400 kW.
Minimum $\eta_{s,h}$ to be Ecodesign compliant.
COMMISSION REGULATION (EU) 2016/2281.

1) Calculated at nominal conditions: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB.
2) Rated heat output of space heaters and combination heaters at reference design conditions (Tdesign -10 °C) as stated in COMMISSION REGULATION (EU) No 813/2013.

ECOi-W AQUA-G EVO range. Unmatched innovation

Introducing an innovative solution with Inverter technology and natural refrigerant R290. Combine efficiency and comfort in one compact package.

R290
NATURAL REFRIGERANT

INVERTER

- INVERTER SCROLL COMPRESSORS
- HIGH SEASONAL EFFICIENCY
- HIGH ENERGY EFFICIENCY CLASS (A++[1])
- DHW MANAGEMENT
- MAXIMUM 75 °C LEAVING WATER TEMPERATURE (75 °C)
- SMALL FOOTPRINT

1) Scale A+++ to D. According to EN 14825 and Following COMMISSION REGULATION (EU) No 813/2013.

NEW

ECOi-W AQUA-G EVO – Heating optimised solution for superior efficiency in low ambient climates.

High-performance components, enhanced refrigerant circuits, and optimised defrost management.
This solution is suitable for gas boiler replacement and DHW production.

Inverter technology: reliable performances under variable load conditions

Inverter compressor and inverter driven pump for high energy-efficiency and stable temperature control, improving comfort and reducing energy consumption.

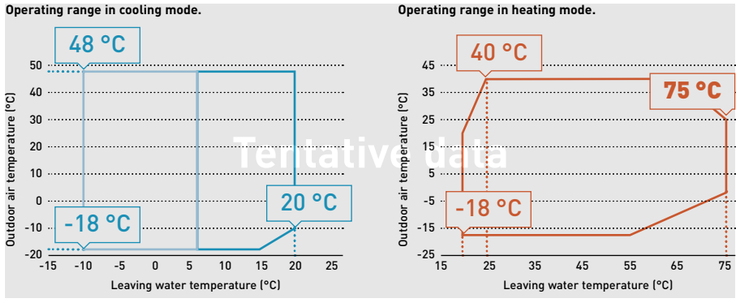
Enhanced capacity with cascade and modular configurations

· Scalable up to 880 kW with multiple units
· Modular configuration with minimum installation space*

*Up to 440 kW.

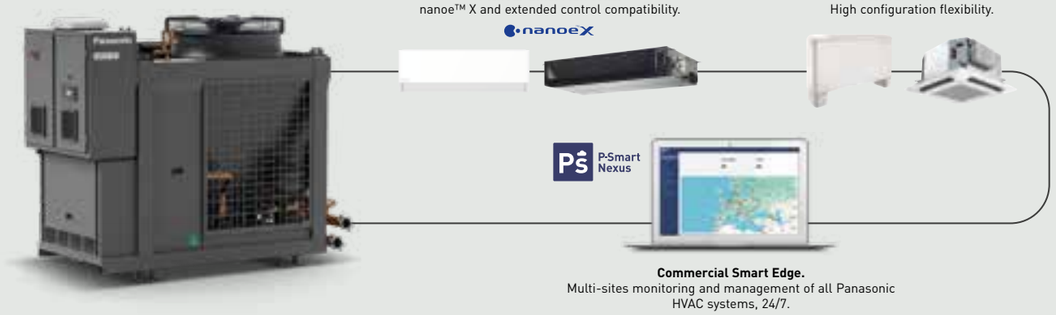
Extended operating limits for high temperature heating

Exceptional operating limits delivering leaving water temperatures up to **75 °C** at 0 °C outdoor air temperature for domestic hot water production.



Tentative data

Comprehensive range of solutions for commercial applications.



Extension of the R290 heat pump range.

ECOi-W AQUA-G BLUE — Cooling optimised solution.

· Reliable and stable cooling capacity at high ambient temperatures
· Capacities from 50 to 80 kW
· Scalable solution and intelligent control logic
· Quiet operation: low sound power of only 79,9 dB(A)*
· Wide range of applications including offices, hotels, and multi-family houses

*Size 50.

Quick selection guide - Air cooled chillers

Page	Size	Cooling capacity (kW)	SEER	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQUA C · R410A	20	19,2	4,78	75	1000 x 1983 x 1000
	25	24,3	4,38	75	1000 x 1983 x 1000
P. 484 	30	27,1	4,43	75	1000 x 1983 x 1000
	35	36,7	4,43	76	1000 x 1983 x 1000
	40	39,0	4,48	76	1000 x 1983 x 1000
ECOi-W AQUA-Z C · R32	50	51,6	4,60	83	2180x 1986 x 1160
	60	57,6	4,59	84	2180x 1986 x 1160
 R32	70	69,7	4,61	81	2180x 1986 x 1160
	75	78,2	4,72	81	2180x 1986 x 1160
	85	82,8	4,45	84	2180x 2286 x 1160
P. 488	100	100,0	4,88	86	2180x 2286 x 1160
	115	116,0	4,59	87	2180x 2286 x 1160
	130	126,0	4,43	87	2180x 2286 x 1160
 R32	150	154,0	4,70	89	3789 x 2285 x 1151
	170	173,0	4,68	91	3789 x 2285 x 1151
ECOi-W AQUA-Z DC C · R32	150	151,0	4,93	89,6	3795 x 2240 x 1096
 R32	170	170,0	4,90	90,4	3795 x 2240 x 1096
 R32	190	189,0	4,68	91,1	2650 x 2250 x 2211
	210	212,0	4,62	91,5	2650 x 2250 x 2211
	230	229,0	4,48	92,0	2650 x 2250 x 2211
	260	260,0	4,40	92,4	2650 x 2250 x 2211
 R32	290	307,0	4,63	93,3	3775 x 2250 x 2211
	320	326,0	4,33	94,3	3775 x 2250 x 2211
P. 490	350	346,0	4,43	95,2	3775 x 2250 x 2211
	380	377,0	4,35	95,4	3775 x 2250 x 2211
 R32	420 (210+210)	424,0	4,62	95,5	5310 x 2250 x 2211
	460 (230+230)	458,0	4,48	96	5310 x 2250 x 2211
	520 (260+260)	520,0	4,4	96,4	5310 x 2250 x 2211
 R32	580 (290+290)	614,0	4,63	97,3	7556 x 2250 x 2211
	640 (320+320)	652,0	4,33	98,3	7556 x 2250 x 2211
	700 (350+350)	692,0	4,43	99,2	7556 x 2250 x 2211
	760 (380+380)	754,0	4,35	99,4	7556 x 2250 x 2211

1) Dimensions without water tank.

Page	Size	Cooling capacity (kW)	SEER	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQV C · R410A	85	83,5	4,55	84	2555 x 2185 x 1095
	95	93,6	4,80	84	2555 x 2185 x 1095
P. 498 	105	103,0	4,78	84	2555 x 2185 x 1095
	115	110,1	4,80	84	2555 x 2185 x 1095
	125	121,9	4,73	88	3155 x 2185 x 1095
	140	136,6	4,53	88	3155 x 2185 x 1095
ECOi-W AQUA EVO C · R410A	400	390,4	4,48	92	4580 x 2500 x 2175
	450 S [2]	431,1	4,63	87	5620 x 2500 x 2175
	490 S [2]	470,2	4,58	87	6680 x 2500 x 2175
	530 S [2]	513,7	4,78	87	6680 x 2500 x 2175
P. 502	600	584,5	4,58	94	7760 x 2500 x 2175
	670	653,2	4,59	94	7760 x 2500 x 2175
	750 S [2]	727,7	4,73	89	8900 x 2500 x 2175
	800 S [2]	775,4	4,70	89	8900 x 2500 x 2175
ECOi-W SW-N EVO C · R513A	380	365,7	4,53	97	4660 x 2510 x 2192
	440	443,0	4,64	98	5712 x 2510 x 2192
	510	500,2	4,65	100	5712 x 2510 x 2192
 R513A	590	565,8	4,80	100	6764 x 2510 x 2192
	660	643,5	4,66	100	7816 x 2510 x 2192
P. 504	730	704,3	4,56	101	7816 x 2510 x 2192
	810	778,1	4,62	101	8868 x 2510 x 2192
	900	896,9	4,56	102	9920 x 2510 x 2192
	980	983,5	4,60	102	10972 x 2510 x 2192
	1060	1047,4	4,87	103	12024 x 2510 x 2192
	1160	1154,0	4,86	103	13076 x 2510 x 2192
	1260	1240,5	4,85	103	13076 x 2510 x 2192

1) Dimensions without water tank. 2) S version.

Increased capacity with modular configuration units.

Our ECOi-W AQUA-Z DC units are available in both single and twin configurations. For large-scale projects, combine two double circuit units to significantly boost the capacity.

- 2xAQUA-Z DC units installed back to back from rear side
- Common hydraulic connections
- Common hydraulic kit: pumps (option)
- Separate power supply (1 per unit)

R32

Quick selection guide - Air cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQUA EVO H · R410A					
P. 478 	20	21,0 / 20,4	3,30 / 3,75	74	1477 x 1615 x 539
	30	28,0 / 26,1	3,98 / 3,68	75	1477 x 1615 x 539
ECOi-W AQUA-G BLUE H · R290					
P. 480 	50	48,2 / 49,2	4,40 / 3,70	83	2215 x 1730 x 1032
	60	56,1 / 61,1	4,30 / 3,70	84	2180 x 2011 x 1160
	70	64,9 / 73,5	4,30 / 3,90	85	2180 x 2030 x 1160
	80	74,1 / 83,6	4,20 / 3,80	85	2180 x 2030 x 1160
NEW! ECOi-W AQUA-G EVO H · R290					
P. 482 	60	56,7 / 61,2	4,07 / 4,32	79	1998 x 2385 x 1116
	80	67,4 / 80,8	4,84 / 4,13	80	1998 x 3385 x 1116
	110	91,0 / 101,9	4,77 / 4,49	81	1998 x 3385 x 1116
ECOi-W AQUA H · R410A					
P. 484 	20	18,7 / 19,5	4,68 / 3,50	75	1000 x 1983 x 1000
	25	23,7 / 26,9	4,31 / 3,38	75	1000 x 1983 x 1000
	30	26,4 / 29,7	4,28 / 3,45	75	1000 x 1983 x 1000
	35	35,8 / 37,3	4,25 / 3,50	76	1000 x 1983 x 1000
	40	38,1 / 41,6	4,33 / 3,50	76	1000 x 1983 x 1000
ECOi-W AQUA-Z EVO H · R32					
P. 486 	40	41,5 / 41,0	5,59 / 4,22	79,5	2209 x 1732 x 1100
	50	48,5 / 48,2	5,65 / 4,52	80,5	2209 x 1732 x 1100

1) Dimensions without water tank.

New ECOi-W AQUA-G EVO.

The future of comfort: eco-friendly performance and advance technology in a groundbreaking solution.

R290 NATURAL REFRIGERANT R290 WITH GWP 0,02*

INVERTER TECHNOLOGY

880 kW BOOST CAPACITY UP TO 880 KW

*Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC).

Quick selection guide – Air cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQUA-Z H · R32					
P. 488 	50	51,1 / 51,7	4,46 / 3,63	83	2180 x 1986 x 1160
	60	57,0 / 59,7	4,42 / 3,51	84	2180 x 1986 x 1160
	70	69,0 / 71,8	4,51 / 3,49	81	2180 x 1986 x 1160
	75	77,4 / 78,5	4,61 / 3,56	81	2180 x 1986 x 1160
	85	82,0 / 86,5	4,33 / 3,76	84	2180 x 2286 x 1160
	100	99,3 / 107,6	4,77 / 3,56	86	2180 x 2286 x 1160
	115	115,0 / 122,3	4,44 / 3,77	87	2180 x 2286 x 1160
	130	125,0 / 137,5	4,23 / 3,81	87	2180 x 2286 x 1160
	150	152,0 / 159,1	4,59 / 3,78	89	3789 x 2285 x 1151
	170	170,0 / 180,1	4,49 / 3,70	91	3789 x 2285 x 1151
ECOi-W AQUA-Z DC H · R32					
	150	150,0 / 154,0	4,75 / 3,83	89,6	3795 x 2240 x 1096
	170	167,0 / 178,0	4,71 / 3,90	90,4	3795 x 2240 x 1096
	190	184,0 / 190,0	4,45 / 3,46	91,1	2650 x 2250 x 2211
	210	204,0 / 201,0	4,39 / 3,44	91,5	2650 x 2250 x 2211
	220 [2]	208,0 / 219,0	5,03 / 3,86	91,3	2650 x 2300 x 2211
	230	224,0 / 241,0	4,34 / 3,64	92,0	2650 x 2250 x 2211
	260	251,0 / 256,9	4,21 / 3,52	92,4	2650 x 2250 x 2211
P. 490 	270 [2]	265,0 / 288,0	5,01 / 3,82	92,8	3775 x 2300 x 2211
	290	291,1 / 285,6	4,34 / 3,51	93,3	3775 x 2250 x 2211
	300 [2]	295,0 / 312,0	5,01 / 3,92	93,1	3775 x 2300 x 2211
	320	307,7 / 301,3	4,33 / 3,50	94,3	3775 x 2250 x 2211
	350	330,0 / 337,0	4,40 / 3,50	95,2	3775 x 2250 x 2211
	380	364,0 / 384,0	4,34 / 3,66	95,4	3775 x 2250 x 2211
	420 (210+210)	408,0 / 402,0	4,39 / 3,44	95,5	5310 x 2250 x 2211
	440 (220+220)	438,0 / 416,0	5,03 / 3,86	95,3	5310 x 2250 x 2211
	460 (230+230) [2]	448,0 / 482,0	4,34 / 3,64	96,0	5310 x 2250 x 2211
	520 (260+260)	502,0 / 513,8	4,21 / 3,52	96,4	5310 x 2250 x 2211
	540 (270+270) [2]	530,0 / 576,0	5,01 / 3,82	96,8	7556 x 2250 x 2211
	580 (290+290)	582,2 / 571,2	4,34 / 3,51	97,3	7556 x 2250 x 2211
	600 (300+300) [2]	590,0 / 624,0	5,01 / 3,92	97,1	7556 x 2250 x 2211
	640 (320+320)	615,4 / 602,6	4,33 / 3,50	98,3	7556 x 2250 x 2211
	700 (350+350)	660,0 / 674,0	4,40 / 3,50	99,2	7556 x 2250 x 2211
	760 (380+380)	728,0 / 768,0	4,34 / 3,66	99,4	7556 x 2250 x 2211

1) Dimensions without water tank. 2) Only EC fans version.

Quick selection guide – Air cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQV H · R410A	85	81,0 / 91,8	**4,25 / 3,61**	84	2555 x 2185 x 1095
	95	89,9 / 102,8	**4,68 / 3,64**	84	2555 x 2185 x 1095
	105	98,9 / 110,0	**4,63 / 3,78**	84	2555 x 2185 x 1095
	115	106,9 / 119,0	**4,17 / 3,77**	84	2555 x 2185 x 1095
P. 494	125	115,8 / 134,0	**4,33 / 3,47**	88	3155 x 2185 x 1095
	140	129,2 / 146,9	**4,28 / 3,54**	88	3155 x 2185 x 1095
ECOi-W VL H · R410A	704	173,2 / 200,1	**3,63 / 3,41**	93	4300 x 2300 x 1100
	804	197,1 / 223,2	**3,55 / 3,42**	93	4300 x 2300 x 1100
	904	226,4 / 254,7	**3,35 / 3,28**	94	4300 x 2300 x 1100
	1004	246,3 / 270,8	**3,50 / 3,39**	94	4300 x 2300 x 1100
P. 498	1104	273,1 / 302,1	**3,53 / 3,30**	95	4300 x 2300 x 1100
	1204	299,9 / 337,4	**3,43 / 3,19**	95	4300 x 2300 x 1100

1) Dimensions without water tank. 2) Only EC fans version.

Quick selection guide – Air cooled condensing units

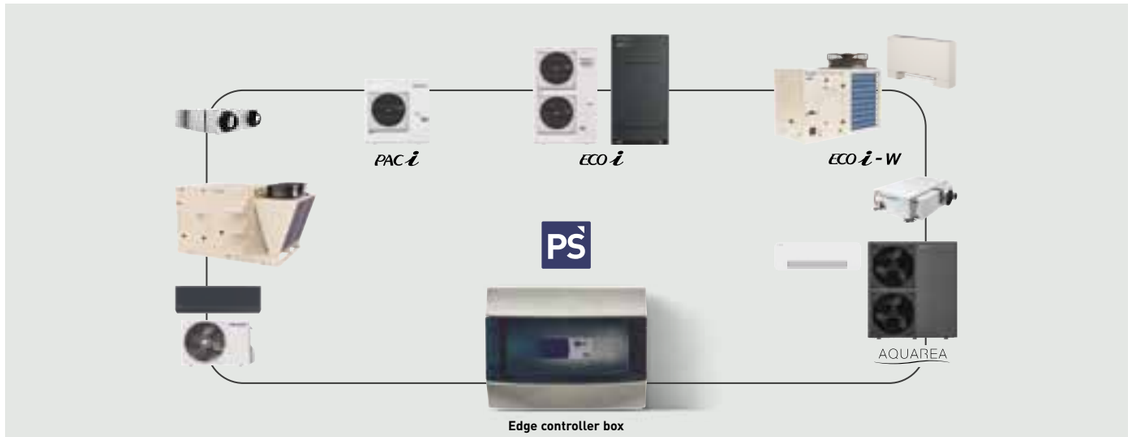
Page	Size	Cooling capacity (kW)	EER	Sound power (dB(A))	Dimension [1] L x H x W (mm)
ECOi-W AQUA E · R410A	25	32,4	**3,24**	75	1000 x 1983 x 1000
	30	33,7	**3,15**	75	1000 x 1983 x 1000
	35	43,1	**2,90**	76	1000 x 1983 x 1000
	40	44,8	**2,99**	76	1000 x 1983 x 1000
ECOi-W AQV E · R410A	85	92,1	**3,36**	84	2555 x 2185 x 1095
	95	103,2	**3,29**	84	2555 x 2185 x 1095
	105	113,2	**3,32**	84	2555 x 2185 x 1095
	115	121,8	**3,30**	84	2555 x 2185 x 1095
P. 494	125	134,7	**3,23**	88	3155 x 2185 x 1095
	140	151,0	**3,23**	88	3155 x 2185 x 1095
ECOi-W VL E · R410A	704	199,0	**2,90**	93	4300 x 2300 x 1100
	804	224,0	**3,00**	93	4300 x 2300 x 1100
	904	258,0	**2,98**	94	4300 x 2300 x 1100
	1004	283,0	**3,12**	94	4300 x 2300 x 1100
P. 498	1104	315,0	**2,98**	95	4300 x 2300 x 1100
	1204	347,0	**2,90**	95	4300 x 2300 x 1100

1) Dimensions without water tank.

Commercial Smart Edge

Manage the entire Panasonic HVAC portfolio from a single platform – on-site or remotely, 24/7.

- COMPATIBLE WITH ENTIRE HVAC RANGE
- SIMPLIFIED COMMISSIONING
- OPTIMISED PLANT MANAGEMENT
- ADVANCED ANALYTICS



P-Smart Edge*.
A powerful smart control platform designed for single-site installations, giving you seamless management of the complete Panasonic HVAC range.

***Edge controller box (PAW-CSE**) is required.**

P-Smart Nexus*.
An online multi-site control solution that provides remote, centralised supervision of all your locations worldwide.

Model code	Control points	Indoor unit connections [1]
PAW-CSE-1B	100	4
PAW-CSE-2B	200	10
PAW-CSE-5B	500	25

Model code	Control points	Indoor unit connections [1]
PAW-CSE-10	1000	50
PAW-CSE-20	2000	100

1) The final number of connected indoor units may vary depending on the range. *For the detail information, please contact an authorised Panasonic dealer.

ECOi-W AQUA EVO H · R410A

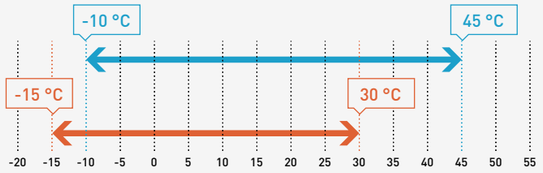
Air cooled heat pumps Inverter.

Cooling capacity: 20,0 to 35,9 kW.
Heating capacity: 20,4 to 34,0 kW.

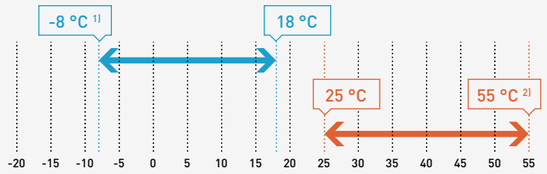
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



Cooling: outside air temperature (°C (DB)). Heating: outside air temperature (°C (WB)).
1) Below 5 °C, glycol is required. For operation below 0 °C contact sales office.
2) Maximum leaving water temperature 55 °C (minimum outdoor air temperature -10 °C size 20, -15 °C size 30) to be confirmed with AC SELECT.
Chillers suitable for operation without buffer tank for water content greater than 2,5 liters of water per kW of output.

The range at a glance

· 1 version: H (heat pump)
· 2 sizes

Advantages

· Wide load variation capability:
  - Cooling operation down to 30% and up to 140% of nominal capacity
  - Heating operation down to 40% and up to 130% of nominal capacity
· Unit optimization in heating mode for both fan coil and floor applications
· Wide operating limits in heating mode
· Domestic Hot Water management
· Inverter compressor
· New fan motors (ErP compliant) with integrated grill and fan speed control as standard

Equipment

· A single Inverter driven 3-phase scroll compressor equipped with variable frequency brushless motor (20-120 Hz)
· Plate evaporator (AISI 316)
· 1 refrigerant circuit
· Bi-flow electronic expansion valve
· Multistage centrifugal pump as standard
· Bluefin coil
· Operating low water content in the plant
· Automatic circuit breaker
· Coil grilles
· Fan speed control
· Power factor corrector capacitors
· Phase sequence control
· Soft starter
· Water differential pressure switch
· Water filter
· DHW function available on the controller with DHW probe and 3 way valve available as options

Technical performance

Power supply	Voltage	V	400	400
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
Size			**20**	**30**
ECOi-W AQUA EVO H - heat pump			**P-AQAVE0020HA**	**P-AQAVE0030HA**
Cooling capacity [1]	Nominal (Min - Max)	kW	20,0 (9,33 - 28,0)	29,0 (13,9 - 35,9)
Input power [1]	Nominal (Min - Max)	kW	4,15 (2,38 - 6,61)	7,24 (3,51 - 13,0)
EER [1]	Nominal (Min - Max)		4,82 (3,92 - 4,24)	4,01 (3,96 - 2,76)
Cooling capacity [2]	Nominal (Min - Max)	kW	21,0 (6,60 - 25,2)	28,0 (9,43 - 31,1)
Input power [2]	Nominal (Min - Max)	kW	6,95 (2,52 - 10,3)	10,9 (3,14 - 12,4)
EER [2]	Nominal (Min - Max)		3,02 (2,62 - 2,45)	2,57 (3,00 - 2,51)
EER 75%			3,83	3,65
EER 50%			4,53	4,48
EER 25%			3,80	4,79
SEER [3]			**3,30**	**3,98**
$\eta_{s,c}$ [3]			**129**	**156**
Nominal water flow (in the evaporator)		m³/h	3,64	5,92
Heating capacity [4]	Nominal (Min - Max)	kW	20,4 (9,94 - 29,4)	26,1 (11,5 - 34,0)
Input power [4]	Nominal (Min - Max)	kW	5,02 (2,98 - 8,37)	6,45 (3,01 - 9,80)
COP [4]	Nominal (Min - Max)		4,06 (3,34 - 3,51)	4,05 (3,82 - 3,47)
Heating capacity [5]	Nominal (Min - Max)	kW	20,4 (8,90 - 27,4)	26,1 (10,2 - 33,9)
Input power [5]	Nominal (Min - Max)	kW	6,44 (3,34 - 9,64)	8,42 (3,97 - 11,6)
COP [5]	Nominal (Min - Max)		3,17 (2,66 - 2,84)	3,10 (2,57 - 2,91)
SCOP [6] [7]			**3,75**	**3,68**
Energy efficiency class [6] [7]		**A+++ to D**	**A+**	**A+**
$\eta_{s,h}$ [6] [7]			**147**	**144**
SCOP [6] [8]			**3,00**	**2,95**
Energy efficiency class [6] [8]		**A+++ to D**	**A+**	**A+**
$\eta_{s,h}$ [6] [8]			**117**	**115**
Nominal water flow (in the evaporator)		m³/h	3,64	5,92
Sound power [9]		dB(A)	74	75
Sound pressure at 10 m [10]		dB(A)	43	44

Physical features

ECOi-W AQUA EVO H - heat pump			**20**	**30**
Dimension	H x W x L	mm	1615 x 539 x 1477	1615 x 539 x 1477
Operating weight		kg	260	275
Water connections				
Type of connections (evaporator)			Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	1 ¼	1 ¼

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C. 2) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) According to EN 14825 standard. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 7) According to EN 14825 standard - low temperature application (35 °C). 8) According to EN 14825 standard - medium temperature application (55 °C). 9) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 10) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Accessories and options
Buffer tank placed under unit
Chassis acoustic insulation

Accessories and options
Coils treatments

Accessories supplied loose	
P-373705	Water temperature sensor for second set-point zone
P-347941	Remote ON / OFF control
P-364735	Remote keyboard panel
P-362577	Flow switch
P-473465	Pressure switch

Accessories supplied loose	
P-362384	Valves in – out
P-348144	3 way valve for DHW production – ON / OFF – DN 20
P-375890	3 way valve for second set-point zone – 0-10 V – DN 25
P-375891	3 way valve for second set-point zone – 0-10 V – DN 32

ErP | HIGH SEER 3,98 | HIGH SCOP 3,75 | INVERTER | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL INVERTER COMPRESSOR | DHW

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W AQUA-G BLUE 50-80 H · R290

Air cooled heat pumps.

Cooling capacity: 48,2 to 74,1 kW.
Heating capacity: 49,2 to 83,6 kW.

R290 NATURAL REFRIGERANT

The range at a glance

· 1 version: H (heat pump)
· 4 sizes
· 2 acoustic options: STD (standard) and S (super low noise)

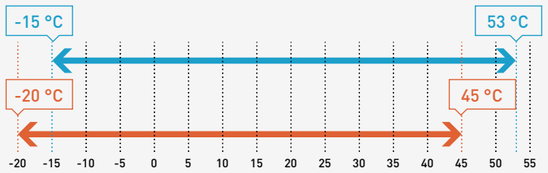
Advantages

· Natural refrigerant R290
· Very high performance and improved energy efficiencies
· Smart energy consumption
· Expanded operating limit
· Domestic Hot Water management
· Compact chassis
· Very quiet operation
· Cascade controller available for multi system operation
· SG Ready
· Very low refrigerant charge
· Reliable safety measurements

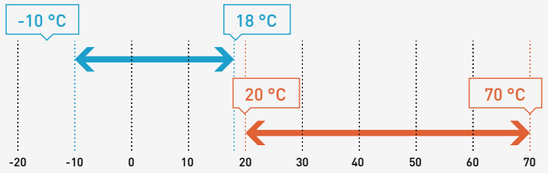
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



Equipment

· Fan speed control. All units are equipped with EC fan technology
· Variable speed pump - option. A variable speed pump can be added to the unit for even greater energy savings
· Controller. This new high standard control system provides excellent pressure control, as well as global and optimised unit management
· Removable panels. Great accessibility to internal components for service operations
· Condenser. Highly optimised heat exchanger design enables a refrigerant charge reduction. Lower than 5,0 kg of R290 for the sizes 50 and 60
· Electronic expansion valve. This reliable and high-performant valve minimises overheating of the evaporator. It is directly managed by the control system
· Modbus RTU, Modbus TCP/IP, BACnet MSTP or BACnet IP
· Leak detector and safety ventilation fans to detect R290 leakages and exhaust refrigerant to atmosphere in the event of a leak
· DHW function available on the controller with DHW probe and 3 way valve available as options

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Power supply	Voltage	V	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50
Size			**50**	**60**	**70**	**80**
ECOi-W AQUA-G BLUE 50-80 H EC fan - heat pump			**P-AQAG0050HA**	**P-AQAG0060HA**	**P-AQAG0070HA**	**P-AQAG0080HA**
Cooling capacity [1]		kW	48,2	56,1	64,9	74,1
Input power [1]		kW	15,0	19,0	21,6	25,0
EER [1]			3,20	3,00	3,00	3,00
SEER [2]			**4,37**	**4,30**	**4,31**	**4,21**
$\eta_{s,c}$ [2]		**%**	**171,9**	**168,9**	**169,4**	**165,4**
Heating capacity [3]		kW	49,2	61,1	73,5	83,6
Input power [3]		kW	15,6	18,6	21,7	24,9
COP [3]			3,2	3,3	3,4	3,4
SCOP [4]			**3,67**	**3,75**	**3,87**	**3,84**
$\eta_{s,h}$ [4]			**143,7**	**146,8**	**151,8**	**150,5**
Energy efficiency class (SCOP) [4]		**A+++ to D**	**A+**	**A+**	**A++**	**A++**
$SCOP_{MT}$ [4]			**3,11**	**3,14**	**3,26**	**3,22**
$\eta_{s,hMT}$ [4]			**121,4**	**122,7**	**127,3**	**126,0**
Energy efficiency class ($SCOP_{MT}$) [4]		**A+++ to D**	**A+**	**A+**	**A++**	**A++**
Sound power (STD / S)		dB(A)	82,7 / 79,9	84,1 / 80,5	85,1 / 81,5	85,8 / 81,9
Sound pressure at 10 m (STD / S) [5]		dB(A)	51,0 / 48,2	52,3 / 48,7	53,3 / 49,7	54,0 / 50,1

Physical features

ECOi-W AQUA-G BLUE 50-80 H EC fan - heat pump			**50**	**60**	**70**	**80**
Dimension	Height	mm	1730	2011	2030	2030
	Length w/o / w water tank	mm	2215 / 2915 [6]	2180 / 2680	2180 / 2680	2180 / 2680
	Width	mm	1032	1160	1160	1160
Operating weight		kg	538	603	628	669
Refrigerant and compressors						
Number of refrigerant circuits			1	1	1	1
Refrigerant (R290)		kg	4,50	4,80	5,30	6,80
GWP [7]		CO_2 eq.	0,02	0,02	0,02	0,02
Compressors	Number / type		2 / Scroll	2 / Scroll	2 / Scroll	2 / Scroll
Capacity steps		%	50 / 100	40 / 60 / 100	40 / 60 / 100	50 / 100
Water connections						
Type of connections			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	1 ¼	2	2	2 ½
Buffer tank (option)						
Volume		l	200	300	300	300

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and following COMMISSION REGULATION (EU) 2016/2281.
3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) Tank is external to the unit chassis. 7) Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC).
*w/o: without, w: with.

Accessories and options
Anti-vibration rubber mount / spring dampers
Refrigerant gauges HP/LP
Shut off valves
Soft starter

Accessories and options
Electric heater for the water tank
Variable or fixed speed pumps
Water tank 200 L for sizes 50
Water tank 300 L for sizes 60-70-80

Accessories supplied loose	
P-375281	SRC – mini BMS controller
P-586595_G	Cascade controller
P-372061_G	Remote keyboard panel
P-372615_G	Kit 4G modem
SVC-HYD-COMM-CLD1	1-year pre-paid Cloud access

Accessories supplied loose	
SVC-HYD-COMM-CLD3	3-year pre-paid Cloud access
P-3721027	3 way valve and probe for DHW management for size 50
P-3721028	3 way valve and probe for DHW management for sizes 60-80
P-3721050	Kit temperature probe for deported tank

R290 REFRIGERANT | HIGH SEER 4,33 | HIGH SCOP 3,54 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | PS COMMERCIAL SMART EDGE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

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NEW! ECOi-W AQUA-G EVO 60-110 H · R290

R290 NATURAL REFRIGERANT

Air cooled heat pumps Inverter.

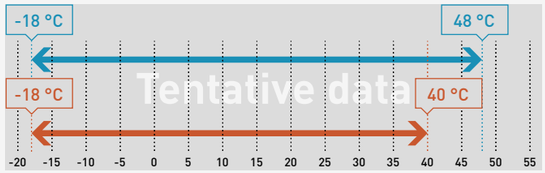
Cooling capacity: 56,7 to 91,0 kW.
Heating capacity: 61,2 to 101,9 kW.

NEW

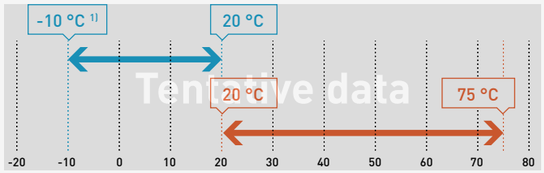
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



1) With glycol, 5 °C without glycol.

The range at a glance

- 1 version: H (heat pump)
- 3 sizes
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- Natural refrigerant R290
- Inverter driven compressor
- Very high performance
- Improved heating capacity at low ambient temperature
- Expanded operating limit
- Domestic Hot Water management
- Compact chassis
- Very quiet operation
- Modular configuration with integrated main/sub logic
- Ultra-compact design allows multiple units to be installed side by side with minimal spacing.
- SG Ready
- Reliable safety measurements
- Suitable for boiler replacement with DT 12 °C in heating

Equipment

- Fan speed control. All units are equipped with EC fan technology and flow grid to reduce Sound power
- Electronic expansion valve. This reliable and high-performant valve minimises overheating of the evaporator. It is directly managed by the control system
- Compressor: 1 inverter compressor for size 60 and tandem compressor (fixed + Inverter) for sizes 80-110
- Compressor box providing both protection and noise reduction
- Automatic circuit breakers
- Integrated HMI to manage unit operation
- An advanced built-in controller enabling fully autonomous operation
- Communication protocol: Modbus RTU, Modbus TCP/IP
- Highly optimised finned tube Al/Cu heat exchanger with Bluefin treatment
- Condensate drain pan to collect and direct the condensate away from the unit
- Antifreeze electric heater on the plate heat exchanger
- Pressure relief valve
- Differential pressure switch on the plate heat exchanger from water side
- Water expansion vessel (only with pump and/or tank)
- Leak detector and safety ventilation fans to detect R290 leakages and exhaust refrigerant to atmosphere in the event of a leak
- DHW function available on the controller with DHW probe and 3 way valve available as options
- Removable panels. Great accessibility to internal components for service operations
- Multiple lifting point (lateral, frontal and upper side) for an easy handling of the unit

Technical performance

Power supply	Voltage	V	400	400	400
	Phase		Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50
Size			**60**	**80**	**110**
ECOi-W AQUA-G EVO 60-110 H - heat pump			**P-AQAVG0060HA**	**P-AQAVG0080HA**	**P-AQAVG0110HA**
Cooling capacity [1]		kW	56,7	67,4	91,0
Input power [1]		kW	18,9	22,6	33,9
Total EER [1]			3,00	2,98	2,68
Total EER (A 35 °C, W 23/18 °C)			2,48	3,68	3,29
SEER [2]			**4,07**	**4,84**	**4,77**
$\eta_{s,c}$ [2]		**%**	**160,0**	**190,5**	**187,2**
Heating capacity [3]		kW	61,2	80,8	101,9
Input power [3]		kW	17,6	22,3	29,7
Total COP [3]			3,48	3,62	3,43
Heating capacity (A 7 °C, W 30/35 °C)		kW	62,7	83,2	104,8
Input power (A 7 °C, W 30/35 °C)		kW	14,9	18,7	25,4
COP (A 7 °C, W 30/35 °C)			4,21	4,45	4,13
SCOP [4]			**4,32**	**4,13**	**4,49**
$\eta_{s,h}$ [4]		**%**	**169,6**	**162,0**	**176,5**
SCOP [5]			**3,72**	**3,56**	**3,87**
$\eta_{s,h}$ [5]		**%**	**145,9**	**139,4**	**151,7**
SCOP [6]			**3,41**	**3,25**	**3,55**
$\eta_{s,h}$ [6]		**%**	**133,3**	**127,1**	**138,8**
SCOP [7]			**3,00**	**2,88**	**3,15**
$\eta_{s,h}$ [7]		**%**	**118,1**	**112,2**	**123,1**
Energy efficiency class (SCOP) [4]		**A+++ to D**	**A++**	**A++**	**A++**
Sound power (STD)		dB(A)	79,0	80,0	81,0
Sound pressure at 10 m (STD) [8]		dB(A)	47,2	48,0	49,0

Physical features

ECOi-W AQUA-G EVO 60-110 H - heat pump			**60**	**80**	**110**
Dimension	Height x Width	mm	1998 x 1116	1998 x 1116	1998 x 1116
	Length w/o / w water tank	mm	2385	3385	3385
Operating weight (STD)		kg	572	906	950
Refrigerant and compressors					
Number of refrigerant circuit			1	1	1
Compressor	Number / type		1 / Scroll	2/ Scroll	2 / Scroll
Capacity steps		%	25-100	25-100	25-100
Water connections					
Type of connections			Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	2	2 ½	2 ½
Buffer tank (option)					
Volume		l	Not available	230	230

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and following COMMISSION REGULATION (EU) 2016/2281. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013. 4) According EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: low temperature application. 5) According EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: intermediate temperature application. 6) According EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: medium temperature application. 7) According EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: high temperature application. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 8) Sound pressures refer to ISO 3744 standard, parallelepiped shape.
*w/o: without, w: with.

Accessories and options
Dual pressure safety valve with changeover device
Epoxy or blygold treatment
Chiller protection grids
Anti-vibration rubber mount / spring dampers
Compressor jacket (super low noise version)

Accessories and options
Pump acoustic box (super low noise version)
Power factor corrector capacitor (for sizes 80-110)
Variable pump
Water pressure switch
Shut off valve

Accessories and options
Water tank (for sizes 80-110)
Hydro connection pipes
Energy meter
Flow meter
BACnet MSTP or BACnet IP

Accessories supplied loose
Water filter
Kit remote control
Kit 4G modem
1-year pre-paid Cloud access
3-year pre-paid Cloud access
Flow switch

Accessories supplied loose
Separator refrigerant/water
Manifold 3'' for modular configuration standard (60 cm distance)
Manifold 3'' for modular configuration ultra-compact (5 cm distance)
Manifold 4'' for modular configuration standard (60 cm distance)
Manifold 4'' for modular configuration ultra-compact (5 cm distance)
DHW kit including a water temperature probe, a 230 V motorised 3 way valve

R290 REFRIGERANT · ErP ✔ · HIGH SEER 5,19 · HIGH SCOP 4,59 · INVERTER · AIR COOLED · PLATE HEAT EXCHANGER · SCROLL INVERTER COMPRESSOR · DHW · PS COMMERCIAL SMART EDGE

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W AQUA 20-40 C/H/E · R410A

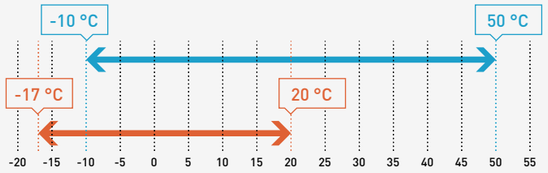
Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 19,3 to 40,9 kW.
Heating capacity: 19,5 to 41,6 kW.

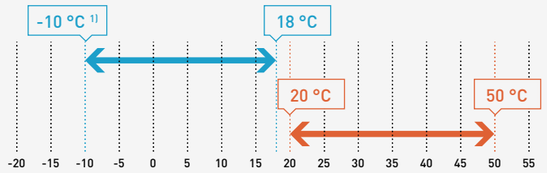
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature (chiller, heat pump and condensing unit).



Leaving water temperature (chiller and heat pump).



1) With glycol, 5 °C without glycol.

The range at a glance

- 3 versions: C (chiller), H (heat pump) and E (condensing unit)
- SEER up to 4,59
- SCOP up to 3,40
- 5 sizes (4 sizes for E type)
- 2 configurations: STD (standard) and HPF (high pressure fan)

Advantages

- Very high performance
- Low noise units
- Wide operating limits
- Easy maintenance: great accessibility to the internal components
- Low footprint
- Smart defrost technology: 1 defrost every 130 minutes for a constant LWT even at very low OAT (H type)
- Optimised for partial load operation
- 100% factory tested

Equipment

- 1 refrigerant circuit with tandem scroll compressors for a higher efficiency at partial load
- Stainless steel plate heat exchanger insulated with closed cell synthetic foam (C/H types)
- Finned coil condenser constructed with seamless copper tubes mechanically expanded into aluminium fins - Bluefin treatment for H type
- Hydraulic circuit without pump (C type) / without or with a fixed speed pump (H type)
- Super low noise units: acoustic box around the compressors
- Complete integrated control system with an external control panel that displays operating parameters and alarms
- Modbus RTU communication protocol as standard
- Night mode for energy savings and reduced sound levels
- Double water set point (H type)
- Water compensation curve control (C/H types)
- Return and leaving water temperature control (C/H types)
- Water filter and water flow switch (C/H types)
- Phase sequence monitor
- Suction and liquid line shut-off valves + a suction receiver (E type)

Technical performance

Power supply	Voltage	V	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50
Size			**20**	**25**	**30**	**35**	**40**
ECOi-W AQUA 20-40 C - chiller			**P-AQAE0020CA**	**P-AQAE0025CA**	**P-AQAE0030CA**	**P-AQAE0035CA**	**P-AQAE0040CA**
Cooling capacity [1]		kW	19,2	24,3	27,1	36,7	39,0
Input power [1]		kW	5,9	7,7	9,3	12,2	13,0
EER [1]			3,25	3,17	2,9	3,01	3,0
SEER [2] [3]			**4,78**	**4,38**	**4,43**	**4,43**	**4,48**
$\eta_{s,c}$ [2] [3]			**188**	**172**	**174**	**174**	**176**
Nominal water flow (in the evaporator)		m^3/h	3,3	4,2	4,7	6,3	6,7
Sound power (STD fan)		dB(A)	75	76	76	77	77
Sound pressure at 10 m (STD fan) [4]		dB(A)	42,8	43,8	43,8	44,8	44,8
ECOi-W AQUA 20-40 H - heat pump			**P-AQAE0020HA**	**P-AQAE0025HA**	**P-AQAE0030HA**	**P-AQAE0035HA**	**P-AQAE0040HA**
Cooling capacity [1]		kW	18,7	23,7	26,4	35,8	38,1
Input power [1]		kW	5,9	7,7	9,4	12,3	13,1
EER [1]			3,15	3,07	2,81	2,92	2,92
SEER [2]			**4,68**	**4,31**	**4,28**	**4,25**	**4,33**
$\eta_{s,c}$ [2]			**184**	**169**	**168**	**167**	**170**
Nominal water flow (in the evaporator)		m^3/h	3,3	4,3	4,6	6,2	6,4
Heating capacity [5]		kW	19,5	26,9	29,7	37,3	41,6
Input power [5]		kW	6,1	9,3	9,9	13,2	13,5
COP [5]			3,19	2,90	2,99	2,82	3,08
COP [6]			3,84	3,90	3,90	3,91	3,67
SCOP [2] [7]			**3,50**	**3,38**	**3,45**	**3,50**	**3,50**
Energy efficiency class [2] [7]		**A+++ to D**	**A+**	**A+**	**A+**	**A+**	**A+**
$\eta_{s,h}$ [2] [7]			**137**	**132**	**135**	**137**	**137**
Nominal water flow (in the evaporator)		m^3/h	3,4	4,7	5,2	6,5	7,2
Sound power (STD fan)		dB(A)	75	76	76	77	77
Sound pressure at 10 m (STD fan) [4]		dB(A)	42,8	43,8	43,8	44,8	44,8
ECOi-W AQUA 25-40 E - condensing unit			**—**	**P-AQAE0025EA**	**P-AQAE0030EA**	**P-AQAE0035EA**	**P-AQAE0040EA**
Cooling capacity [8]		kW	—	32,4	33,7	43,1	44,8
Input power [8]		kW	—	10,0	10,7	14,9	15,0
EER [8]			—	3,24	3,15	2,90	2,99
Sound power		dB(A)	—	75	75	76	76

Physical features

ECOi-W AQUA 20-40 C/H - chiller / heat pump			**20**	**25**	**30**	**35**	**40**
Dimension	Height (STD / HPF)	mm	1983 / 2025	1983 / 2025	1983 / 2025	1983 / 2025	1983 / 2025
	Width w/o / w water tank	mm	1000 / 1507	1000 / 1507	1000 / 1507	1000 / 1507	1000 / 1507
	Length	mm	1000	1000	1000	1000	1000
Operating weight without / with water tank - 1 pump		kg	285 / 450	295 / 460	325 / 490	335 / 500	335 / 500
Water connections							
Type of connections (evaporator)			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Inlet/outlet diameter		Inch	1 ½	1 ½	1 ½	1 ½	1 ½
ECOi-W AQUA 25-40 E - condensing unit			**—**	**25**	**30**	**35**	**40**
Dimension	H x W x L	mm	—	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000
Operating weight		kg	—	260	270	280	280
Refrigerant connections							
Liquid / suction line		Inch	— / —	⅝ / 1 ⅛	⅝ / 1 ⅛	⅝ / 1 ⅛	⅝ / 1 ⅛

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 8) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN 14511-2013 standard.
*w/o: without, w: with.

Accessories and options
Anti-vibration rubber mount / spring dampers
BACnet IP or BACnet MSTP
Fan speed control
Finned coil blygold treatment (upon request) or epoxy
High pressure fan (HPF)

Accessories and options
Modbus TCP/IP
Outdoor coil protection grid
Nordic pack (H type only)
Shut off valves
Soft starter

Accessories and options
Variable or fixed* speed pumps
Water pressure switch
Water tank 100 L
Without neutral (upon request)

*Not available with ECOi-W AQUA C and ECOi-W AQUA H 20-30 due to Ecodesign compliance.

Accessories supplied loose	
P-375281	SRC – mini BMS controller
P-372061	Remote keyboard panel
P-372615	Kit 4G modem

Accessories supplied loose	
SVC-HYD-COMM-CLD1	1-year pre-paid Cloud access
SVC-HYD-COMM-CLD3	3-year pre-paid Cloud access
P-378016	Kit anti-vibration mount rubber

ErP ✔ | HIGH SEER 4,59 | HIGH SCOP 3,40 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W AQUA-Z EVO 40-50 H · R32

R32 REFRIGERANT

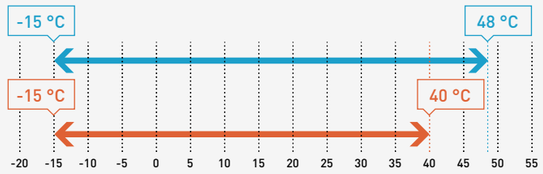
Air cooled heat pumps Inverter.

Cooling capacity: 41 to 48 kW.
Heating capacity: 42 to 49 kW.

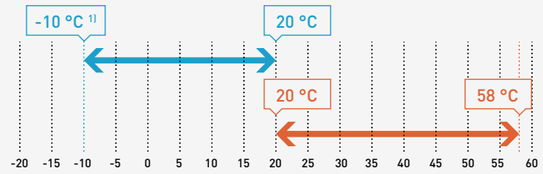
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



Operating limits at nominal speed.
1) Below 5 °C, glycol is required.

The range at a glance

· 1 version: H (heat pump)
· 2 sizes
· 2 acoustic options: STD (standard) and S (super low noise)

Advantages

· Low GWP R32 refrigerant (GWP= 675)
· Inverter driven compressor
· Very high performance (SEER up to 5,65, SCOP up to 4,52)
· Low energy consumption
· Expanded operating limit (LWT 58 °C with OAT 40 °C)
· Compact chassis
· Very quiet operation
· Cascade configuration through MAIN/SUB management: up to 8 units
· SG Ready
· Very low refrigerant charge
· Removable panels for great accessibility to internal components

Equipment

· 1 refrigerant circuit with Inverter scroll compressors for a higher efficiency at partial load
· EC fan
· Stainless steel plate heat exchanger insulated with closed cell synthetic foam
· Finned coil condenser constructed with seamless copper tubes mechanically expanded into aluminium fins - Bluefin treatment
· Hydraulic circuit without pump
· Complete integrated control system with an external control panel that displays the operating parameters and alarms
· Modbus RTU, Modbus TCP/IP
· Reduced mode for energy savings and low sound levels
· Electronic expansion valve
· Return or leaving water temperature control
· External switch (cooling/heating, ON / OFF, reduced mode)
· Water filter and differential pressure switch
· Phase sequence monitor
· Without neutral
· DHW function available on the controller with DHW probe and 3 way valve available as options

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Power supply	Voltage	V	400	400
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
Size			**40**	**50**
ECOi-W AQUA-Z EVO 40-50 H EC fan - heat pump			**P-AQAVZ0040HA**	**P-AQAVZ0050HA**
Cooling capacity [1]		kW	41,0	48,2
Input power [1]		kW	12,8	15,1
EER [1]			3,20	3,19
SEER [2]			**5,59**	**5,65**
$\eta_{s,c}$ [2]		**%**	**221**	**223**
Heating capacity [3]		kW	41,5	48,5
Input power [3]		kW	13,4	16,2
COP [3]			3,10	2,99
SCOP [4]			**4,22**	**4,52**
$\eta_{s,h}$ [4]			**166**	**178**
Energy efficiency class (SCOP) [4]		**A+++ to D**	**A+++**	**A+++**
Sound power (STD / S)		dB(A)	79,5 / 78,5	80,5 / 79,5
Sound pressure at 10 m (STD / S) [5]		dB(A)	47,8 / 46,8	48,8 / 47,8

Physical features

ECOi-W AQUA-Z EVO 40-50 H EC fan - heat pump			**40**	**50**
Dimension	Height	mm	1732	1732
	Length w/o / w water tank	mm	2209 / 2913 [6]	2209 / 2913 [6]
	Width	mm	1100	1100
Operating weight		kg	348	368
Refrigerant and compressors				
Number of refrigerant circuits			1	1
Refrigerant (R32)		kg	5	6
GWP [7]		CO_2 eq.	675	675
Compressors	Number / type		1 / Scroll Inverter	1 / Scroll Inverter
Capacity steps		%	0-100	0-100
Water connections				
Type of connections			Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	1 ¼	1 ¼
Buffer tank (option)				
Volume		l	200	200

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and following COMMISSION REGULATION (EU) 2016/2281.
3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: low temperature application. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) Tank is external to the unit chassis. 7) Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC).
*w/o: without, w: with.

Accessories and options
BACnet MSTP or BACnet IP
Energy meter for power input
Coil guards
Compressor jackets
Variable speed pumps
Water filter
Water flow switch

Accessories and options
Water tank
Fin&Tube Al/Cu with epoxy
Anti-vibration mount rubber
Anti-vibration spring
Kit water flow switch
Water pressure switch
Shut off valves

Accessories supplied loose	
P-364735	Kit remote control

Accessories supplied loose	
P-3721027	Kit DHW

ErP · HIGH SEER 5,65 · HIGH SCOP 4,52 · INVERTER · AIR COOLED · PLATE HEAT EXCHANGER · SCROLL INVERTER COMPRESSOR · DHW · PS COMMERCIAL SMART EDGE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

ECOi-W AQUA-Z 50-170 C/H · R32

R32 REFRIGERANT

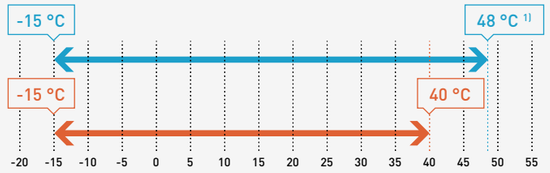
Air cooled chillers and heat pumps.

Cooling capacity: 51,6 to 173,0 kW.
Heating capacity: 51,7 to 180,0 kW.

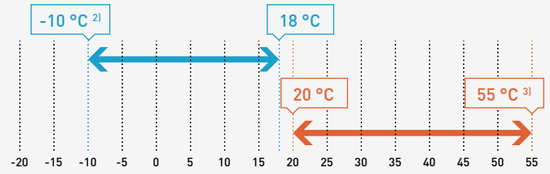
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



1) 47 °C for sizes 150-170.
2) With glycol, 5 °C without glycol.
3) 53 °C for sizes 150-170.

The range at a glance

- 2 versions: C (chiller) and H (heat pump)
- 10 sizes
- SEER up to 4,88 (STD AC) / 5,31 (STD EC)
- SCOP up to 3,72 (STD AC) / 4,10 (STD EC)
- 2 configurations: STD (standard) and HPF (high pressure fan)
- 2 fan types: AC (standard fan) and EC (high-efficiency fan)
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- Low GWP R32 refrigerant (GWP= 675)
- Very high-efficiency
- Wide operating limits
- Low footprint: one of the smallest footprint on the market with only 2,53 m² for sizes 50-130 and 4,36 m² for sizes 150-170
- Reduced sound levels: S version (super low noise) with EC fan and compressor sound jackets
- New advanced control system
- Easy maintenance: great accessibility to the internal components
- Cascade controller available for multi system operation
- SG Ready
- 100% factory tested

Equipment

- 1 refrigerant circuit with tandem scroll compressors for a higher efficiency at partial load
- Stainless steel plate heat exchanger insulated with closed cell synthetic foam
- Finned coil condenser constructed with seamless copper tubes mechanically expanded into aluminium fins - Bluefin treatment for H type
- Hydraulic circuit without pump
- Complete integrated control system with an external control panel that displays the operating parameters and alarms
- Modbus RTU, Modbus TCP/IP, BACnet MSTP or BACnet IP
- Night mode for energy savings and reduced sound levels
- Electronic expansion valve
- Water compensation curve control
- Return and leaving water temperature control
- External switch (cooling/heating, night mode, load shedding)
- Water filter and water flow switch
- Phase sequence monitor
- Without neutral

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50
Size			**50**	**60**	**70**	**75**	**85**	**100**	**115**	**130**	**150**	**170**
ECOi-W AQUA-Z 50-170 C - chiller	**P-AQAZ****CA**		**0050**	**0060**	**0070**	**0075**	**0085**	**0100**	**0115**	**0130**	**0150**	**0170**
Cooling capacity [1]	kW		51,6	57,6	69,7	78,2	82,8	100	116	126	154	173
Input power [1]	kW		16,5	19,6	22,4	24	26,8	31,4	37,4	42,3	47,4	55,7
EER (STD AC / STD EC) *[1]			3,13/3,25	2,94/3,03	3,11/3,29	3,26/3,41	3,09/3,23	3,18/3,30	3,10/3,20	2,98/3,07	3,25/3,38	3,11/3,20
SEER (STD AC / STD EC) *[2] [3]			**4,60/5,05**	**4,59/5,02**	**4,61/5,31**	**4,72/5,29**	**4,45/4,96**	**4,88/5,19**	**4,59/5,01**	**4,43/4,71**	**4,70/5,22**	**4,68/5,16**
$\eta_{s,c}$ (STD AC / STD EC) *[2] [3]			**180,9 / 198,9**	**180,5 / 197,8**	**181,3 / 209,6**	**185,6 / 208,7**	**175,0 / 195,6**	**192,3 / 204,9**	**180,5 / 197,3**	**174,2 / 185,6**	**184,8 / 205,6**	**184,2 / 203,2**
Nominal water flow (in the evaporator)	m³/h		9,2	10,6	12,2	13,2	14,7	17,9	21,1	23,5	27,2	30,7
Sound power (STD AC / S) *	dB(A)		83 / 81	84 / 81	81 / 78	81 / 78	84 / 82	86 / 83	87 / 84	87 / 84	89 / 86	91 / 88
Sound pressure at 10 m (STD AC / S) *[4]	dB(A)		51 / 49	52 / 49	50 / 47	49 / 46	52 / 50	54 / 51	55 / 52	55 / 53	57 / 54	59 / 56
ECOi-W AQUA-Z 50-170 H - heat pump	**P-AQAZ****HA**		**0050**	**0060**	**0070**	**0075**	**0085**	**0100**	**0115**	**0130**	**0150**	**0170**
Cooling capacity [1]			51,1	57	69	77,4	82	99,3	115	125	152	170
Input power [1]			16,7	19,8	22,6	24,3	27,1	31,8	37,7	42,7	47,9	57,1
EER (STD AC / STD EC) *[1]			3,06/3,17	2,88/2,97	3,05/3,22	3,19/3,35	3,03/3,17	3,12/3,25	3,05/3,14	2,93/3,00	3,17/3,30	2,98/3,07
EER (STD AC / STD EC) *[5]			3,53/3,67	3,40/3,50	3,57/3,64	3,78/3,96	3,52/3,66	3,63/3,76	3,51/3,54	3,39/3,50	3,63/3,76	3,39/3,56
SEER (STD AC / STD EC) *[2]			**4,46/4,83**	**4,42/4,50**	**4,51/5,04**	**4,61/4,99**	**4,33/4,80**	**4,77/4,93**	**4,44/4,82**	**4,23/4,51**	**4,59/5,04**	**4,49/4,92**
$\eta_{s,c}$ (STD AC / STD EC) *[2]			**175,2 / 190,2**	**173,6 / 176,9**	**177,5 / 198,8**	**181,5 / 196,7**	**170,3 / 188,9**	**187,7 / 194,1**	**174,6 / 190,0**	**166 / 177,2**	**180,5 / 198,7**	**176,6 / 193,8**
Nominal water flow (in the evaporator)	m³/h		8,7	10,6	12,2	13,2	14,7	17,9	21,1	23,5	27,2	30,7
Heating capacity [6]	kW		51,7	59,7	71,8	78,5	86,5	107,6	122,3	137,5	159,1	180,1
Input power [6]	kW		17,1	19,9	22,9	25,0	28,0	33,6	38,2	42,4	49,8	56,2
COP (STD AC / STD EC) *[6]			3,01/3,27	2,99/3,21	3,13/3,43	3,13/3,19	3,08/3,30	3,20/3,45	3,20/3,42	3,24/3,42	3,19/3,48	3,20/3,40
COP (STD AC / STD EC) *[7]			3,81/4,00	3,80/3,92	3,92/4,21	3,91/4,16	3,92/4,16	3,99/4,19	4,10/4,26	4,04/4,12	4,07/4,31	4,02/4,16
SCOP (STD AC / STD EC) *[2] [8]			**3,53/3,90**	**3,54/3,94**	**3,47/3,71**	**3,65/3,80**	**3,60/4,02**	**3,64/4,10**	**3,66/4,02**	**3,72/3,97**	**3,57/4,04**	**3,60/3,95**
Energy efficiency class (STD AC / STD EC) *[2] [7]	**A+++ to D**		**A+ / A+**	**A+ / A+**	**A+ / A++**	**A+ / A++**	**A+ / A++**	**— / —**	**— / —**	**— / —**	**— / —**	**— / —**
$\eta_{s,h}$ (STD AC / STD EC) *[2] [7]			**138,0 / 152,8**	**138,5 / 154,5**	**135,6 / 145,3**	**143,2 / 148,8**	**141,2 / 157,8**	**142,5 / 160,9**	**143,2 / 157,9**	**145,7 / 155,9**	**139,9 / 158,4**	**140,9 / 155,2**
Nominal water flow (in the evaporator)	m³/h		9,3	10,7	12,5	13,9	15,0	18,3	21,5	23,9	27,5	31,7
Sound power (STD AC / S) *	dB(A)		83 / 81	84 / 81	81 / 78	81 / 78	84 / 82	86 / 83	87 / 84	87 / 84	89 / 86	91 / 88
Sound pressure at 10 m (STD AC / S) *[4]	dB(A)		51 / 49	52 / 49	50 / 47	50 / 46	52 / 50	54 / 51	55 / 52	56 / 53	57 / 54	59 / 56

Physical features

ECOi-W AQUA-Z 50-170 C/H - chiller / heat pump			50	60	70	75	85	100	115	130	150	170
Dimension	Height (STD / EC/HPF)	mm	1986/2034	1986/2034	1986/2034	1986/2034	2286/2334	2286/2334	2286/2334	2286/2334	2285/2333	2285/2333
	Width	mm	1160	1160	1160	1160	1160	1160	1160	1160	1151	1151
	Length without water tank	mm	2180	2180	2180	2180	2180	2180	2180	2180	3789	3789
Operating weight without water tank - 1 pump		kg	527	547	621	637	701	731	813	815	1265	1279
Water connections												
Type of connections (evaporator)			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Inlet/outlet diameter		Inch	2	2	2	2	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½

1) According to EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According to EN 14511-2018: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C DB.
6) According to EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) According to EN 14511-2018: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 8) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013.
*STD AC: standard version with AC fan, STD EC: standard version with high-efficiency EC fan, S: super low noise version with high-efficiency EC fan + compressor sound jackets.

Accessories and options
Anti-vibration rubber mount / spring dampers *
Compressor jackets (standard for S versions)
Desuperheater
Electric heater for the water tank
Fin&Tube Al/Cu with epoxy / Blygold treatment
High efficiency EC fan
High pressure fan (HPF)

Accessories and options
Outdoor coil protection grid
Power factor corrector capacitors
Refrigerant gauges HP/LP
Shut off valves
Soft starter
Variable speed pumps
Water pressure switch *

Accessories and options
Water tank 300 L
Without neutral
Communication protocols: Modbus RTU (Std.), Modbus TCP/IP, BACnet MSTP, BACnet IP

*Field-installed accessories. All other accessories are factory-installed.

Accessories supplied loose	
P-375281	SRC – mini BMS controller
P-586595	Cascade controller
P-372061	Remote keyboard panel

Accessories supplied loose	
P-372615	Kit 4G modem
SVC-HYD-COMM-CLD1	1-year pre-paid Cloud access
SVC-HYD-COMM-CLD3	3-year pre-paid Cloud access

R32 REFRIGERANT · ErP · HIGH SEER 5,22 · HIGH SCOP 4,10 · AIR COOLED · PLATE HEAT EXCHANGER · SCROLL COMPRESSOR · SUPER QUIET · VERY HIGH PERFORMANCE · PS COMMERCIAL SMART EDGE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W AQUA-Z DC 150-380 C/H · R32

R32 REFRIGERANT

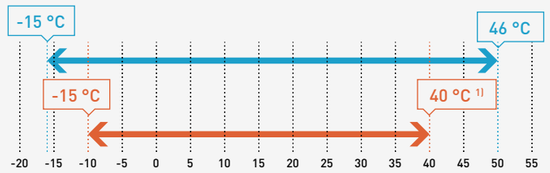
Air cooled chillers and heat pumps.

Cooling capacity: 151 to 377 kW (single unit). NEW! Up to 754 kW (twin units).
Heating capacity: 154 to 384 kW (single unit). NEW! Up to 768 kW (twin units).

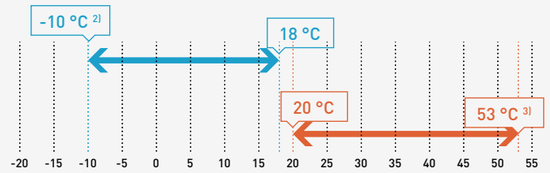
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature.



Leaving water temperature.



1) With EC fans. 2) With glycol, 5 °C without glycol. 3) 55 °C sizes 150-170.

The range at a glance

- 2 versions: C (chiller) and H (heat pump)
- **NEW!** Single and twin (back-to-back) configurations
- Single unit: 10 sizes for C version and 13 sizes for H version in 3 different chassis
- SEER up to 4,93 (STD AC) / 5,23 (STD EC)
- SCOP up to 3,90 (STD AC) / 4,00 (STD EC)
- 2 configurations: STD (standard) and HPF (high pressure fan)
- 2 fan types: AC (standard fan) and EC (high-efficiency fan)
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- Low GWP R32 refrigerant (GWP= 675)
- Double circuit units able to work in partial load from around 20% of total capacity
- Very high-efficiency
- Wide operating limits
- Reduced sound levels: S version (super low noise) with EC fan and compressor sound jackets for sizes 150-380, additional compressor box for sizes 190-380
- Advanced control logic
- Easy maintenance: great accessibility to the internal components
- Cascade configuration available for multi system operation with capacity boost up to 3040 kW (for single unit)
- SG Ready
- 100% factory tested

Equipment for single units

- 2 refrigerant circuits with tandem scroll compressors for a higher efficiency at partial load
- Stainless steel plate heat exchanger insulated with closed cell synthetic foam
- Microchannel coils only for C version (sizes 190-380)
- Fin&Tube coil condenser constructed with seamless copper tubes mechanically expanded into aluminium fins - Bluefin treatment for H version
- Hydraulic circuit without pump
- Complete integrated control system with an external control panel that displays the operating parameters and alarms
- Modbus RTU, Modbus TCP/IP, BACnet MSTP or BACnet IP
- Digital input for Night Mode, Demand mode or Eco Mode for energy savings and reduced sound levels
- Electronic expansion valve
- Water compensation curve control
- Return and leaving water temperature control
- Water flow switch (sizes 150-170)
- Differential pressure switch (sizes 190-380)
- Phase sequence monitor
- Automatic circuit breaker
- Without neutral

NEW! Equipment for twin units

In addition to single units equipment:

- Mechanical, hydraulic (without pump), and control-wise connection, as a single chassis

Technical performance – Single units

Power supply	Voltage	V	400	400	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50
Size			**150**	**170**	**190**	**210**	**230**	**260**	**290**	**320**	**350**	**380**
ECOi-W AQUA-Z DC 150-380 C - chiller	**P-AQADZ****CB**		**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**
Cooling capacity [1]	kW		151,0/ 151,0	170,0/ 170,0	189,0/ 189,0	212,0/ 214,0	229,0/ 229,0	260,0/ 260,0	307,0/ 307,0	326,0/ 325,0	346,0/ 347,0	377,0/ 377,0
Input power [1]	kW		49,7/ 49,0	56,7/ 55,9	59,4/ 57,3	69,1/ 66,5	75,1/ 72,7	90,0/ 87,8	95,9/ 92,5	104,2/ 100,0	112,0/ 108,1	126,9/ 122,8
EER [1]			3,04/3,08	3,00/3,04	3,18/3,30	3,07/3,22	3,05/3,15	2,89/2,96	3,20/3,32	3,13/3,25	3,09/3,21	3,00/3,10
SEER [2]			**4,93/5,20**	**4,90/5,15**	**4,68/5,23**	**4,62/5,20**	**4,48/4,90**	**4,40/4,79**	**4,63/5,13**	**4,33/5,12**	**4,43/4,79**	**4,35/4,80**
$\eta_{s,c}$ [2]	**%**		**194,0/ 204,0**	**192,8/ 203,0**	**184,3/ 206,1**	**181,8/ 204,8**	**176,3/ 192,9**	**173,1/ 188,4**	**182,0/ 202,2**	**170,0/ 188,8**	**174,2/ 188,5**	**171,0/ 188,8**
Cooling capacity (A 35 °C, W 23/18 °C)	kW		191,0/ 193,0	213,0/ 217,0	242,0/ 243,0	269,0/ 271,0	294,0/ 295,0	331,0/ 339,7	389,0/ 390,0	415,0/ 412,0	442,0/ 444,0	483,0/ 484,0
Input power (A 35 °C, W 23/18 °C)	kW		53,8/ 52,7	62,1/ 61,2	64,2/ 61,3	74,5/ 71,6	82,9/ 79,9	98,2/ 96,8	103,0/ 99,4	112,0/ 109,0	123,0/ 119,0	139,0/ 136,0
Water flow	m^3/h		26,0/25,9	29,2/29,2	32,5/32,5	36,5/36,8	39,4/39,4	44,7/44,7	52,8/52,8	56,1/55,9	59,5/59,7	64,8/64,8
Sound power (STD) [5]	dB(A)		89,6/89,0	90,4/89,9	91,1/90,9	91,5/1,3	92,0/91,9	92,4/92,3	93,3/93,1	94,3/94,2	95,2/95,1	95,4/95,3
Sound pressure (STD)	dB(A)		57,5/56,9	58,3/57,8	59,0/58,8	59,4/59,2	59,9/59,8	60,3/60,2	61,1/60,9	62,1/62,0	63,0/62,9	63,2/63,1
Sound power (S) [5]	dB(A)		—/85,0	—/85,4	—/87,2	—/87,4	—/87,6	—/87,8	—/88,6	—/89,7	—/90,1	—/90,3
Sound pressure (S)	dB(A)		—/52,9	—/53,3	—/55,1	—/55,3	—/55,5	—/55,7	—/56,4	—/57,5	—/57,9	—/58,1
Size			**150**	**170**	**190**	**210**	**220**	**230**	**260**	**270**	**290**	**300**	**320**	**350**	**380**
ECOi-W AQUA-Z DC 150-380 H - heat pump	**P-AQADZ****HB**		**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**
Cooling capacity [1]	kW		150,0/ 150,0	167,0/ 167,0	184,0/ 183,0	204,0/ 204,0	208,0	224,0/ 224,0	251,0/ 251,0	265,0	291,1/ 289,3	295,0	307,7/ 310,7	330,0/ 331,0	364,0/ 364,3
Input power [1]	kW		49,7/ 49,0	56,6/ 55,9	62,0/ 59,6	72,1/ 69,9	67,3	76,7/ 74,4	93,0/ 90,6	83,1	101,3/ 96,6	93,1	107,5/ 103,3	114,2/ 110,0	131,7/ 128,1
Total EER [1]			3,02/ 3,06	2,95/ 2,99	2,97/ 3,07	2,83/ 2,92	3,09	2,92/ 3,01	2,7/ 2,77	3,19	2,87/ 2,99	3,17	2,86/ 3,00	2,89/ 3,01	2,76/ 2,84
Total EER (A 35 °C, W 23/18 °C)			3,53/ 3,60	3,41/ 3,51	3,41/ 3,58	3,22/ 3,37	3,63	3,45/ 3,60	3,12/ 3,18	3,83	3,32/ 3,46	3,72	3,31/ 3,52	3,32/ 3,52	3,16/ 3,30
SEER [2]			**4,75/ 5,03**	**4,71/ 4,97**	**4,45/ 4,94**	**4,39/ 4,82**	**5,03**	**4,34/ 4,71**	**4,21/ 4,55**	**5,01**	**4,34/ 4,83**	**5,01**	**4,33/ 4,89**	**4,40/ 4,79**	**4,34/ 4,65**
$\eta_{s,c}$ [2]	**%**		**187,1/ 198,1**	**185,3/ 195,7**	**175,2/ 194,6**	**172,5/ 189,6**	**198,0**	**170,6/ 185,5**	**165,5/ 179,1**	**197,5**	**170,4/ 190,1**	**197,3**	**170,0/ 192,4**	**172,9/ 188,5**	**170,5/ 182,9**
Water flow	m^3/h		25,8/ 25,8	28,7/ 28,7	31,6/ 31,5	35,1/ 35,1	35,8	38,5/ 38,5	43,2/ 43,2	45,6	50,1/ 49,8	50,7	52,9/ 53,4	56,8/ 56,9	62,6/ 62,7
Heating capacity [3]	kW		154,0/ 154,0	178,0/ 179,0	190,0/ 190,0	201,0/ 201,0	219,0	241,0/ 241,0	256,9/ 258,5	288,0	285,6/ 284,8	312,0	301,3/ 316,5	337,0/ 340,0	384,0/ 384,5
Input power [3]	kW		48,8/ 48,2	54,9/ 54,4	61,3/ 58,6	68,5/ 65,9	67,0	75,4/ 72,0	87,6/ 85,0	88,3	97,5/ 93,2	94,6	103,2/ 100,1	111,0/ 107,0	128/ 122,4
Total COP [3]			3,16/ 3,20	3,24/ 3,29	3,10/ 3,24	2,93/ 3,05	3,27	3,20/ 3,35	2,93/ 3,04	3,26	2,93/ 3,05	3,30	2,92/ 3,16	3,04/ 3,18	3,00/ 3,14
Total COP (A 7 °C, W 30/35 °C)			3,67/ 3,82	3,98/ 4,04	3,57/ 3,80	3,43/ 3,59	4,01	3,86/ 4,04	3,56/ 3,68	4,00	3,47/ 3,61	3,86	3,45/ 3,86	3,69/ 3,82	3,54/ 3,66
SCOP [4]			**3,83/ 4,00**	**3,90/ 4,00**	**3,46/ 3,89**	**3,44/ 3,90**	**3,86**	**3,64/ 3,99**	**3,52/ 3,85**	**3,82**	**3,51/ 3,91**	**3,92**	**3,50/ 3,85**	**3,50/ 3,87**	**3,66/ 3,95**
$\eta_{s,h}$ [4]	**%**		**150,0/ 157,1**	**152,8/ 156,8**	**135,6/ 152,7**	**134,7/ 152,8**	**151,3**	**142,5/ 156,4**	**137,9/ 151,0**	**149,7**	**137,4/ 153,2**	**153,7**	**137,0/ 151,2**	**136,9/ 151,9**	**143,4/ 155,1**
Water flow	m^3/h		26,5/ 26,5	30,6/ 30,8	32,7/ 32,7	34,6/ 34,6	37,7	41,5/ 41,5	44,2/ 44,5	49,5	49,1/ 49,0	53,7	51,8/ 54,4	58,0/ 58,5	66,0/ 66,1
Sound power (STD) [5]	dB(A)		89,6/ 89,0	90,4/ 89,9	91,1/ 90,9	91,5/ 91,3	91,3	92,0/ 91,9	92,4/ 92,3	92,8	93,3/ 93,1	93,1	94,3/ 94,2	95,2/ 95,1	95,4/ 95,3
Sound pressure (STD)	dB(A)		57,5/ 56,9	58,3/ 57,8	59,0/ 58,8	59,4/ 59,2	59,2	59,9/ 59,8	60,3/ 60,2	60,7	61,1/ 60,9	60,9	62,1/ 62,0	63,0/ 62,9	63,2/ 63,1
Sound power (S) [5]	dB(A)		—/ 85,0	—/ 85,4	—/ 87,2	—/ 87,4	87,4	—/ 87,6	—/ 87,8	88,5	—/ 88,6	88,6	—/ 89,7	—/ 90,1	—/ 90,3
Sound pressure (S)	dB(A)		—/ 52,9	—/ 53,3	—/ 55,1	—/ 55,3	55,3	—/ 55,5	—/ 55,7	56,4	—/ 56,4	56,4	—/ 57,5	—/ 57,9	—/ 58,1

1) According to EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and Following COMMISSION REGULATION (EU) 2016/2281.
3) According to EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and Following COMMISSION REGULATION (EU) No 813/2013. 5) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard.

R32 REFRIGERANT | ErP | HIGH SEER 5,23 | HIGH SCOP 4,00 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE | COMMERCIAL SMART EDGE

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Technical performance – NEW! Twin units

Power supply	Voltage	V	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50
Size			**420 (210+210)**	**460 (230+230)**	**520 (260+260)**	**580 (290+290)**	**640 (320+320)**	**700 (350+350)**	**760 (380+380)**
ECOi-W AQUA-Z DC 420-760 C - chiller	**P-AQADZ****CB**		**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**
Cooling capacity [1]	kW		424,0/428,0	458,0/458,0	520,0/520,0	614,0/614,0	652,0/650,0	692,0/694,0	754,0/754,0
Input power [1]	kW		138,2/133	150,2/145,4	180/175,6	191,8/185	208,4/200	224/216,2	253,8/245,6
EER [1]			3,07/3,22	3,05/3,15	2,89/2,96	3,20/3,32	3,13/3,25	3,09/3,21	3,0/3,1
SEER [2]			**4,62/5,20**	**4,48/4,90**	**4,40/4,79**	**4,63/5,13**	**4,33/5,12**	**4,43/4,79**	**4,35/4,8**
$\eta_{s,c}$ [2]	**%**		**181,8/204,8**	**176,3/192,9**	**173,1/188,4**	**182,0/202,2**	**170,0/188,8**	**174,2/188,5**	**171,0/188,8**
Cooling capacity (A 35 °C, W 23/18 °C)	kW		538/542	588/590	662/679	778/780	830/824	884/888	966/968
Input power (A 35 °C, W 23/18 °C)	kW		149/143	166/160	196/194	206/199	224/218	246/238	278/272
Water flow	m³/h		72,9/73,6	78,8/78,8	89,4/89,4	105,6/105,6	112,1/111,8	119/119,4	129,7/129,7
Sound power (STD) [5]	dB(A)		95,5/95,3	96/95,9	96,4/96,3	97,3/97,1	98,3/98,2	99,2/99,1	99,4/99,3
Sound pressure (STD)	dB(A)		63,4/63,2	63,9/63,8	64,3/64,2	65,1/64,9	66,1/66	67/66,9	67,2/67,1
Sound power (S) [5]	dB(A)		—/91,4	—/91,6	—/91,8	—/92,6	—/93,7	—/94,1	—/94,3
Sound pressure (S)	dB(A)		—/59,3	—/59,5	—/59,7	—/60,4	—/61,5	—/61,9	—/62,1
Size			**420 (210+210)**	**440 (220+220)**	**460 (230+230)**	**520 (260+260)**	**540 (270+270)**	**580 (290+290)**	**600 (300+300)**	**640 (320+320)**	**700 (350+350)**	**760 (380+380)**
ECOi-W AQUA-Z DC 420-760 H - heat pump	**P-AQADZ****HB**		**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD EC**	**STD AC/EC**	**STD AC/EC**	**STD AC/EC**
Cooling capacity [1]	kW		408,0/408,0	416	448,0/448,0	502,0/502,0	530	582,2/578,6	590	615,4/617,8	660,0/662,0	728,0/728,6
Input power [1]	kW		144,2/139,8	134,6	153,4/148,8	185,9/181,2	166,1	202,5/193,3	186,1	215/206,7	228,4/219,9	263,5/256,3
Total EER [1]			2,83/2,92	3,09	2,92/3,01	2,7/2,77	3,19	2,87/2,99	3,17	2,86/3,00	2,89/3,01	2,76/2,84
Total EER (A 35 °C, W 23/18 °C)			3,22/3,37	3,63	3,45/3,60	3,12/3,18	3,83	3,32/3,46	3,72	3,31/3,52	3,32/3,52	3,16/3,30
SEER [2]			**4,39/4,82**	**5,03**	**4,34/4,71**	**4,21/4,55**	**5,01**	**4,34/4,83**	**5,01**	**4,33/4,89**	**4,40/4,79**	**4,34/4,65**
$\eta_{s,c}$ [2]	**%**		**172,5/189,6**	**198**	**170,6/185,5**	**165,5/179,1**	**197,5**	**170,4/190,1**	**197,3**	**170/192,4**	**172,9/188,5**	**170,5/182,9**
Water flow	m³/h		70,2/70,2	71,6	77,1/77,1	86,3/86,3	91,2	100,1/99,5	101,5	105,8/106,9	113,5/113,9	125,2/125,3
Heating capacity [3]	kW		402,0/402,0	438	482,0/482,0	513,8/517,0	576	571,2/569,6	624	602,6/612,2	674,0/680,0	768,0/769,0
Input power [3]	kW		137,0/131,8	134,0	150,5/144,0	195,2/170,0	176,6	195,0/186,4	189,2	204,4/200,2	222,0/214,0	256,0/244,8
Total COP [3]			2,93/3,05	3,27	3,20/3,35	2,93/3,04	3,26	2,93/3,05	3,30	2,92/3,16	3,04/3,18	3,00/3,14
Total COP (A 7 °C, W 30/35 °C)			3,43/3,59	4,01	3,86/4,04	3,56/3,68	4,00	3,47/3,61	3,86	3,45/3,86	3,69/3,82	3,54/3,66
SCOP [4]			**3,44/3,90**	**3,86**	**3,64/3,99**	**3,52/3,85**	**3,82**	**3,51/3,91**	**3,92**	**3,50/3,85**	**3,50/3,87**	**3,66/3,95**
$\eta_{s,h}$ [4]	**%**		**134,7/152,8**	**151,3**	**142,5/156,4**	**137,9/151**	**149,7**	**137,4/153,2**	**153,7**	**137/151,2**	**136,9/151,9**	**143,4/155,1**
Water flow	m³/h		69,1/69,1	75,3	82,9/82,9	88,4/88,9	99,1	98,2/98	107,3	103,6/108,9	115,9/117	132,1/132,3
Sound power (STD)	dB(A)		95,5/95,3	95,3	96/95,9	96,4/96,3	96,8	97,3/97,1	97,1	98,3/98,2	99,2/99,1	99,4/99,3
Sound pressure (STD) [5]	dB(A)		63,4/63,2	63,2	63,9/63,8	64,3/64,2	64,7	65,1/64,9	64,9	66,1/66	67/66,9	67,2/67,1
Sound power (S)	dB(A)		—/91,4	91,4	—/91,6	—/91,8	92,5	—/92,6	92,6	—/93,7	—/94,1	—/94,3
Sound pressure (S) [5]	dB(A)		—/59,3	59,3	—/59,5	—/59,7	60,4	—/60,4	60,4	—/61,5	—/61,9	—/62,1

1) According to EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and Following COMMISSION REGULATION (EU) 2016/2281.
3) According to EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and Following COMMISSION REGULATION (EU) No 813/2013. 5) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard.

Physical features – Single units

ECOi-W AQUA-Z DC 150-380 C/H - chiller / heat pump			150	170	190	210	220	230	260	270	290	300	320	350	380
Dimension	Height (STD AC) / (EC/HPF)	mm	2240 / 2312	2240 / 2312	2250 / 2300	2250 / 2300	— / 2300	2250 / 2300	2250 / 2300	— / 2300	2250 / 2300	— / 2300	2250 / 2300	2250 / 2300	2250 / 2300
	Width	mm	1096	1096	2211	2211	2211	2211	2211	2211	2211	2211	2211	2211	2211
	Length	mm	3795	3795	2650	2650	2650	2650	2650	3775	3775	3775	3775	3775	3775

Physical features NEW! Twin units

ECOi-W AQUA-Z DC 420-760 C/H - chiller / heat pump			420 (210+210)	440 (220+220)	460 (230+230)	520 (260+260)	540 (270+270)	580 (290+290)	600 (300+300)	640 (320+320)	700 (350+350)	760 (380+380)
Dimension	Height (STD AC) / (EC/HPF)	mm	2250 / 2300	— / 2300	2250 / 2300	2250 / 2300	— / 2300	2250 / 2300	— / 2300	2250 / 2300	2250 / 2300	2250 / 2300
	Width	mm	2211	2211	2211	2211	2211	2211	2211	2211	2211	2211
	Length	mm	5310	5310	5310	5310	7556	7556	7556	7556	7556	7556

Accessories and options
Anti-vibration rubber mount *
BACnet IP or BACnet MSTP
Desuperheater for sizes 190-380 (single unit)
Energy meter for power input
Fin&Tube Al/Cu with epoxy / Blygold treatment
High efficiency EC fan
High pressure fan (HPF)
Mechanical gauges kit (HP and LP manometers)
Coil guards for sizes 150-170 (single unit)
Chiller grilles and drain pan for sizes 190-380

Accessories and options
Power factor corrector capacitors
Shut off valves (single unit)*
Soft starter
Super low noise (S) version
Compressor jackets
Compressor box for sizes 190-380
Variable speed pumps
Water pressure switch
Water tank (single unit)

*Field-installed accessories. All other accessories are factory-installed.

Accessories supplied loose	
P-586595	Cascade controller (for single unit)
P-372061	Remote keyboard panel (for single unit)
P-364735	Remote keyboard panel (for twin units)
P-372615	Kit 4G modem
SVC-HYD-COMM-CLD1	1-year pre-paid Cloud access (for single unit)
SVC-HYD-COMM-CLD3	3-year pre-paid Cloud access (for single unit)
P-477042	Anti-vibration spring for sizes 150-170 (single unit)
P-477044	Anti-vibration spring for sizes 190-260 C version
P-477045	Anti-vibration spring for sizes 190-260 H version

Accessories supplied loose	
P-477047	Anti-vibration spring for sizes 270-380
P-477043	Anti-vibration spring with tank for sizes 150-170
P-477046	Anti-vibration spring with tank for sizes 190-260
P-477048	Anti-vibration spring with tank for sizes 290-380 C version
P-477049	Anti-vibration spring with tank for sizes 270-380 H version
P-348619	Water filter (for single unit)
P-348620	Water filter (for twin units)
tbd	Back to back connection kit (for twin units)

ECOi-W AQV C/H/E · R410A

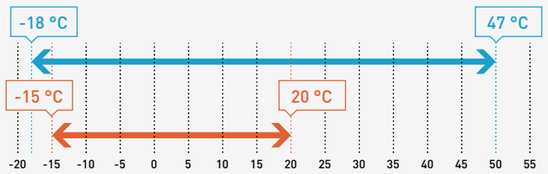
Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 83,3 to 136,6 kW.
Heating capacity: 91,8 to 146,9 kW.

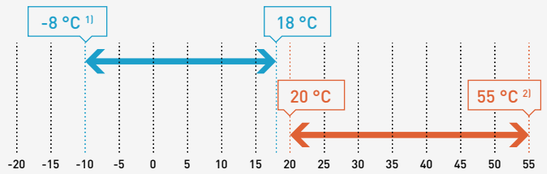
Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Ambient temperature (chiller and heat pump).



Leaving water temperature (chiller and heat pump).



1) With glycol, 5 °C without glycol.
2) Leaving water temperature maximum 55 °C (external air temperature minimum 6 °C) to be confirm with AC SELECT selection software.

ECOi-W AQV 85-140 C/H - chiller / heat pump				
Cooling	Outdoor air temperature	S	°C	From -18 to 44
		HT	°C	From -18 to 50 (85-115)
				From -18 to 47 (125-140)
Heating	Outdoor air temperature	S	°C	From -4 to 20
		Polar Version	°C	From -15 to 20
External static pressure		STD / HPF	Pa	0 / <120
ECOi-W AQV 85-140 E - condensing unit				
Evaporating limit			°C	From 1 to 15
Outdoor air temperature		STD	°C	From 0 to 48
		S	°C	From -18 to 45
		HT	°C	From 0 to 50

The range at a glance

- 3 versions: C (chiller), H (heat pump) and E (condensing unit)
- 6 sizes
- 3 configurations: STD (standard), HT (high temperature) and HPF (high pressure fan)
- 2 fan types: AC (standard fan) and EC (HSE model: high seasonal efficiency)
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- High seasonal performances: SEER up to 4,9
- Common configuration for the different versions: easy upgrade of the units in stock or on field
- Electronic expansion device: excellent control of superheating for the best performance at full and partial load and for a safe operation
- Microchannel coils: significant reduction on refrigerant charge and operating weight (C type)
- Compressor box: remarkable sound reduction even for the basic noise version
- Control platform: modular architecture, compressor envelope integration, corrective actions in border line areas, easy-friendly user interface

Equipment

- 2 refrigerant circuits
- 4 scroll compressors (tandem)
- Plate evaporator (AISI 316)
- Microprocessor control
- Low operating water content in the plant
- Electronic expansion valve as standard
- Brine version for process application
- Polar version for extreme conditions
- E-coating coil treatment as standard
- Compressor acoustic box
- Compressor jackets (standard on S)
- Phase sequence control
- Water flow switch

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**85**	**95**	**105**	**115**	**125**	**140**
ECOi-W AQV 85-140 C - chiller			**P-AQVE0085CA**	**P-AQVE0095CA**	**P-AQVE0105CA**	**P-AQVE0115CA**	**P-AQVE0125CA**	**P-AQVE0140CA**
Cooling capacity [1]		kW	83,5	93,6	103,0	110,1	121,9	136,6
Input power [1]		kW	26,9	31,0	33,5	36,5	41,1	46,1
EER [1]			3,10	3,03	3,06	3,03	2,98	2,97
EER HSE [1]			3,19	3,10	3,13	3,09	3,05	3,04
SEER [2] [3]			**4,55**	**4,8**	**4,78**	**4,8**	**4,73**	**4,53**
$\eta_{s,c}$ [2] [3]			**179**	**189**	**188**	**189**	**186**	**178**
SEER HSE [2] [3]			**4,73**	**4,75**	**4,95**	**4,95**	**4,78**	**4,6**
$\eta_{s,c}$ HSE [2] [3]			**186**	**187**	**195**	**195**	**188**	**181**
Nominal water flow (in the evaporator)		m³/h	14,3	16,1	17,6	19,0	21,0	23,5
Sound power [4]		dB(A)	84	84	84	84	88	88
Sound pressure at 10 m [5]		dB(A)	52	52	52	52	56	56
Sound power HPF [4]		dB(A)	92	92	92	92	95	95
Sound pressure at 10 m HPF [5]		dB(A)	60	60	60	60	63	63
ECOi-W AQV 85-140 C S - chiller			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	80,6	90,2	98,6	106	119,1	133,1
Input power [1]		kW	28	32,6	35,5	38,6	41,1	46,5
EER [1]			2,87	2,76	2,77	2,73	2,90	2,86
EER HSE [1]			3,00	2,87	2,87	2,81	2,96	2,91
SEER [2] [3]			**4,75**	**4,78**	**4,98**	**5,0**	**4,8**	**4,6**
$\eta_{s,c}$ [2] [3]			**187**	**188**	**196**	**197**	**189**	**181**
SEER HSE [2] [3]			**4,8**	**4,75**	**4,88**	**4,88**	**4,9**	**4,7**
$\eta_{s,c}$ HSE [2] [3]			**189**	**187**	**192**	**192**	**193**	**185**
Nominal water flow (in the evaporator)		m³/h	13,9	15,5	16,9	18,2	20,5	22,9
Sound power [4]		dB(A)	82	82	82	82	86	86
Sound pressure at 10 m [5]		dB(A)	50	50	50	50	54	54
ECOi-W AQV 85-140 C HT - chiller			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	86,2	96,9	107	115	124	139
Input power [1]		kW	28,1	31,6	33,9	36,4	41,1	46
EER [1]			3,07	3,06	3,15	3,16	3,03	3,03
SEER [2] [3]			**4,73**	**4,75**	**4,95**	**4,95**	**4,78**	**4,6**
$\eta_{s,c}$ [2] [3]			**186**	**187**	**195**	**195**	**188**	**181**
Nominal water flow (in the evaporator)		m³/h	14,8	16,6	18,3	19,8	21,4	24,0
Sound power [4]		dB(A)	95	95	95	95	95	95
Sound pressure at 10 m [5]		dB(A)	63	63	63	63	63	63

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 3) According to EN 14825. 4) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Accessories and options
Anti-vibration spring dampers
Automatic circuit breaker
Coils treatments
Desuperheater
Fan speed control
Hydrokit with 1 or 2 pumps with or without buffer tank
Mechanical gauges

Accessories and options
Overload protection for compressors
Power factor corrector capacitors
Several communication protocols
Soft starter
Unit protection grilles
Water differential pressure

Accessories supplied loose	
P-376463	Sequencer for up to 4 chillers installation
P-347941	Remote ON / OFF
P-364735	Remote keyboard panel
P-348000	Coil guards for sizes 85-115
P-348001	Coil guards for sizes 125-140

Accessories supplied loose	
P-347999	Chiller grilles for sizes 85-115
P-347998	Chiller grilles for sizes 125-140
P-473465	Pressure switch
P-348615	Water filter for sizes 85-105
P-348616	Water filter for sizes 115-140

ErP | HIGH SEER 5,00 | HIGH SCOP 4,12 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**85**	**95**	**105**	**115**	**125**	**140**
ECOi-W AQV 85-140 H - heat pump			**P-AQVE0085HA**	**P-AQVE0095HA**	**P-AQVE0105HA**	**P-AQVE0115HA**	**P-AQVE0125HA**	**P-AQVE0140HA**
Cooling capacity [1]		kW	81	89,9	98,9	106,9	115,8	129,2
Input power [1]		kW	27,5	31,5	34,2	36,9	41,8	46,5
EER [1]			2,95	2,85	2,89	2,89	2,77	2,78
EER HSE [1]			3,05	2,94	2,97	2,96	2,84	2,84
SEER [2]			**4,25**	**4,68**	**4,63**	**4,17**	**4,33**	**4,28**
$\eta_{s,c}$ [2]			**167**	**184**	**182**	**164**	**170**	**168**
SEER HSE [2]			**4,6**	**5,03**	**4,95**	**4,55**	**4,6**	**4,5**
$\eta_{s,c}$ HSE [2]			**181**	**198**	**195**	**179**	**181**	**177**
Nominal water flow (in the evaporator)		m³/h	13,9	15,5	17,0	18,4	19,9	22,2
Heating capacity [3]		kW	91,8	102,8	110	119	134	146,9
Input power [3]		kW	26,8	30,5	32,2	35,2	40,9	44,8
COP [3]			3,42	3,37	3,42	3,38	3,28	3,28
COP HSE [3]			3,54	3,47	3,52	3,47	3,36	3,36
COP [4]			4,35	4,28	4,36	4,32	4,16	4,17
COP HSE [4]			4,53	4,44	4,52	4,46	4,29	4,28
SCOP [2] [5]			**3,61**	**3,64**	**3,78**	**3,77**	**3,47**	**3,54**
$\eta_{s,h}$ [2] [5]			**141**	**143**	**148**	**148**	**136**	**139**
Nominal water flow (in the evaporator)		m³/h	17,2	17,8	19,3	20,6	23,3	25,5
Sound power [6]		dB(A)	84	84	84	84	88	88
Sound pressure at 10 m [7]		dB(A)	52	52	52	52	56	56
Sound power HPF [6]		dB(A)	92	92	92	92	95	95
Sound pressure at 10 m HPF [7]		dB(A)	60	60	60	60	63	63
ECOi-W AQV 85-140 H S - heat pump			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	78,4	86,7	95,1	102	112	124,6
Input power [1]		kW	28,6	33,2	36,0	39,1	43,1	47,6
EER [1]			2,75	2,61	2,64	2,62	2,61	2,63
EER HSE [1]			2,84	2,69	2,71	2,69	2,65	2,67
SEER [2]			**4,25**	**4,68**	**4,63**	**4,17**	**4,33**	**4,28**
$\eta_{s,c}$ [2]			**167**	**184**	**182**	**164**	**170**	**168**
SEER HSE [2]			**4,6**	**5,03**	**4,95**	**4,55**	**4,6**	**4,5**
$\eta_{s,c}$ HSE [2]			**181**	**198**	**195**	**179**	**181**	**177**
Nominal water flow (in the evaporator)		m³/h	13,5	14,9	16,3	17,6	19,3	21,5
Heating capacity [3]		kW	89,5	99,8	108	115	129	142
Input power [3]		kW	26,4	30,1	32,0	34,7	39,3	43,0
COP [3]			3,39	3,32	3,36	3,32	3,29	3,30
COP HSE [3]			3,55	3,46	3,50	3,45	3,38	3,38
COP [4]			4,32	4,24	4,31	4,25	4,22	4,24
COP HSE [4]			4,58	4,46	4,51	4,44	4,34	4,35
SCOP [2] [5]			**3,61**	**3,64**	**3,78**	**3,77**	**3,47**	**3,54**
$\eta_{s,h}$ [2] [5]			**141**	**143**	**148**	**148**	**136**	**139**
Nominal water flow (in the evaporator)		m³/h	15,6	17,4	18,8	20,1	22,5	24,7
Sound power [6]		dB(A)	82	82	82	82	86	86
Sound pressure at 10 m [7]		dB(A)	50	50	50	50	54	54
ECOi-W AQV 85-140 H HT - heat pump			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	83,5	93,4	104	112	118	132
Input power [1]		kW	28,4	32,0	34,4	37	42	46,2
EER [1]			2,94	2,9	3,02	3,02	2,8	2,85
SEER [2]			**4,6**	**5,02**	**4,95**	**4,55**	**4,6**	**4,5**
$\eta_{s,c}$ [2]			**181**	**198**	**195**	**179**	**181**	**177**
Nominal water flow (in the evaporator)		m³/h	14,3	16,0	17,8	19,2	20,3	22,7
Heating capacity [3]		kW	93,4	104,9	113,7	121,9	135	148
Input power [3]		kW	29,4	33,1	35,0	37,8	42,2	46,1
COP [3]			3,18	3,17	3,25	3,23	3,21	3,21
COP [4]			3,98	3,98	4,08	4,07	4,06	4,08
SCOP [2] [5]			**3,99**	**3,96**	**4,12**	**4,07**	**3,73**	**3,77**
$\eta_{s,h}$ [2] [5]			**157**	**155**	**162**	**160**	**146**	**148**
Nominal water flow (in the evaporator)		m³/h	16,3	18,3	19,8	21,2	23,6	25,8
Sound power [6]		dB(A)	95	95	95	95	95	95
Sound pressure at 10 m [7]		dB(A)	63	63	63	63	63	63

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**85**	**95**	**105**	**115**	**125**	**140**
ECOi-W AQV 85-140 E STD / HSE / HPF - condensing unit			**P-AQVE0085EA**	**P-AQVE0095EA**	**P-AQVE0105EA**	**P-AQVE0115EA**	**P-AQVE0125EA**	**P-AQVE0140EA**
Cooling capacity [1]		kW	92,1	103,2	113,2	121,8	134,7	151,0
Input power [1]		kW	27,4	31,4	34,1	37,0	41,7	46,8
Sound power [2]		dB(A)	84	84	84	84	88	88
Sound pressure at 10 m [3]		dB(A)	53	53	53	53	57	57
ECOi-W AQV 85-140 E STD / HSE S - condensing unit			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	89	99,5	108,7	116,6	131,6	147,2
Input power [1]		kW	28,6	33,1	36,1	39,3	41,9	47,3
Sound power [2]		dB(A)	82	82	82	82	86	86
Sound pressure at 10 m [3]		dB(A)	51	51	51	51	55	55
ECOi-W AQV 85-140 E HT - condensing unit			**85**	**95**	**105**	**115**	**125**	**140**
Cooling capacity [1]		kW	95	106,8	117,7	127	137,2	153,8
Input power [1]		kW	28,5	32,1	34,4	36,9	41,8	46,7
Sound power [2]		dB(A)	95	95	95	95	95	95
Sound pressure at 10 m [3]		dB(A)	64	64	64	64	64	64

Physical features

ECOi-W AQV 85-140 C/H/E - chiller / heat pump / condensing unit			**85**	**95**	**105**	**115**	**125**	**140**
Dimension	H x W x L	mm	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 3155	2185 x 1095 x 3155
Operating weight (C type)	STD / HT / S	kg	1058 / 1058 / 1088	1072 / 1072 / 1102	1111 / 1111 / 1141	1143 / 1143 / 1173	1183 / 1183 / 1213	1262 / 1262 / 1292
Operating weight (H type)	STD / HT / S	kg	1090 / 1090 / 1120	1105 / 1105 / 1135	1149 / 1149 / 1179	1180 / 1180 / 1210	1227 / 1227 / 1257	1301 / 1301 / 1331
Shipping weight (E type)	STD / S	kg	971 / 1001	983 / 1013	1013 / 1043	1043 / 1073	1066 / 1096	1142 / 1172
Water connections (85-140 C/H types)								
Type of connections (evaporator)			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½
Condenser (85-140 E type)								
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter		Inch	⅝	⅝	⅝	⅝	⅞	⅞
Outlet diameter		Inch	1 ⅜	1 ⅜	1 ⅜	1 ⅜	1 ⅜	1 ⅜

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN 14511-2013 standard. 2) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 3) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

ECOi-W VL H/E · R410A

Air cooled heat pumps and condensing units.

Cooling capacity: 176,2 to 307 kW.
Heating capacity: 200 to 337,4 kW.

Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

ECOi-W VL 604-904 H - heat pump			704	804	904
Cooling	Water outlet temperature	Water	°C	From 6 to 15	
		Water with glycol	°C	From 0 to 15	
		Water with glycol (Brine version)	°C	From -8 to 15	
		ΔT	K	From 3 to 8	
	Outdoor air temperature	STD	°C	-5 to 47	0 to 46	0 to 47
		L	°C	-5 to 45	0 to 44	0 to 45
		S	°C	-18 to 41	-18 to 40	-18 to 41
		HT	°C	-18 to 49	-18 to 48	-18 to 49
ECOi-W VL 1004-1204 H - heat pump				**1004**	**1104**	**1204**
Cooling	Water outlet temperature	Water	°C	From 6 to 15	
		Water with glycol	°C	From 0 to 15	
		Water with glycol (Brine version)	°C	From -8 to 15	
		ΔT	K	From 3 to 8	
	Outdoor air temperature	STD	°C	0 to 46	0 to 45	0 to 45
		L	°C	0 to 44	0 to 42	0 to 42
		S	°C	-18 to 40	-18 to 38	-18 to 38
		HT	°C	-18 to 48	-18 to 47	-18 to 47
ECOi-W VL 604-1204 H - heat pump						
Heating	Water outlet temperature		°C	From 30 to 50 [1]	
	Outdoor air temperature	STD	°C	From -10 to 20 [1]	
		L / S	°C	From - 4 to 20 [1]	
External static pressure		STD fans	Pa	0	
		Inverter HPF	Pa	<120	
ECOi-W VL 604-904 E - condensing unit				**704**	**804**	**904**
Evaporating temperature			°C	From 1 to 15	
Outdoor air temperature		STD	°C	-18 to 47 [1]	-18 to 46 [1]	-18 to 46 [2]
		L / S	°C	-18 to 45 [1]	-18 to 44 [1]	-18 to 45 [2]
		HT	°C	-18 to 49 [1]	-18 to 48 [1]	-18 to 49 [2]
ECOi-W VL 604-904 E - condensing unit				**1004**	**1104**	**1204**
Evaporating temperature			°C	1 to 15	
Outdoor air temperature		STD	°C	-18 to 46 [2]	-18 to 45 [2]	-18 to 45 [2]
		L / S	°C	-18 to 44 [2]	-18 to 42 [2]	-18 to 42 [2]
		HT	°C	-18 to 48 [2]	-18 to 47 [2]	-18 to 47 [2]

1(Maximum water outlet temperature 50 °C (minimum temperature outdoor air +0 °C) to be confirmed with AC SELECT selection software. 2) At high pressure 40,5 bar.
Chillers suitable for operation without buffer tank for water content greater than 3 liters of water per kW of output.

The range at a glance

- 2 versions: H (heat pump) and E (condensing unit)
- 6 sizes
- 3 configurations: STD (standard), HT (high temperature) and HPF (high pressure fan)
- 2 fan types: AC (standard fan) and EC (HSE model: high seasonal efficiency)
- 3 acoustic options: STD (standard), L (low noise) and S (super low noise)

Advantages

- High seasonal performances: SCOP up to 3,4
- Small footprint
- Common configuration for the different versions: easy upgrade of the units in stock or on field
- Electronic expansion device: excellent control of superheating for the best performance at full and partial load and for a safe operation
- Compressor box: remarkable sound reduction even for the basic noise version
- Control platform: modular architecture, compressor envelope integration, corrective actions in border line areas, easy-friendly user interface

Equipment

- 2 refrigerant circuits
- 4 scroll compressors (tandem)
- Plate evaporator (AISI 316)
- Microprocessor control
- Electronic expansion valve
- E-coating coil treatment
- Compressor acoustic box
- Phase sequence control
- Water differential pressure switch

Accessories and options
Anti-vibration spring dampers
Automatic circuit breaker
Coils treatments
Compressor jackets (standard on S)
Desuperheater
Fan speed control (-18 °C)
Hydrokit with 1 or 2 pumps with or without buffer tank (500 L) (+1 m of length)
Inverter fans
Mechanical gauges
Overload protection for compressors
Power factor corrector capacitors
Several communication protocols
Soft starter
Unit protection grilles

Technical performance

Power supply								
	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**704**	**804**	**904**	**1004**	**1104**	**1204**
ECOi-W VL 704-1204 H STD / HPF - heat pump			**P-VLE0704HA**	**P-VLE0804HA**	**P-VLE0904HA**	**P-VLE1004HA**	**P-VLE1104HA**	**P-VLE1204HA**
Cooling capacity [1]		kW	173,2	197,1	226,4	246,3	273,1	299,9
Input power [1]		kW	65,9	72,2	82,4	86,8	99,8	114,0
EER [1]			2,62	2,73	2,74	2,84	2,74	2,63
SEER [2]			**3,63**	**3,55**	**3,35**	**3,5**	**3,53**	**3,43**
$\eta_{s,c}$ [2]			**142**	**139**	**131**	**137**	**138**	**134**
SEER HSE [2]			**3,95**	**3,83**	**3,65**	**3,8**	**3,78**	**3,68**
$\eta_{s,c}$ HSE [2]			**155**	**150**	**143**	**149**	**148**	**144**
Nominal water flow (in the evaporator)		m³/h	29,9	33,9	38,8	42,4	47,0	51,6
Heating capacity [3]		kW	200,1	223,2	254,7	270,8	302,1	337,4
Input power [3]		kW	67,4	70,4	79,6	87,6	100,0	112,5
COP [3]			2,97	3,17	3,20	3,09	3,02	3,00
COP [4]			3,71	3,96	3,99	3,86	3,78	3,77
SCOP [2] [5]			**3,41**	**3,42**	**3,28**	**3,39**	**3,30**	**3,19**
$\eta_{s,h}$ [2] [5]			**133**	**134**	**128**	**133**	**129**	**125**
SCOP HSE [2] [5]			**3,44**	**3,4**	**3,32**	**3,33**	**3,37**	**3,3**
Nominal water flow (in the evaporator)		m³/h	34,7	38,6	43,6	47,0	52,3	58,4
Sound power [6]		dB(A)	93	93	94	94	95	95
Sound pressure at 10 m [7]		dB(A)	61	61	62	62	63	63
ECOi-W VL 704-1204 H L - heat pump			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [1]		kW	168,2	191,2	220,4	237,3	261,2	285,1
Input power [1]		kW	66,2	73,3	83,8	88,5	102,8	119,8
EER [1]			2,54	2,61	2,63	2,68	2,54	2,38
SEER [2]			**3**	**3**	**3,1**	**3,28**	**3,3**	**3,23**
$\eta_{s,c}$ [2]			**117**	**117**	**121**	**128**	**129**	**126**
SEER HSE [2]			**3,95**	**3,83**	**3,65**	**3,80**	**3,78**	**3,68**
$\eta_{s,c}$ HSE [2]			**155**	**150**	**143**	**149**	**148**	**144**
Nominal water flow (in the evaporator)		m³/h	29,0	32,9	38,2	40,8	45,0	49,1
Heating capacity [3]		kW	195,0	217,1	247,7	261,8	288,9	322,2
Input power [3]		kW	65,2	68,3	76,9	84,7	97,0	109,2
COP [3]			2,99	3,18	3,22	3,09	2,98	2,95
COP [4]			3,77	4,01	4,06	3,9	3,76	3,72
SCOP [2] [5]			**3,41**	**3,42**	**3,28**	**3,39**	**3,20**	**3,19**
$\eta_{s,h}$ [2] [5]			**133**	**134**	**128**	**133**	**125**	**125**
SCOP HSE [2] [5]			**3,44**	**3,4**	**3,32**	**3,33**	**3,37**	**3,24**
Nominal water flow (in the evaporator)		m³/h	33,8	37,5	42,5	45,4	50,0	55,8
Sound power [6]		dB(A)	87	87	88	88	89	89
Sound pressure at 10 m [7]		dB(A)	55	55	56	56	57	57
ECOi-W VL 704-1204 H S - heat pump			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [1]		kW	164,3	185,2	214,5	230,4	253,3	276,1
Input power [1]		kW	69,0	76,2	86,1	90,7	106,9	124,9
EER [1]			2,38	2,43	2,49	2,54	2,37	2,21
SEER [2]			**3,63**	**3,55**	**3,35**	**3,5**	**3,53**	**3,43**
$\eta_{s,c}$ [2]			**142**	**139**	**131**	**137**	**138**	**134**
SEER HSE [2]			**3,95**	**3,83**	**3,65**	**3,8**	**3,78**	**3,68**
$\eta_{s,c}$ HSE [2]			**155**	**150**	**143**	**149**	**148**	**144**
Nominal water flow (in the evaporator)		m³/h	28,3	31,9	36,9	39,7	43,6	47,5
Heating capacity [3]		kW	184,9	202,9	232,6	245,7	266,8	297,0
Input power [3]		kW	64,9	67,0	75,8	83,9	95,0	108,0
COP [3]			2,85	3,03	3,07	2,93	2,81	2,75
COP HSE [3]			2,95	3,13	3,19	3,04	2,90	2,83
COP [4]			3,6	3,83	3,88	3,71	3,56	3,48
COP HSE [4]			3,76	3,98	4,07	3,87	3,7	3,59
SCOP [2] [5]			**3,41**	**3,42**	**3,28**	**3,39**	**3,30**	**3,19**
$\eta_{s,h}$ [2] [5]			**133**	**134**	**128**	**133**	**129**	**125**
SCOP HSE [2] [5]			**3,44**	**3,4**	**3,32**	**3,33**	**3,37**	**3,26**
Nominal water flow (in the evaporator)		m³/h	32,0	35,2	40,4	42,5	46,3	51,5
Sound power [6]		dB(A)	83	83	84	84	85	85
Sound pressure at 10 m [7]		dB(A)	51	51	52	52	53	53

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Accessories supplied loose	
P-376463	Sequencer for up to 4 chillers installation
P-347941	Remote ON / OFF
P-364735	Remote keyboard panel
P-348003	Chiller grilles

Accessories supplied loose	
P-365581	Flow switch
P-473465	Pressure switch
P-348619	Water filter

ErP · HIGH SEER 3,63 · HIGH SCOP 3,42 · AIR COOLED · PLATE HEAT EXCHANGER · SCROLL COMPRESSOR · VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**704**	**804**	**904**	**1004**	**1104**	**1204**
ECOi-W VL 704-1204 H HT - heat pump			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [1]		kW	175,6	199,7	229,5	250,1	276,5	305,6
Input power [1]		kW	66,3	72,4	83,6	87,4	101,1	114,2
EER [1]			2,64	2,75	2,74	2,85	2,73	2,67
SEER [2]			**3**	**3**	**3,1**	**3,28**	**3,3**	**3,23**
$\eta_{s,c}$ [2]			**117**	**117**	**121**	**128**	**129**	**126**
Nominal water flow (in the evaporator)		m³/h	30,1	34,3	39,4	42,9	47,5	52,5
Heating capacity [3]		kW	200,7	224,0	256,6	273,7	305,5	341,5
Input power [3]		kW	68,6	71,7	81,8	90,2	103	115
COP [3]			2,93	3,13	3,14	3,04	2,98	2,97
COP [4]			3,66	3,92	3,91	3,79	3,73	3,73
SCOP [2] [5]			**3,44**	**3,40**	**3,32**	**3,33**	**3,37**	**3,26**
$\eta_{s,h}$ [2] [5]			**135**	**133**	**130**	**130**	**132**	**127**
Nominal water flow (in the evaporator)		m³/h	34,9	39,0	44,7	47,6	53,2	59,4
Sound power [6]		dB(A)	99	99	100	100	100	100
Sound pressure at 10 m [7]		dB(A)	67	67	68	68	68	68
ECOi-W VL 704-1204 E STD / HPF - condensing unit			**P-VLE0704EA**	**P-VLE0804EA**	**P-VLE0904EA**	**P-VLE1004EA**	**P-VLE1104EA**	**P-VLE1204EA**
Cooling capacity [8]		kW	199,0	224,0	258,0	283,0	315,0	347,0
Input power [8]		kW	68,7	74,7	86,6	90,6	106	120
Sound power [6]		dB(A)	93	93	94	94	95	95
Sound pressure at 10 m [7]		dB(A)	61	61	62	62	63	63
ECOi-W VL 704-1204 E L - condensing unit			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [8]		kW	194,0	218,0	251,0	272,5	301,0	330,0
Input power [8]		kW	69,6	76,6	87,8	92,8	109	126
Sound power [6]		dB(A)	87	87	88	88	89	89
Sound pressure at 10 m [7]		dB(A)	55	55	56	56	57	57
ECOi-W VL 704-1204 E S - condensing unit			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [8]		kW	188,5	211,0	244,0	264,5	292,0	319,0
Input power [8]		kW	72,0	79,5	90,5	95,5	112	131
Sound power [6]		dB(A)	83	83	84	84	85	85
Sound pressure at 10 m [7]		dB(A)	51	51	52	52	53	53
ECOi-W VL 704-1204 E HT - condensing unit			**704**	**804**	**904**	**1004**	**1104**	**1204**
Cooling capacity [8]		kW	201,0	226,5	261,0	286,5	318,0	353,0
Input power [8]		kW	68,9	74,9	87,1	91,0	105	119
Sound power [6]		dB(A)	99	99	100	100	100	100
Sound pressure at 10 m [7]		dB(A)	67	67	68	68	68	68

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 8) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature.

Physical features

ECOi-W VL 704 - 1204 H/E - heat pump / condensing unit			**704**	**804**	**904**	**1004**	**1104**	**1204**
Dimension	H x W x L	mm	2300 x 1100 x 4300	2300 x 1100 x 4300	2300 x 1100 x 4300	2300 x 1100 x 4300	2300 x 1100 x 4300	2300 x 1100 x 4300
Operating weight - heat pump	STD / L	kg	1675	1820	1980	2125	2215	2225
	S	kg	1710	1855	2015	2165	2255	2265
	HT	kg	1705	1850	2020	2165	2255	2265
Shipping weight - condensing unit	STD / L	kg	1490	1615	1700	1825	1910	1920
	S	kg	1525	1650	1735	1865	1950	1960
	HT	kg	1520	1645	1740	1865	1950	1960
ECOi-W VL 704-1204 H STD / HPF - heat pump			**704**	**804**	**904**	**1004**	**1104**	**1204**
Water connections								
Type of connections (evaporator)			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	2 ½	2 ½	3	3	3	3
ECOi-W VL 704-1204 E - condensing unit			**704**	**804**	**904**	**1004**	**1104**	**1204**
Refrigerant connections								
Inlet diameter		Inch	⅞	⅞	1 ⅛	1 ⅛	1 ⅛	1 ⅛
Outlet diameter		Inch	1 ⅝	1 ⅝	2 ⅛	2 ⅛	2 ⅛	2 ⅛

ECOi-W AQUA EVO 400-800 C - R410A

Air cooled chillers.

Cooling capacity: 390,4 to 775,4 kW.

Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

ECOi-W AQUA EVO 400-800 C - chiller				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol*	°C	From -10 to 5
		ΔT	K	From 3 to 7
	Maximum operating pressure		bar	6
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 10 to 48
		S / EC / EC S	°C	From -18 to 48
		HT	°C	From -18 to 52
External static pressure	STD fans		Pa	0
	High pressure fan (HPF)		Pa	<120

*For liquid outlet temperature <-3 °C provide Brine version.

The range at a glance

- 1 version: C (chiller)
- 8 sizes
- 3 configurations: STD (standard), HT (high temperature) and HPF (high pressure fan)
- 2 fan types: AC (standard fan) and EC (high-efficiency fan)
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- High seasonal performances: SEER up to 4,6
- Low sound emission and high-efficiency level in a single unit: Super Low Noise version
- Electronic expansion device: excellent control of superheating for the best performance at full and partial load and for a safe operation
- E-coated microchannel coils: Significant reduction on refrigerant charge and operating weight and excellent anticorrosion protection with the standard delivery
- Compressor box: remarkable sound reduction even for the basic noise version
- Control platform: modular architecture, compressor envelope integration, corrective actions in border line areas, easy-friendly user interface

Equipment

- Brine version: chiller for process application LWT -10 °C
- Plate evaporator
- Electronic expansion valve
- Modbus RS485 (standard for sizes 400-670)
- Microchannel coils (MCHX)
- E-coating coil treatment as standard on MCHX
- Compressor acoustic box
- Compressor jackets (standard as S version)
- Fan speed control (standard as EC/HPF/S versions)
- Phase sequence control
- Water differential pressure switch

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Power supply [1]	Voltage	V	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50
Size			**400**	**450 S**	**490 S**	**530 S**	**600**	**670**	**750 S**	**800 S**
ECOi-W AQUA EVO 400-800 C AC - chiller		**P-AQAVE**	**0400CA**	**0450CA**	**0490CA**	**0530CA**	**0600CA**	**0670CA**	**0750CA**	**0800CA**
Nominal cooling capacity [2]		kW	390,4	431,1	470,2	513,7	584,5	653,2	727,7	775,4
Input power [2]		kW	126,7	138,6	152,7	167,9	189,1	210,7	234,7	250,1
EER [2]			3,08	3,11	3,08	3,06	3,09	3,10	3,10	3,10
SEER [3] [4]			**4,48**	**4,63**	**4,58**	**4,78**	**4,58**	**4,59**	**4,73**	**4,70**
$\eta_{s,c}$ [3] [4]		**%**	**176**	**182**	**180**	**188**	**180**	**180,7**	**186**	**185**
Nominal water flow (in the evaporator)		m³/h	68,0	75,1	82,0	89,5	101,8	113,9	113,9	135,1
Sound power [5]		dB(A)	92	87	87	87	94	94	89	89
Sound pressure at 10 m [6]		dB(A)	60	54	54	54	61	61	56	56
ECOi-W AQUA EVO 400-800 C EC - chiller			**400**	**450 S**	**490 S**	**530 S**	**600**	**670**	**750 S**	**800 S**
Nominal cooling capacity [2]		kW	400,0	447,0	489,0	535,0	599,0	669,0	751,4	801,4
Input power [2]		kW	127,0	140,0	154,0	170,0	189,0	211,0	239,7	255,7
EER [2]			3,15	3,19	3,17	3,16	3,17	3,17	3,13	3,13
SEER [3] [4]			**4,65**	**4,58**	**4,68**	**4,55**	**4,78**	**4,87**	**4,65**	**4,68**
$\eta_{s,c}$ [3] [4]		**%**	**183**	**180**	**184**	**179**	**188**	**192**	**183**	**184**
Nominal water flow (in the evaporator)		m³/h	68,8	76,9	84,2	92,2	103,1	115,1	131,0	139,7
Sound power [5]		dB(A)	92	93	93	94	94	94	95	95
Sound pressure at 10 m [6]		dB(A)	60	61	60	61	61	61	62	62

Physical features

ECOi-W AQUA EVO 400-800 C - chiller			**400**	**450 S**	**490 S**	**530 S**	**600**	**670**	**750 S**	**800 S**
Dimension	H x W	mm	2500 x 2175	2500 x 2175	2500 x 2175	2500 x 2175	2500 x 2175	2500 x 2175	2500 x 2175	2500 x 2175
	Length STD / EC / HPF	mm	4580	5620	6680	6680	7760	7760	8900	8900
	Length S / EC S / HT	mm	5620	6680	7760	7760	8800	8800	11000	11000
Operating weight	STD / EC / HPF	kg	3028	3367	3783	4069	4317	4524	5536	5607
	S / EC S / HT	kg	3318	3656	4069	4369	4597	4789	6111	6183
Water connections (evaporator and condenser)										
Type of connections			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	4	4	4	4	4	5	6	6

1) Voltage 400 V +/- 10%. 2) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) According to EN 14825. 5) Sound power is declared in nominal full load condition (cooling operation), referring to ISO standard 9614, in accordance with Eurovent certification program. 6) Sound pressure refer to ISO Standard 3744, parallelepiped shape in a free field on a reflective surface.

Accessories and options
Anti-vibration spring dampers
Automatic circuit breaker
Coils treatments
Desuperheater
Fan speed control (-14 °C in cooling mode – standard as EC/HPF/S versions)
Hydrokit with 1 or 2 pumps with or without buffer tank (500 L 400-450, 1000 L 470-670)

Accessories and options
Mechanical gauges
Overload protection for compressors
Power factor corrector capacitors
Several communication protocols
Soft starter
Unit protection grilles
Variable pump (for sizes 750-800 upon request)

Accessories supplied loose	
P-376463	Sequencer for up to 4 chillers installation
P-347941	Remote ON / OFF control
P-364735	Remote keyboard panel
P-365581	Flow switch

Accessories supplied loose	
P-473465	Pressure switch
P-348620	Water filter for sizes 400-530
P-348618	Water filter for sizes 580-750
P-362589	Water filter for size 800

ErP | HIGH SEER 4,78 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | VERY HIGH PERFORMANCE

ErP: Check ErP compliance according to the configurations in AC SLECT: https://acselect.panasonic.eu/.

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W SW-N EVO 380-1260 C · R513A

Air cooled chillers.

Cooling capacity: 366 to 1240,5 kW.

Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

ECOi-W SW-N EVO 380-1260 C - chiller			
Leaving water temperature	Water	°C	From 5 to 15
	Water with glycol	°C	From 0 to 5
	Brine	°C	From -8 to 0
	ΔT	K	From 3 to 8
Outdoor air temperature	STD	°C	From -10 to 46
	S	°C	From -10 to 44
	HT	°C	From -10 to 49
	Minimum air temperature	°C	-10
External static pressure	STD fans	Pa	0
	High pressure fans	Pa	< 120

The range at a glance

· 1 version: C (chiller)
· 12 sizes
· 2 configurations: STD (standard) and HT (high temperature)
· 1 fan type: EC (high-efficiency fan)
· 2 acoustic options: STD (standard) and S (super low noise)

Advantages

· High seasonal efficiency level exceeding ErP 2021 requirements
· High durability painting process for casing and frame, offering C4 corrosion category in accordance with ISO 12944
· Compressor metal box, providing basic acoustic protection and resistance to atmospheric agents
· Side panel on coil ends, protecting from corrosion and damage
· EC fan motors, improving part load efficiency, extending envelope operation and reducing noise level in part load operation
· Proprietary software logic, optimizing unit efficiency in accordance with plant needs and protecting unit operation with preventing actions

Equipment

· 2 refrigerant circuits
· 2 screw compressors
· Pure countercurrent shell and tubes direct expansion heat exchanger
· Axial type EC fan motors
· Micro-channels condensers
· Electronic expansion valve
· Hydronic / heat recovery options

Accessories and options
Antifreeze electric heater for hydraulic manifolds
Anti-vibration spring dampers
Chiller grilles
Compressor acoustic box
Compressor star delta start
Compressor suction valve
E-coating treatment

Accessories and options
Finned tubes (Al/Cu)
Hydro kit 1P-SP/1P-HP/2P-SP/2PHP
Mechanical gauges kit (HP and LP manometers)
Power factor corrector capacitors
Several communication protocols
Variable pump

Accessories supplied loose	
P-347941	Remote ON / OFF
P-364735	Remote keyboard panel
P-365581	Flow switch

Accessories supplied loose	
P-348620	Water filter for sizes 320-510
P-348618	Water filter for sizes 590-730
P-362589	Water filter for sizes 810-1260

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50	50	50
Size			**380**	**440**	**510**	**590**	**660**	**730**	**810**	**900**	**980**	**1060**	**1160**	**1260**
ECOi-W SW-N EVO 380-1260 C STD / HT / HP - chiller	**P-SWVN****CA**		**0380**	**0440**	**0510**	**0590**	**0660**	**0730**	**0810**	**0900**	**0980**	**1060**	**1160**	**1260**
Nominal cooling capacity [1]		kW	365,7	443,0	500,2	565,8	643,5	704,3	778,1	896,9	983,5	1047,4	1154,0	1240,5
Input power [1]		kW	126	146	168	185	217	233	259	296	328	340	378	416
EER [1]			2,89	3,04	2,96	3,05	2,96	3,01	3,00	3,02	2,99	3,08	3,05	2,98
EER CONDITION B (74%)			3,95	4,01	3,99	4,02	3,93	3,95	3,89	3,82	3,98	4,10	4,14	4,20
EER CONDITION C (47%)			4,66	4,81	4,81	5,03	4,76	4,66	4,72	4,68	4,72	5,10	5,06	5,02
EER CONDITION D (21%)			6,14	6,31	6,33	6,65	6,62	6,23	6,62	6,32	6,22	6,69	6,70	6,68
SEER [2] [3]			**4,53**	**4,64**	**4,65**	**4,80**	**4,66**	**4,56**	**4,62**	**4,56**	**4,60**	**4,87**	**4,86**	**4,85**
$\eta_{s,c}$ [2] [3]		**%**	**178**	**182**	**183**	**189**	**183**	**179**	**182**	**179**	**181**	**192**	**191**	**191**
Number of refrigerant circuits			2	2	2	2	2	2	2	2	2	2	2	2
Total capacity steps [4]		%	22% ÷ 100%	18% ÷ 100%	16% ÷ 100%	14% ÷ 100%	13% ÷ 100%	15% ÷ 100%	13% ÷ 100%	14% ÷ 100%	13% ÷ 100%	17% ÷ 100%	15% ÷ 100%	14% ÷ 100%
Sound power [5]		dB(A)	97	98	100	100	100	101	101	102	102	103	103	103
Sound power [5]**/***		dB(A)	102	103	104	104	104	105	105	106	106	107	108	108
Sound pressure at 10 m [6]		dB(A)	65	66	68	68	68	68	68	69	69	70	70	70
Sound pressure at 10 m [6]**/***		dB(A)	70	71	72	72	72	72	72	73	73	74	75	75
ECOi-W SW-N EVO 380-1260 C S - chiller			**380**	**440**	**510**	**590**	**660**	**730**	**810**	**900**	**980**	**1060**	**1160**	**1260**
Nominal cooling capacity [1]		kW	362,8	441,8	498,2	563,1	640,0	702,5	775,9	893,1	980,9	1045,5	1150,6	1234,8
Input power [1]		kW	126,1	144,9	168,0	184,0	209,3	231,5	256,4	294,7	326,4	335,5	375,0	416,8
EER [1]			2,88	3,05	2,97	3,06	3,06	3,03	3,03	3,03	3,01	3,12	3,07	2,96
EER CONDITION B (74%)			3,90	4,03	3,99	4,00	3,96	3,97	4,01	3,84	4,18	4,15	4,22	4,31
EER CONDITION C (47%)			4,69	5,04	5,05	5,21	4,95	4,91	4,98	4,94	5,02	5,24	5,36	5,30
EER CONDITION D (21%)			6,44	6,82	6,75	6,92	6,93	6,64	6,71	6,60	6,55	7,00	7,24	7,04
SEER [2] [3]			**4,56**	**4,82**	**4,79**	**4,89**	**4,78**	**4,73**	**4,77**	**4,69**	**4,82**	**4,98**	**5,07**	**5,03**
$\eta_{s,c}$ [2] [3]		**%**	**180**	**190**	**189**	**193**	**188**	**186**	**188**	**185**	**190**	**196**	**200**	**198**
Number of refrigerant circuits			2	2	2	2	2	2	2	2	2	2	2	2
Total capacity steps [4]		%	22% ÷ 100%	18% ÷ 100%	16% ÷ 100%	14% ÷ 100%	13% ÷ 100%	15% ÷ 100%	13% ÷ 100%	14% ÷ 100%	13% ÷ 100%	17% ÷ 100%	15% ÷ 100%	14% ÷ 100%
Sound power [5]		dB(A)	94	94	97	97	97	98	98	99	99	99	100	100
Sound pressure at 10 m [6]		dB(A)	62	62	65	65	65	65	65	66	66	66	67	67

Physical features

ECOi-W SW-N EVO 380-1260 C - chiller			380	440	510	590	660	730	810	900	980	1060	1160	1260
Dimension	Height	mm	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510	2510
	Height S	mm	2590	2590	2590	2590	2590	2590	2590	2590	2590	2590	2590	2590
	Width	mm	2192	2192	2192	2192	2192	2192	2192	2192	2192	2192	2192	2192
	Length	mm	4660	5712	5712	6764	7816	7816	8868	9920	10972	12024	13076	13076
Operating weight	STD / HT / HP	kg	3896	4259	4897	5241	5620	6207	6531	7326	7764	8491	8875	9074
	S	kg	3981	4352	4990	5323	5702	6293	6617	7412	7852	8579	8963	9162

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN 14511-2013 standard. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281.
3) According to EN 14825. 4) This value can change for BC version or other special applications. 5) Sound levels are at fully loaded conditions. Sound power values refer to ISO standard 3744. 6) Sound pressures refer to ISO Standard 3744, parallelepiped shape.
*High temperature units (HT), data with fans at maximum speed (1100 r.p.m.). **HPF units, data with fans at maximum speed (1100 r.p.m.).

Technological innovation - All-round variable volume flow management.

Refrigerant.
Inverter driven compressor technology and electronic expansion valve.

Air.
EC brushless fan motor technology.

Water.
Inverter driven pump technology.

Improved part load efficiency.
Continuous capacity control.
Flexible offer in plant integration.

ErP · HIGH SEER 5,07 · INVERTER · AIR COOLED · SHELL AND TUBE EVAPORATOR · SCREW COMPRESSOR · SUPER QUIET · VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

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Water cooled chillers, heat pumps and condenserless units

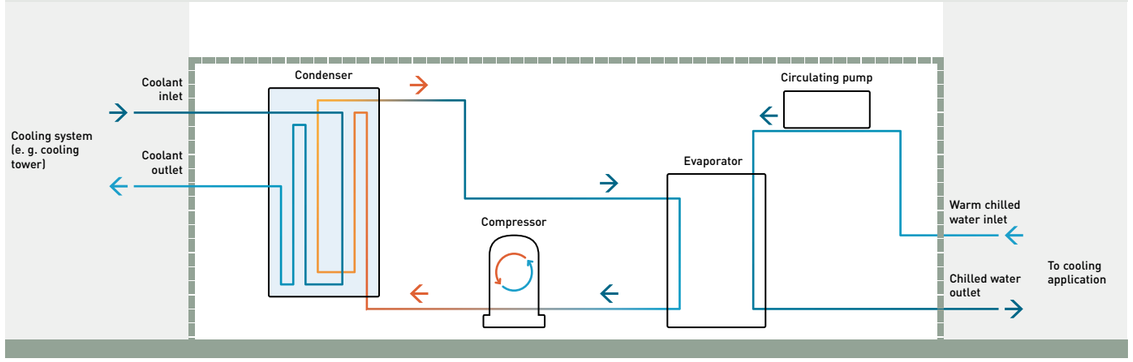
Quality and comfort for all your projects with ECOi-W units! Perfect for any type of building, the system consists of water cooled chillers or heat pumps that provide cold or hot water to water terminals. This system is particularly well suited for applications such as office buildings, hotels, shopping centers and hospitals.

Water cooled chillers ECOi-W use water as the cooling medium to extract heat from the cooling circuit by cooling and condensing the refrigerant.

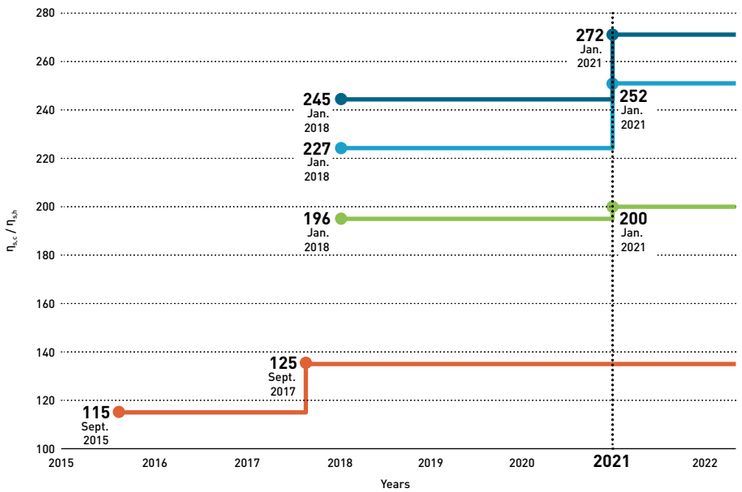
Advantages:

- Higher cooling efficiency compared to air cooled chillers
- Less impact on the environment with less waste heat or fan noise

*The below illustration show cooling application.



Ecodesign



Water to water comfort chiller [1].

≤400 kW. Minimum $\eta_{s,c}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.	>400 kW and ≤1500 kW. Minimum $\eta_{s,c}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.	>1500 kW. Minimum $\eta_{s,c}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

Water to water heat pumps [2].

≤400 kW. Minimum $\eta_{s,h}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) No813/2013.	>400 kW and ≤1500 kW. Minimum $\eta_{s,h}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.	>1500 kW. Minimum $\eta_{s,h}$ to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

1) Calculated at nominal conditions: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 30/35 °C DB.
2) Rated heat output of space heaters and combination heaters at reference design conditions (Tdesign -10 °C) as stated in COMMISSION REGULATION (EU) No 813/2013.

Quick selection guide - Water cooled chillers

Page	Size	Cooling capacity (kW)	SEER	Sound power (dB(A))	Dimension L x H x W (mm)
ECOi-W WQ C	20	21,2	5,58	65	821 x 1350 x 455
	25	26,2	5,60	67	821 x 1350 x 455
	30	31,1	5,45	67	821 x 1350 x 455
	35	34,8	5,50	68	821 x 1350 x 455
	40	39,2	5,35	68	821 x 1350 x 455
	45	46,6	5,83	70	821 x 1350 x 455
P. 512	50	50,9	6,13	70	1210 x 1500 x 850
	60	61,1	6,38	70	1210 x 1500 x 850
	75	77,3	5,95	72	1210 x 1500 x 850
	90	91,1	6,70	73	1210 x 1500 x 850
	120	118,4	5,90	78	1210 x 1500 x 850
	150	147,1	6,13	81	1210 x 1500 x 850
	170	170	6,08	81	1210 x 1500 x 850
	190	192,7	6,20	81	1210 x 1500 x 850
P. 514	524	154,3	5,55	81	2250 x 1845 x 850
	604	181,8	6,28	82	2250 x 1845 x 850
	704	208,9	6,10	85	2250 x 1845 x 850
	804	232,6	5,75	87	2250 x 1845 x 850
	904	265,8	6,10	89	2250 x 1845 x 850
	1004	295,6	6,10	90	2250 x 1845 x 850
	1104	338	6,20	90	2250 x 1845 x 850
	1204	379,2	6,25	90	2250 x 1845 x 850
	1404	421,1	6,43	92	2250 x 1845 x 850
	1604	459,8	6,47	94	2250 x 1845 x 850
ECOi-W WSW-N EVO C	440	418,6	6,38	95	4250 x 1650 x 1350
	490	471,6	6,38	95	4250 x 1650 x 1350
	570	539,3	6,52	95	4210 x 1650 x 1350
	630	601,9	6,42	95	4210 x 1650 x 1350
	700	664,4	6,38	95	4180 x 1650 x 1350
	770	734,6	6,38	95	4180 x 1650 x 1350
P. 516	860	825,0	6,41	98	4510 x 1710 x 1520
	920	874,1	6,41	98	4510 x 1710 x 1520
	990	936,6	6,41	98	4600 x 1710 x 1520
	1070	1019,1	6,42	98	4650 x 1710 x 1520
	1130	1071,8	6,53	98	4650 x 1710 x 1520
	1220	1159,3	6,51	98	4650 x 1710 x 1520
	1280	1226,1	6,44	98	4650 x 1710 x 1520
	1400	1334,6	6,45	98	5350 x 1710 x 1520
	1550	1457,9	6,42	98	5350 x 1710 x 1520

Quick selection guide - Water cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension L x H x W (mm)
ECOi-W WQ H	20	20,8 23,8	5,13 / 5,17	65	821 x 1350 x 455
	25	26,1 29,0	5,00 / 5,45	67	821 x 1350 x 455
	30	30,2 33,9	4,88 / 5,33	67	821 x 1350 x 455
	35	34,1 38,6	5,10 / 5,05	68	821 x 1350 x 455
	40	38,3 43,1	5,00 / 4,83	68	821 x 1350 x 455
	45	45,7 51,2	5,48 / 5,28	70	821 x 1350 x 455
P. 512	50	50,1 58,6	4,48 / 5,70	70	1210 x 1500 x 850
	60	59,1 65,8	4,83 / 5,88	70	1210 x 1500 x 850
	75	76,3 87,5	4,70 / 5,70	72	1210 x 1500 x 850
	90	88,9 103,0	4,88 / 5,78	73	1210 x 1500 x 850
	120	115,0 134,0	4,93 / 5,75	78	1210 x 1500 x 850
	150	145,0 167,0	4,98 / 5,63	81	1210 x 1500 x 850
	170	166,0 193,0	5,65 / 5,95	81	1210 x 1500 x 850
	190	186,0 215,0	5,10 / 5,63	81	1210 x 1500 x 850
P. 514	524	151,0 172,0	4,65 / 5,40	81	2250 x 1845 x 850
	604	177,0 203,0	4,93 / 5,20	82	2250 x 1845 x 850
	704	205,0 234,0	4,93 / 5,38	85	2250 x 1845 x 850
	804	226,0 259,0	4,68 / 5,35	87	2250 x 1845 x 850
	904	264,0 298,0	5,15 / 5,73	89	2250 x 1845 x 850
	1004	292,0 333,0	5,10 / 5,85	90	2250 x 1845 x 850
	1104	333,0 379,0	5,28 / 5,83	90	2250 x 1845 x 850
	1204	371,0 422,0	5,30 / 5,85	90	2250 x 1845 x 850
	1404	421,0 471,0	6,43 / —	92	2250 x 1845 x 850
	1604	460,0 508,0	6,47 / —	94	2250 x 1845 x 850
ECOi-W WSW-N EVO H	440	365,9 470,3	6,53 / 4,46	95	4590 x 1650 x 1450
	490	418,9 536,5	6,38 / 4,52	95	4590 x 1650 x 1450
	570	483,2 621,7	6,40 / 4,4	95	4630 x 1650 x 1450
	630	541,0 698,6	6,38 / 4,31	95	4630 x 1650 x 1450
	700	595,6 764,7	6,45 / 4,47	95	4320 x 1650 x 1450
	770	646,6 835,9	6,60 / 4,37	95	4560 x 1650 x 1450
P. 516	860	715,5 923,0	6,40 / 4,39	98	5110 x 1680 x 1520
	920	772,0 992,7	6,50 / 4,44	98	5110 x 1680 x 1520
	990	828,1 1063,0	6,40 / 4,49	98	5100 x 1680 x 1520
	1070	891,5 1146,0	6,40 / 4,45	98	5100 x 1680 x 1520
	1130	958,8 1231,8	6,50 / 4,45	98	5000 x 1680 x 1520
	1220	1023,8 1315,8	6,48 / 4,41	98	5000 x 1680 x 1520
	1280	1078,2 1386,1	6,48 / 4,37	98	5000 x 1680 x 1520
	1400	1186,9 1523,8	6,50 / 4,45	98	5300 x 1710 x 1580
	1550	1285,5 1654,6	6,70 / 4,38	98	5300 x 1710 x 1580

Quick selection guide - Water cooled condenserless units

Page	Size	Cooling capacity (kW)	Sound power (dB(A))	Dimension L x W x H (mm)
ECOi-W WQ R	20	**18,3**	65	821 x 1350 x 455
	25	**22,7**	67	821 x 1350 x 455
	30	**27,1**	67	821 x 1350 x 455
	35	**30,0**	68	821 x 1350 x 455
	40	**34,2**	68	821 x 1350 x 455
	45	**43,1**	70	821 x 1350 x 455
	50	**45,0**	70	1210 x 1500 x 850
P. 512	60	**53,4**	70	1210 x 1500 x 850
	75	**67,5**	72	1210 x 1500 x 850
	90	**80,1**	73	1210 x 1500 x 850
	120	**104,0**	78	1210 x 1500 x 850
	150	**128,0**	81	1210 x 1500 x 850
	170	**148,0**	81	1210 x 1500 x 850
	190	**168,0**	81	1210 x 1500 x 850
	524	**130,0**	81	2250 x 1845 x 850
	604	**155,3**	82	2250 x 1845 x 850
	704	**177,6**	85	2250 x 1845 x 850
	804	**196,5**	87	2250 x 1845 x 850
P. 514	904	**224,2**	89	2250 x 1845 x 850
	1004	**247,2**	90	2250 x 1845 x 850
	1104	**285,9**	90	2250 x 1845 x 850
	1204	**316,1**	90	2250 x 1845 x 850
	1404	**368,0**	92	2250 x 1845 x 850
	1604	**397,0**	94	2250 x 1845 x 850
ECOi-W WSW-N EVO R	440	**358,6**	95	4590 x 1650 x 1450
	490	**405,3**	95	4590 x 1650 x 1450
	570	**472,7**	95	4630 x 1650 x 1450
	630	**535,6**	95	4630 x 1650 x 1450
	700	**586,2**	95	4320 x 1650 x 1450
	770	**638,1**	95	4560 x 1650 x 1450
	860	**708,9**	98	5110 x 1680 x 1520
	920	**758,1**	98	5110 x 1680 x 1520
P. 516	990	**817,2**	98	5100 x 1680 x 1520
	1070	**886,2**	98	5100 x 1680 x 1520
	1130	**947,7**	98	5000 x 1680 x 1520
	1220	**1015,0**	98	5000 x 1680 x 1520
	1280	**1075,9**	98	5000 x 1680 x 1520
	1400	**1181,4**	98	5300 x 1710 x 1580
	1550	**1277,8**	98	5300 x 1710 x 1580

ECOi-W WQ 20-190 C/H/R · R410A

Water cooled chillers, heat pumps and condenserless units.

Cooling capacity: 21,2 to 192,7 kW.
Heating capacity: 23,7 to 212,3 kW.

The range at a glance

- 3 versions: C (chiller), H (heat pump) and R (condenserless unit)
- 14 sizes
- 2 acoustic options: STD (standard) and S (super low noise)
- 2 frames: F1 (size from 20 to 45) and F2 (size from 50 to 190)

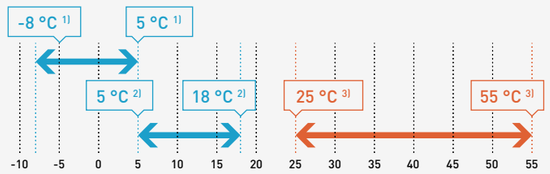
Advantages

- High full load efficiency: EER up to 4,50, COP up to 3,90
- High seasonal performances: SEER up to 6,70
- Compressor box: remarkable sound reduction
- Reduced refrigerant charge: less than 10 kg per circuit for units up to size 90
- Advanced electronic controller: auto-adaptive function to reduce water content in the piping system
- Condensing pressure control option suitable for well application
- Wide range of Plug & Play hydrokit: easy hydraulic installation
- DHW function available on the controller with DHW probe and 3 way valve available as options
- Desuperheater heat exchanger available as option (50-190 sizes)

Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

Leaving water temperature.



1) With glycol + EEV.
2) Without glycol + EEV.
3) Only C/H types 20-190.
Note: maximum % glycol (ethylenic or propilenic): 40%.

Equipment

- 1 refrigerant circuit
- 1 or 2 scroll compressors
- Plate evaporator (AISI 316)
- Compressor acoustic box (standard on S)
- Differential pressure switch
- Electronic expansion valve (standard C type 170-190)
- Phase sequence control

ECOi-W WQ 20-190 C/H/R				
Cooling	Leaving water temperature	ΔT	K	From 3 to 8
Heating 1)	Leaving water temperature	ΔT	K	From 3 to 15

1) Only C/H types 20-190.

Accessories and options
Compressor jackets
Desuperheater available for sizes 50-190
Hydrokit with 1 or 2 pumps for evaporator and condenser
Mechanical gauges kit
Modbus communication protocol
Power factor corrector capacitors
Soft starter

Accessories supplied loose	
P-348089	Valves in - out for sizes 20-45
P-376463	Sequencer for up to 4 chillers installation
P-348682	Water temperature sensor for second set-point zone
P-347940	Remote ON / OFF control
P-348684	Remote keyboard panel
P-365581	Flow switch (operational only on the evaporator side
P-473465	Pressure switch

Accessories supplied loose	
P-348612	Water filter for sizes 20-45
P-348615	Water filter for sizes 50-120
P-348619	Water filter for sizes 150-190
P-348144	3 way valve for DHW production - ON / OFF - DN 20 for sizes 20-45
P-348145	3 way valve for DHW production - ON / OFF - DN 20 for sizes 50-90
P-348143	3 way valve for DHW production - ON / OFF - DN 20 for sizes 120-190

Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50	50	50	50	50	50
Size			**20**	**25**	**30**	**35**	**40**	**45**	**50**	**60**	**75**	**90**	**120**	**150**	**170**	**190**
ECOi-W WQ 20-190 C - chiller	**P-WQE****CA**		**0020**	**0025**	**0030**	**0035**	**0040**	**0045**	**0050**	**0060**	**0075**	**0090**	**0120**	**0150**	**0170**	**0190**
Cooling capacity 1)		kW	21,2	26,2	31,1	34,8	39,2	46,6	50,9	61,1	77,3	91,1	118,4	147,1	170,0	192,7
Input power 1)		kW	4,56	5,67	6,84	7,54	8,60	10,1	11,7	13,5	17,1	20,7	26,5	33,0	37,7	42,8
EER 1)			4,67	4,65	4,57	4,64	4,58	4,65	4,35	4,53	4,52	4,40	4,48	4,47	4,51	4,51
SEER 2) 3)			**5,58**	**5,6**	**5,45**	**5,5**	**5,35**	**5,83**	**6,13**	**6,38**	**5,95**	**6,7**	**5,90**	**6,13**	**6,08**	**6,2**
$\eta_{s,c}$ 2) 3)			**220**	**221**	**215**	**217**	**211**	**230**	**242**	**252**	**235**	**265**	**233**	**242**	**240**	**245**
Sound power (STD / S) 4)		dB(A)	65 / 62	67 / 64	67 / 64	68 / 65	68 / 66	70 / 67	70 / 68	70 / 68	72 / 70	73 / 71	78 / 76	81 / 79	81 / 79	81 / 79
Sound pressure at 10 m (STD / S) 5)		dB(A)	34 / 31	36 / 33	36 / 33	37 / 34	38 / 35	39 / 36	39 / 37	39 / 37	40 / 39	42 / 40	47 / 45	50 / 48	50 / 48	50 / 48
ECOi-W WQ 20-190 H - heat pump	**P-WQE****HA**		**0020**	**0025**	**0030**	**0035**	**0040**	**0045**	**0050**	**0060**	**0075**	**0090**	**0120**	**0150**	**0170**	**0190**
Cooling capacity 1)		kW	20,8	26,1	30,2	34,1	38,3	45,7	50,1	59,1	76,3	88,9	115,0	145,0	166,0	186,0
Input power 1)		kW	4,61	5,71	6,90	7,68	8,69	10,20	11,80	13,70	17,20	20,90	26,70	33,10	38,00	43,20
EER 1)			4,52	4,56	4,37	4,44	4,41	4,46	4,23	4,31	4,42	4,25	4,31	4,36	4,37	4,30
SEER 2)			**5,13**	**5,00**	**4,88**	**5,10**	**5,00**	**5,48**	**4,48**	**4,83**	**4,70**	**4,88**	**4,93**	**4,98**	**5,65**	**5,10**
$\eta_{s,c}$ 2)			**202**	**197**	**192**	**201**	**197**	**216**	**185**	**192**	**176**	**190**	**194**	**196**	**223**	**201**
Heating capacity 6)		kW	23,8	29,0	33,9	38,6	43,1	51,2	58,6	65,8	87,5	103,0	134,0	167,0	193,0	215,0
Input power 6)		kW	6,26	7,81	9,32	10,90	12,10	14,20	15,50	17,90	22,00	26,30	33,70	41,60	48,50	54,10
COP 6)			3,80	3,72	3,64	3,54	3,57	3,61	3,79	3,67	3,97	3,93	3,97	4,01	3,97	3,98
COP 7)			5,66	5,62	5,58	5,60	5,52	5,24	5,32	5,12	5,43	5,23	5,29	5,38	5,33	5,33
SCOP 8) 9)			**5,17**	**5,45**	**5,33**	**5,05**	**4,83**	**5,28**	**5,70**	**5,88**	**5,70**	**5,78**	**5,75**	**5,63**	**5,95**	**5,63**
Energy efficiency class 8) 9)	**A+++ to D**		**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**—**	**—**	**—**	**—**	**—**	**—**
$\eta_{s,h}$ 8) 9)			**204**	**210**	**205**	**194**	**185**	**203**	**220**	**227**	**220**	**223**	**222**	**217**	**230**	**217**
SCOP 8) 10)			**4,00**	**4,48**	**4,45**	**4,30**	**4,28**	**4,45**	**4,63**	**4,78**	**4,75**	**4,75**	**4,73**	**4,48**	**4,88**	**4,68**
Energy efficiency class 8) 10)	**A+++ to D**		**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**A+++**	**—**	**—**	**—**	**—**	**—**	**—**
$\eta_{s,h}$ 8) 10)			**152**	**171**	**170**	**164**	**163**	**170**	**177**	**183**	**182**	**182**	**181**	**171**	**187**	**179**
Sound power (STD / S) 4)		dB(A)	65 / 62	67 / 64	67 / 64	68 / 65	69 / 66	70 / 67	70 / 68	70 / 68	72 / 70	73 / 71	78 / 76	81 / 79	81 / 79	81 / 79
Sound pressure at 10 m (STD / S) 5)		dB(A)	34 / 31	36 / 33	36 / 33	37 / 34	38 / 35	39 / 36	39 / 37	39 / 37	40 / 39	42 / 40	47 / 45	50 / 48	50 / 48	50 / 48
ECOi-W WQ 20-190 R - condenserless unit	**P-WQE****RA**		**0020**	**0025**	**0030**	**0035**	**0040**	**0045**	**0050**	**0060**	**0075**	**0090**	**0120**	**0150**	**0170**	**0190**
Cooling capacity 11)		kW	18,3	22,7	27,1	30,0	34,2	43,1	45,0	53,4	67,5	80,1	104,0	128,0	148,0	168,0
Input power 11)		kW	5,70	6,97	8,07	9,15	10,1	12,2	13,7	16	20,1	23,9	30,8	38,1	44,2	49,7
Sound power (STD / S) 4)		dB(A)	65/62	67 / 64	67 / 64	68 / 65	69 / 66	70 / 67	70 / 68	70 / 68	72 / 70	73 / 71	78 / 76	81 / 79	81 / 79	81 / 79
Sound pressure at 10 m (STD / S) 5)		dB(A)	34/31	36 / 33	36 / 33	37 / 34	38 / 35	39 / 36	39 / 37	39 / 37	41 / 39	42 / 40	47 / 45	50 / 48	50 / 48	50 / 48

Physical features

ECOi-W WQ 20-190 C/H - chiller / heat pump			**20**	**25**	**30**	**35**	**40**	**45**	**50**	**60**	**75**	**90**	**120**	**150**	**170**	**190**
Dimension	Height	mm	1350	1350	1350	1350	1350	1350	1500	1500	1500	1500	1500	1500	1500	1500
	Width	mm	455	455	455	455	455	455	850	850	850	850	850	850	850	850
	Length	mm	821	821	821	821	821	821	1210	1210	1210	1210	1210	1210	1210	1210
Operating weight	Chiller	kg	162	182	179	185	191	214	352	371	392	411	597	666	701	745
	Heat pump	kg	165	187	184	190	195	219	360	379	403	422	610	683	718	762
Water connections (evaporator and condenser)																
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½
ECOi-W WQ 20-190 R - condenserless unit			**20**	**25**	**30**	**35**	**40**	**45**	**50**	**60**	**75**	**90**	**120**	**150**	**170**	**190**
Dimension	Height	mm	1350	1350	1350	1350	1350	1350	1500	1500	1500	1500	1500	1500	1500	1500
	Width	mm	455	455	455	455	455	455	850	850	850	850	850	850	850	850
	Length	mm	821	821	821	821	821	821	1210	1210	1210	1210	1210	1210	1210	1210
Operating weight		kg	144	164	166	166	172	172	332	344	365	376	558	612	643	674
Water connections (evaporator)																
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½
Remote condenser refrigerant connections																
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter		Inch	⅝	⅝	⅝	⅝	⅝	⅝	⅝	⅝	⅞	⅞	⅞	⅞	1 ⅛	1 ⅛
Outlet diameter		Inch	⅝	⅞	⅞	⅞	⅞	⅞	⅞	⅞	1 ⅛	1 ⅛	1 ⅜	1 ⅝	1 ⅝	1 ⅝

1) According to EN 14511 standard: evaporator EWT/LWT 12 °C/7 °C, condenser EWT/LWT 30 °C/35 °C. 2) According to EN 14825 standard. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. These values are not Eurovent certified. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) According to EN 14511 standard: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 40 °C/45 °C. 7) According to EN 14511 standard: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 30 °C/35 °C. 8) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 9) According to EN 14825 standard - low temperature application (35 °C). 10) According to EN 14825 standard - medium temperature application (55 °C). 11) Data refers to evaporator water temperature 12/7 °C and condensing temperature 50 °C.

ErP | HIGH SEER 6,70 | HIGH SCOP 5,88 | WATER COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W WQ 524-1604 C/H/R · R410A

Water cooled chillers, heat pumps and condenserless units.

Cooling capacity: 154,3 to 459,8 kW.
Heating capacity: 170,2 to 508,4 kW.

The range at a glance

· 3 versions: C (chiller), H (heat pump) and R (condenserless unit)
· 10 sizes
· 2 acoustic options: STD (standard) and S (super low noise)

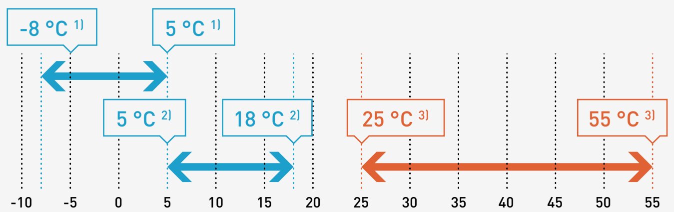
Advantages

· High full load efficiency: EER up to 4,50, COP up to 3,90
· High seasonal performances: SEER up to 6,50
· Advanced electronic controller: auto-adaptive function to reduce water content in the piping system
· Condensing pressure control option: suitable for well application
· Wide range of Plug & Play hydrokit: easy hydraulic installation
· Desuperheater heat exchanger available as option: heating capacity for free thanks to heat recovery

Operating limits

To be confirmed with AC SELECT: https://acselect.panasonic.eu/

Leaving water temperature.



1) With glycol + EEV.
2) Without glycol + EEV.
3) Only C/H types 20-190.
Note: maximum % glycol (ethylenic or propilenic): 40%.

ECOi-W WQ 524-1604 C/H/R				
Cooling	Leaving water temperature	ΔT	K	From 3 to 8
Heating	Leaving water temperature	ΔT	K	From 3 to 15

Equipment

· 2 refrigerant circuits
· 4 scroll compressors (tandem)
· Plate evaporator (AISI 316)
· Differential pressure switch
· Electronic expansion valve (standard 1104-1604)
· Phase sequence control

Accessories and options
Desuperheater
Hydrokit with 1 or 2 pumps for evaporator and condenser
Mechanical gauges
Modbus communication protocol
Soft starter

Accessories supplied loose	
P-376463	Sequencer for up to 4 chillers installation
P-347941	Remote ON / OFF control
P-348684	Remote keyboard panel
P-365581	Flow switch (operational only on the evaporator side)
P-473465	Pressure switch
P-348619	Water filter for sizes 524-1204
P-348620	Water filter for sizes 1404-1604

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

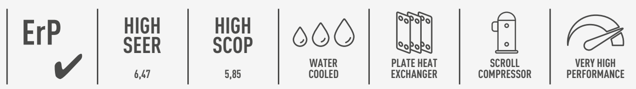
Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50	50	50	50	50
Size			**524**	**604**	**704**	**804**	**904**	**1004**	**1104**	**1204**	**1404**	**1604**
ECOi-W WQ 524-1604 C - chiller		**P-**	**WQE0524CA**	**WQE0604CA**	**WQE0704CA**	**WQE0804CA**	**WQE0904CA**	**WQE1004CA**	**WQE1104CA**	**WQE1204CA**	**WQE1404CA**	**WQE1604CA**
Cooling capacity 1)		kW	154,3	181,8	208,9	232,6	265,8	295,6	338,0	379,2	421,1	459,8
Input power 1)		kW	34,9	42,4	48,4	54,4	60,5	69,0	76,4	85,2	97,0	109,0
EER 1)			4,42	4,28	4,31	4,27	4,39	4,28	4,42	4,45	4,34	4,19
SEER 2) 3)			**5,55**	**6,28**	**6,1**	**5,75**	**6,1**	**6,1**	**6,2**	**6,25**	**6,43**	**6,47**
$\eta_{s,c}$ 2) 3)			**219**	**248**	**241**	**227**	**241**	**241**	**245**	**247**	**254**	**256**
Sound power (STD / S) 4)		dB(A)	81 / 75	82 / 76	85 / 79	87 / 81	89 / 83	90 / 84	90 / 84	90 / 84	92 / 86	94 / 88
Sound pressure at 10 m (STD / S) 5)		dB(A)	49 / 43	50 / 44	53 / 47	55 / 49	57 / 51	58 / 52	58 / 52	58 / 52	60 / 54	62 / 56
ECOi-W WQ 524-1604 H - heat pump		**P-**	**WQE0524HA**	**WQE0604HA**	**WQE0704HA**	**WQE0804HA**	**WQE0904HA**	**WQE1004HA**	**WQE1104HA**	**WQE1204HA**	**WQE1404HA**	**WQE1604HA**
Cooling capacity 1)		kW	151,0	177,0	205,0	226,0	264,0	292,0	333,0	371,0	421,0	460,0
Input power 1)		kW	35,60	43,60	49,40	55,50	61,00	67,70	77,70	86,90	97,00	109,00
EER 1)			4,24	4,05	4,15	4,07	4,32	4,31	4,28	4,27	4,35	4,22
SEER 2)			**4,65**	**4,93**	**4,93**	**4,68**	**5,15**	**5,10**	**5,28**	**5,30**	**6,43**	**6,47**
$\eta_{s,c}$ 2)			**183**	**194**	**194**	**184**	**203**	**201**	**208**	**209**	**254**	**256**
Heating capacity 6)		kW	172,0	203,0	234,0	259,0	298,0	333,0	379,0	422,0	471,0	508,0
Input power 6)		kW	44,20	53,70	60,00	68,40	77,50	84,10	95,70	106,00	122,00	132,00
COP 6)			3,89	3,78	3,90	3,79	3,85	3,96	3,97	3,97	3,85	3,85
COP 7)			5,36	5,08	5,25	5,11	5,33	5,44	5,30	5,30	5,08	4,99
SCOP 8) 9)			**5,40**	**5,20**	**5,38**	**5,35**	**5,73**	**5,85**	**5,83**	**5,85**	**—**	**—**
$\eta_{s,h}$ 8) 9)			**208**	**200**	**207**	**206**	**221**	**226**	**225**	**226**	**—**	**—**
SCOP 8) 10)			**4,55**	**4,38**	**4,48**	**4,43**	**4,53**	**4,58**	**4,60**	**4,60**	**—**	**—**
$\eta_{s,h}$ 8) 10)			**174**	**167**	**171**	**169**	**173**	**175**	**176**	**176**	**—**	**—**
Sound power (STD / S) 4)		dB(A)	81 / 75	82 / 76	85 / 79	87 / 81	89 / 83	90 / 84	90 / 84	90 / 84	92 / 86	94 / 88
Sound pressure at 10 m (STD / S) 5)		dB(A)	49 / 43	50 / 44	53 / 47	55 / 49	57 / 51	58 / 52	58 / 52	58 / 52	60 / 54	62 / 56
ECOi-W WQ 524-1604 R - condenserless unit		**P-**	**WQE0524RA**	**WQE0604RA**	**WQE0704RA**	**WQE0804RA**	**WQE0904RA**	**WQE1004RA**	**WQE1104RA**	**WQE1204RA**	**WQE1404RA**	**WQE1604RA**
Cooling capacity 11)		kW	130,0	155,3	177,6	196,5	224,2	247,2	285,9	316,1	368,0	397,0
Input power 11)		kW	43,2	51,5	59,5	66,4	74,8	83	95	106	120	134
Sound power (STD / S) 4)		dB(A)	81 / 75	82 / 76	85 / 79	87 / 81	89 / 83	90 / 84	90 / 84	90 / 84	92 / 86	94 / 88
Sound pressure at 10 m (STD / S) 5)		dB(A)	49 / 43	50 / 44	53 / 47	55 / 49	57 / 51	58 / 52	58 / 52	58 / 52	60 / 54	62 / 56

Physical features

ECOi-W WQ 524-1604 C/H/R - chiller / heat pump / condenserless unit			**524**	**604**	**704**	**804**	**904**	**1004**	**1104**	**1204**	**1404**	**1604**
Dimension	Height	mm	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)	1845 12) / 1880 13)
	Width	mm	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)	850 12) / 854 13) / 885 12) 14) - 1005 13) 14)
	Length	mm	2250	2250	2250	2250	2250	2250	2250	2250	2250	2250
Operating weight - chiller	STD	kg	890	971	1156	1329	1340	1453	1552	1660	1743	1798
	S	kg	993	1074	1259	1432	1443	1556	1655	1763	1846	1901
Operating weight - heat pump	STD	kg	909	989	1187	1360	1376	1500	1598	1704	1787	1842
	S	kg	1012	1092	1290	1463	1479	1603	1701	1807	1890	1945
Operating weight - condenserless unit	STD	kg	770	812	988	1163	1188	1241	1328	1388	1463	1502
	S	kg	873	915	1091	1266	1291	1344	1431	1491	1566	1605
Water connections												
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	2 ½	2 ½	2 ½	2 ½	4	4	4	4	4	4
ECOi-W WQ 524-1604 R - condenserless unit			**524**	**604**	**704**	**804**	**904**	**1004**	**1104**	**1204**	**1404**	**1604**
Remote condenser refrigerant connections												
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter		Inch	⅞	⅞	1 ⅛	1 ⅛	1 ⅛	1 ⅛	1 ⅛	1 ⅛	1 ⅛	1 ⅛
Outlet diameter		Inch	1 ⅛	1 ⅛	1 ⅜	1 ⅜	1 ⅝	1 ⅝	1 ⅝	1 ⅝	1 ⅝	1 ⅝

1) According to EN 14511 standard: evaporator EWT/LWT 12 °C/7 °C, condenser EWT/LWT 30 °C/35 °C. 2) According to EN 14825 standard. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. These values are not Eurovent certified. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) According to EN 14511 standard: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 40 °C/45 °C. 7) According to EN 14511 standard: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 30 °C/35 °C. 8) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 9) According to EN 14825 standard - low temperature application (35 °C). 10) According to EN 14825 standard - medium temperature application (55 °C). 11) Data refers to evaporator water temperature 12/7 °C and condensing temperature 50 °C. 12) Standard version. 13) S version. 14) Only for handling.



Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-W WSW-N EVO 440-1550 C/H/R · R513A

Water cooled chillers, heat pumps and condenserless units.

Cooling capacity: 410 to 1460 kW.
Heating capacity: 470 to 1650 kW.

Operating limits

To be confirmed with AC SELECT:
https://acselect.panasonic.eu/

ECOi-W WSW-N EVO 440-1550 C - chiller				
Evaporator	Leaving water temperature	Water	°C	From 5 to 15
		Water + glycol	°C	From 0 to 5
		Brine	°C	From -8 to 0
		ΔT	K	From 3 to 7
Condenser	Leaving water temperature		°C	From 25 to 45
ECOi-W WSW-N EVO 440-1550 H - heat pump				
Evaporator	Leaving water temperature	Water	°C	From 5 to 15
		Water + glycol	°C	From -8 to 5
		ΔT	K	From 3 to 7
Condenser	Leaving water temperature		°C	From 25 to 60
ECOi-W WSW-N EVO 440-1550 R - condenserless unit				
Evaporator	Leaving water temperature	Water	°C	From 5 to 15
		Water + glycol	°C	From -8 to 5
		ΔT	K	From 3 to 7
Condenser	Condensing temperature		°C	From 30 to 63

Accessories supplied loose	
P-376463	Sequencer for up to 4 chillers installation
P-347941	Remote ON / OFF control
P-364735	Remote keyboard panel
P-365581	Flow switch

The range at a glance

- 3 versions: C (chiller), H (heat pump) and R (condenserless unit)
- 15 sizes
- 2 acoustic options: STD (standard) and S (super low noise)

Advantages

- High full load performances: EER up to 4,90
- High seasonal performances: SEER up to 6,70
- Compressor optimization (high / low pressure ratio), according application: Maximum benefit in terms of efficiency design
- Electronic expansion device: excellent control of superheating for the best performance at full and partial load and for a safe operation
- New generation of pure counter-current shell and tube evaporators and condensers: maximum efficiency and new levels of competitiveness
- Control platform: modular architecture, compressor envelope integration, corrective actions in border line areas, easy-friendly user interface

Equipment

- 1 or 2 refrigerant circuit(s)
- Twin-screw compressors
- Shell and tube evaporator and condenser
- Electronic expansion valve
- Compressor acoustic box (standard for S version)
- Phase sequence control

Accessories and options
Automatic circuit breaker
Compressor stepless control
Mechanical gauges
Power factor corrector capacitors
Several communication protocols
Soft starter

Accessories supplied loose	
P-348620	Water filter for sizes 440-490
P-348618	Water filter for sizes 570-770
P-362589	Water filter for sizes 860-1550

AC SELECT.

Smart and user-friendly selection tool.

Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Power supply	Voltage	V	400							
	Phase		Three phase							
	Frequency	Hz	50							
Size			**440**		**490**		**570**	**630**	**700**	**770**
ECOi-W WSW-N EVO 440-770 C - chiller			**P-WSWVN0440CA**		**P-WSWVN0490CA**		**P-WSWVN0570CA**	**P-WSWVN0630CA**	**P-WSWVN0700CA**	**P-WSWVN0770CA**
Cooling capacity [1]	kW		418,6		471,6		539,3	601,9	664,4	734,6
Input power [1]	kW		88,1		101,1		115,1	127,5	144	158,7
Total heat rejection [1]	kW		506,7		572,7		654,3	729,4	808,4	893,4
EER [1]			4,75		4,67		4,69	4,72	4,61	4,63
SEER [2]			**6,38**		**6,38**		**6,52**	**6,42**	**6,38**	**6,38**
$\eta_{s,c}$ [2]			**252**		**252**		**258**	**254**	**252**	**252**
Sound power STD / S [3]	dB(A)		95 / 85		95 / 85		95 / 85	95 / 85	95 / 85	95 / 85
Sound pressure at 1 m STD / S [4]	dB(A)		76 / 66		76 / 66		76 / 66	76 / 66	76 / 66	76 / 66
Size			**860**	**920**	**990**	**1070**	**1130**	**1220**	**1280**	**1400**	**1550**
ECOi-W WSW-N EVO 860-1550 C - chiller		**P-**	**WSWVN0860CA**	**WSWVN0920CA**	**WSWVN0990CA**	**WSWVN1070CA**	**WSWVN1130CA**	**WSWVN1220CA**	**WSWVN1280CA**	**WSWVN1400CA**	**WSWVN1550CA**
Cooling capacity [1]	kW		825	874,1	936,6	1019,1	1071,8	1159,3	1226,1	1334,6	1457,9
Input power [1]	kW		177,2	190,3	201,4	215,7	228,1	243,8	257,9	286,3	319
Total heat rejection [1]	kW		1002,2	1064,3	1137,9	1234,7	1299,8	1403,0	1484,0	1620,9	1776,9
EER [1]			4,66	4,59	4,65	4,73	4,70	4,76	4,75	4,66	4,57
SEER [2]			**6,41**	**6,41**	**6,41**	**6,42**	**6,53**	**6,51**	**6,44**	**6,45**	**6,42**
$\eta_{s,c}$ [2]			**254**	**253**	**254**	**254**	**258**	**257**	**254**	**255**	**254**
Sound power STD / S [2]	dB(A)		98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89
Sound pressure at 1 m STD / S [3]	dB(A)		79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70
ECOi-W WSW-N EVO 440-770 H - heat pump			**P-WSWVN0440HA**		**P-WSWVN0490HA**		**P-WSWVN0570HA**	**P-WSWVN0630HA**	**P-WSWVN0700HA**	**P-WSWVN0770HA**
Cooling capacity [1]	kW		419		479		547	612	673	731
Input power [1]	kW		86,5		98		115	132	147	156
EER [1]			4,85		4,89		4,75	4,64	4,58	4,69
Cooling capacity [5]	kW		365,9		418,9		483,2	541	595,6	646,6
Input power [5]	kW		105,2		118,8		141,3	162,1	171,2	191,3
EER [5]			3,48		3,53		3,42	3,34	3,48	3,38
SEER [2]			**6,53**		**6,38**		**6,4**	**6,38**	**6,45**	**6,6**
$\eta_{s,c}$ [2]			**258**		**252**		**253**	**252**	**255**	**261**
Heating capacity [1]	kW		504		576		661	742	813	887
COP [1]			5,83		5,88		5,74	5,62	5,53	5,68
Heating capacity [5]	kW		470,3		536,5		621,7	698,6	764,7	835,9
COP [5]			4,46		4,52		4,4	4,31	4,47	4,37
Sound power STD / S [3]	dB(A)		95 / 85		95 / 85		95 / 85	95 / 85	95 / 85	95 / 85
Sound pressure at 1 m STD / S [4]	dB(A)		76 / 66		76 / 66		76 / 66	76 / 66	76 / 66	76 / 66
ECOi-W WSW-N EVO 860-1550 H - heat pump		**P-**	**WSWVN0860HA**	**WSWVN0920HA**	**WSWVN0990HA**	**WSWVN1070HA**	**WSWVN1130HA**	**WSWVN1220HA**	**WSWVN1280HA**	**WSWVN1400HA**	**WSWVN1550HA**
Cooling capacity [1]	kW		818	882	946	1013	1083	1156	1217	1340	1451
Input power [1]	kW		170	183	195	211	227	242	257	297	306
EER [1]			4,81	4,83	4,85	4,80	4,78	4,78	4,74	4,52	4,74
Cooling capacity [5]	kW		715,5	772	828,1	891,5	958,8	1023,8	1078,2	1186,9	1285,5
Input power [5]	kW		210,1	223,4	236,7	257,3	277	298,6	317,4	342,7	377,4
EER [5]			3,41	3,46	3,5	3,46	3,46	3,43	3,4	3,46	3,41
SEER [2]			**6,4**	**6,5**	**6,4**	**6,4**	**6,5**	**6,48**	**6,48**	**6,5**	**6,7**
$\eta_{s,c}$ [2]			**253**	**257**	**253**	**253**	**257**	**256**	**256**	**257**	**265**
Heating capacity [1]	kW		987	1064	1141	1222	1308	1396	1470	1619	1754
COP [1]			5,8	5,83	5,85	5,8	5,77	5,77	5,73	5,46	5,73
Heating capacity [5]	kW		923	992,7	1063	1146	1231,8	1315,8	1386,1	1523,8	1654,6
COP [5]			4,39	4,44	4,49	4,45	4,45	4,41	4,37	4,45	4,38
Sound power STD / S [3]	dB(A)		98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89
Sound pressure at 1 m STD / S [4]	dB(A)		79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70
ECOi-W WSW-N EVO 440-770 R - condenserless unit			**P-WSWVN0440RA**		**P-WSWVN0490RA**		**P-WSWVN0570RA**	**P-WSWVN0630RA**	**P-WSWVN0700RA**	**P-WSWVN0770RA**
Cooling capacity [6]	kW		358,6		405,3		472,7	535,6	586,2	638,1
Input power [6]	kW		106,9		120,2		143,4	161,4	174,9	192,6
Total heat rejection [6]			465,8		525,8		614,6	694	760,9	828,8
Sound power STD / S [3]	dB(A)		95 / 85		95 / 85		95 / 85	95 / 85	95 / 85	95 / 85
Sound pressure at 1 m STD / S [4]	dB(A)		76 / 66		76 / 66		76 / 66	76 / 66	76 / 66	76 / 66
ECOi-W WSW-N EVO 860-1550 R - condenserless unit		**P-**	**WSWVN0860RA**	**WSWVN0920RA**	**WSWVN0990RA**	**WSWVN1070RA**	**WSWVN1130RA**	**WSWVN1220RA**	**WSWVN1280RA**	**WSWVN1400RA**	**WSWVN1550RA**
Cooling capacity [6]	kW		708,9	758,1	817,2	886,2	947,7	1015,0	1075,9	1181,4	1277,8
Input power [6]	kW		213,7	226,9	240,7	263,1	284	306,3	325,4	348,4	384,4
Total heat rejection [6]			922,3	984,7	1057,4	1147,9	1230,6	1316,3	1395,1	1527,5	1657,7
Sound power STD / S [3]	dB(A)		98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89	98 / 89
Sound pressure at 1 m STD / S [4]	dB(A)		79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70	79 / 70

1) According to EN 14511 standard: evaporator EWT/LWT 12 °C/7 °C, condenser EWT/LWT 30 °C/35 °C. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281 and according to EN 14825 standard. 3) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According to EN 14511 standard: evaporator EWT/LWT 10 °C/7 °C, condenser EWT/LWT 40 °C/45 °C. 6) Conditions: evaporator EWT/LWT 12 °C/7 °C, condensing Temperature 49 °C.

ErP ✔ | HIGH SEER 6,70 | HIGH COP 4,52 | WATER COOLED | SHELL AND TUBE EVAPORATOR | SCREW COMPRESSOR | VERY HIGH PERFORMANCE

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

Physical features

ECOi-W WSW-N EVO 440-770 C - chiller			440	490	570	630	700	770
Dimension	Height	mm	1650	1650	1650	1650	1650	1650
	Height S	mm	1750	1750	1750	1750	1750	1750
	Width	mm	1350	1350	1350	1350	1350	1350
	Length	mm	4250	4250	4210	4210	4180	4180
Operating weight	STD	kg	2690	2700	2875	3003	3472	3521
	S	kg	2884	2894	3069	3197	3666	3715
Water connections								
Connection type	Evaporator		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	6	6	6	6	8	8
Connection type	Condenser		Female gas threaded	Female gas threaded	Female gas threaded	Female gas threaded	Female gas threaded	Female gas threaded
Inlet/outlet diameter		Inch	4	4	5	5	5	5

ECOi-W WSW-N EVO 860-1550 C - chiller			860	920	990	1070	1130	1220	1280	1400	1550
Dimension	Height	mm	1710	1710	1710	1710	1710	1710	1710	1710	1710
	Height S	mm	1780	1780	1780	1780	1780	1780	1780	1780	1780
	Width	mm	1520	1520	1520	1520	1520	1520	1520	1520	1520
	Length	mm	4510	4510	4600	4650	4650	4650	4650	5350	5350
	Length S	mm	4510	4510	4690	4690	4690	4690	4690	5400	5400
Operating weight	STD	kg	5000	5010	5642	5818	6012	6077	6124	6698	6752
	S	kg	5388	5398	6030	6206	6400	6465	6512	7086	7140
Water connections											
Connection type	Evaporator		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10	10
Connection type	Condenser		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter	Condenser	Inch	4 / 4	4 / 4	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5

ECOi-W WSW-N EVO 440-770 H - heat pump			440	490	570	630	700	770
Dimension	Height	mm	1650	1650	1650	1650	1650	1650
	Height S	mm	1750	1750	1750	1750	1750	1750
	Width	mm	1450	1450	1450	1450	1450	1450
	Length	mm	4590	4590	4630	4630	4320	4560
Operating weight	STD	kg	3055	3186	3277	3197	4027	3824
	S	kg	3249	3380	3471	3491	4221	4017
Water connections								
Connection type	Evaporator		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	6	6	6	6	8	8
Connection type	Condenser		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	4	4	5	5	5	5

ECOi-W WSW-N EVO 860-1550 H - heat pump			860	920	990	1070	1130	1220	1280	1400	1550
Dimension	Height	mm	1680	1680	1680	1680	1680	1680	1680	1710	1710
	Height S	mm	1780	1780	1780	1780	1780	1780	1780	1780	1780
	Width	mm	1520	1520	1520	1520	1520	1520	1520	1580	1580
	Length	mm	5110	5110	5100	5100	5000	5000	5000	5300	5300
	Length S	mm	5130	5130	5120	5120	5020	5020	5020	5320	5320
Operating weight	STD	kg	5818	5841	6119	6545	6768	6807	6844	7991	8071
	S	kg	6205	6229	6506	6932	7155	7194	7232	8378	8458
Water connections											
Connection type	Evaporator		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10	10
Connection type	Condenser		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	4 / 4	4 / 4	4 / 4	4 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5

Physical features

ECOi-W WSW-N EVO 440-770 R - condenserless unit			440	490	570	630	700	770
Dimension	Height	mm	1650	1650	1650	1650	1650	1650
	Height S	mm	1750	1750	1750	1750	1750	1750
	Width	mm	1350	1350	1350	1350	1350	1350
	Length	mm	3620	3620	4210	4210	4180	4180
Operating weight	STD	kg	2302	2312	2456	2476	2952	2992
	S	kg	2496	2506	2650	2670	3146	3186
Water connections (evaporator)								
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	6	6	6	6	8	8
Remote condenser refrigerant connections								
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter circuit 1		Inch	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8
Outlet diameter circuit 1		Inch	3 1/8	3 1/8	3 5/8	3 5/8	4 1/8	4 1/8

ECOi-W WSW-N EVO 860-1550 R - condenserless unit			860	920	990	1070	1130	1220	1280	1400	1550
Dimension	Height	mm	1710	1710	1710	1710	1710	1710	1710	1710	1710
	Height S	mm	1770	1770	1770	1770	1770	1770	1770	1770	1770
	Width	mm	1520	1520	1520	1520	1520	1520	1520	1520	1520
	Length	mm	4400	4400	4600	4650	4650	4650	4650	5350	5350
	Length S	mm	4650	4650	4650	4650	4650	4650	4650	5400	5400
Operating weight	STD	kg	4804	4814	4998	5071	5131	5170	5190	5596	5676
	S	kg	5191	5201	5385	5458	5518	5557	5577	5983	6063
Water connections (evaporator)											
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10	10
Remote condenser refrigerant connections											
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter circuit 1		Inch	1 5/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8
Outlet diameter circuit 1		Inch	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	4 1/8	4 1/8
Inlet diameter circuit 2		Inch	1 5/8	1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8	2 1/8
Outlet diameter circuit 2		Inch	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	3 1/8	4 1/8	4 1/8

Water source heat pumps

One building, different needs!

ECOi-LOOP water source heat pumps are ideal for best in class hotels, offices or shopping centers. This solution offers improved comfort by having several different indoor climates inside a building, while maintaining the energy through an internal closed water loop.

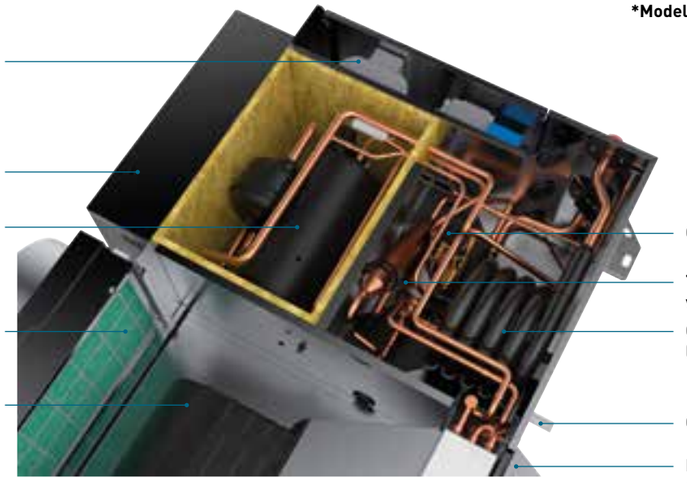
What is a water loop system with water source heat pumps?

The water loop system enables distributed cooling and heating production at different temperatures with a single water circuit.

The recovery of condensation heat units in cooling can used for units in heating and vice-versa, thus providing a balanced and highly efficient system. These indoor units are called water source heat pumps which are equipped with a compressor and 2 heat exchangers to allow energy transfer between the water loop and air within the space.

High-performance technology

*Model shown: ECOi-LOOP-N EVO.



Key features for ECOi-LOOP.

- High-efficiency
- Heating and cooling of rooms at the same time. All units are connected to the same water loop
- Decentralised cool/heat production (closed water circuit)
- Water heater or cooling tower do not need to be operated as long as cooling and heating loads are roughly balanced. Temperature in the water loop will be kept between 16 and 32 °C
- Reduced refrigerant charge (no refrigerant pipes to an outdoor unit required)
- Low risk of leakage (hermetically sealed systems)
- Water source heat pumps can be easily added or removed without changing the system layout
- Each unit is autonomous and has its own controller allowing also its own safety

Quick selection guide - Water source heat pumps

Page	Size	Cooling and heating capacity (kW)	NR sound levels (at MS)	Nominal air flow [1] (m³/h)	Pressure (Pa)	Fan	Dimension L x W x H (mm)
ECOi-LOOP C/H · R410A	15	1,5 / 1,9	26	435	0-140	EC	900 x 530 x 250 [2]
 **P. 524**	20	2,2 / 2,5	30	465	0-140	EC	900 x 530 x 250 [2]
	30	2,9 / 3,7	34	525	0-140	EC	900 x 530 x 250 [2]
ECOi-LOOP-N H · R513A	70	7,0 / 8,1	52	1727	0-495	EC	1142 x 762 x 516 [2]
	85	8,4 / 9,8	50	2165	0-495	EC	1142 x 762 x 516 [2]
 **P. 526**	100	10,3 / 11,3	56	2826	0-335	EC	1333 x 818 x 580 [2]
	110	11,2 / 12,5	54	3078	0-250	EC	1333 x 818 x 580 [2]
	120	12,1 / 13,8	55	3309	0-350	EC	1333 x 818 x 580 [2]
	135	13,3 / 14,6	57	3677	0-260	EC	1333 x 818 x 580 [2]
ECOi-LOOP-N EVO C/H · R513A							
 **P. 528**		2,9 / 3,8	25,8 [3]	525	0-140	EC	900 x 636 x 250 [2]

1) At high speed. 2) Without air inlet/outlet options. 3) At minimum thermal load.

Commercial Smart Edge.

Manage the entire Panasonic HVAC portfolio from a single platform – on-site or remotely, 24/7.

Model code	Control points	Indoor unit connections [1]
PAW-CSE-1B	100	4
PAW-CSE-2B	200	10
PAW-CSE-10	1000	50
PAW-CSE-20	2000	100

1) The final number of connected indoor units may vary depending on the range. *For the detail information, please contact an authorised Panasonic dealer.

COMPATIBLE WITH ENTIRE HVAC RANGE

SIMPLIFIED COMMISSIONING

OPTIMISED PLANT MANAGEMENT

ADVANCED ANALYTICS

P-SMART EDGE

P-Smart Edge*.
A powerful smart control platform designed for single-site installations, giving you seamless management of the complete Panasonic HVAC range.

P-Smart Nexus

P-Smart Nexus*.
An online multi-site control solution that provides remote, centralised supervision of all your locations worldwide.

*Edge controller box (PAW-CSE**) is required.

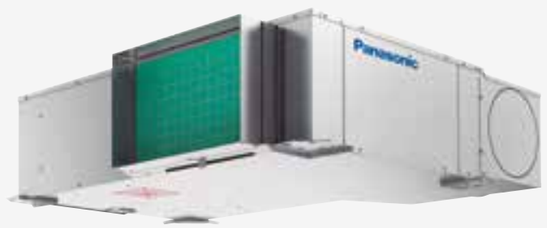
Page	Size	Cooling and heating capacity (kW)	NR sound levels (at MS)	Nominal air flow [1] (m³/h)	Pressure (Pa)	Fan	Dimension L x W x H (mm)
ECOi-LOOP HRW H · R407C **ECOi-LOOP HRWE H · R407C**	19	5,3 / 5,8	37	1250	>50	AC	900 x 600 x 439
	27	7,4 / 8,3	34	1190	>50	AC	1050 x 600 x 460
	27 HE	7,5 / 9,3	34	1180	>50	AC	1050 x 660 x 460
	30	8,7 / 9,8	35	1490	>100	AC	1050 x 660 x 460
	30 HE	8,9 / 10,0	35	1500	>100	AC	1050 x 660 x 460
	36	10,1 / 11,0	37	1580	>100	AC	1050 x 660 x 460
	36 HE	11,1 / 12,2	37	1580	>100	AC	1250 x 705 x 513
	42	11,4 / 14,4	40	2040	>100	AC	1250 x 705 x 513
	42 HE	12,5 / 14,5	40	2040	>100	AC	1250 x 705 x 513
 **P. 530**	48	13,0 / 14,9	43	2750	>100	AC	1250 x 705 x 513
	60	14,3 / 16,1	43	2840	>100	AC	1250 x 705 x 513
	60 HE	16,7 / 18,8	43	2840	>100	AC	1250 x 705 x 583
	72	17,1 / 21,5	39	3570	>100	AC	1250 x 705 x 513
	72 HE	20,6 / 22,6	39	3800	>100	AC	1680 x 955 x 770
	96	21,7 / 26,6	54	4700	>100	AC	1680 x 955 x 770
	96 HE	24,5 / 28,5	54	4700	>100	AC	1680 x 955 x 770
	120	30,0 / 38,1	53	5600	>200	AC	1680 x 955 x 770
ECOi-LOOP FS H · R407C							
 **P. 532**	12	2,7 / 3,2	40	510	0	AC/EC	1138 x 251 x 821 [2]
ECOi-LOOP-N FS H · R513A	7	1,7 / 1,8	34	340	0	AC/EC	1138 x 260 x 821 [2]
 **P. 534**	9	2,0 / 2,6	36	400	0	AC/EC	1138 x 260 x 821 [2]

1) At high speed. 2) Standard unit with cabinet and feet.

ECOi-LOOP 15-30 C/H · R410A

Water source heat pumps cooling only and reversible.

Cooling capacity: 1,5 to 2,9 kW.
Heating capacity: 1,9 to 3,7 kW.



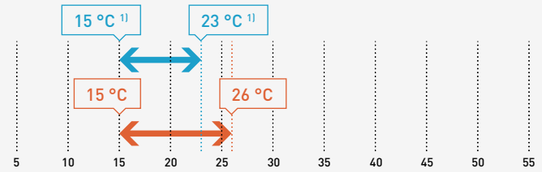
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

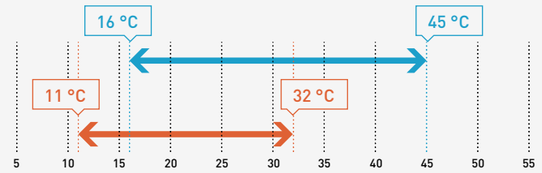
SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.



1) From 21 to 32 °C DB. *Maximum water pressure 10 bars.

The range at a glance

- 2 versions: C (cooling only) and H (reversible)
- 3 sizes
- Horizontal installation
- Nominal air flow from 435 to 525 m³/h
- Many air and water configurations available
- 140 Pa maximum external static pressure
- Operating range: from 15 °C to 32 °C ambient air temperature
- Water inlet temperature from 11 °C to 45 °C

Advantages

- Very high performances: EER up to 5,05 and COP up to 5,70
- Low energy consumption EC fan
- In-line or perpendicular air flow
- Increased robustness: coaxial heat exchanger
- Easy access to the internal components: large electrical panel and filter accessible from 3 sides
- 100% factory tested

Equipment

- The refrigerant circuit comprises a rotary type hermetic compressor, a cycle reversal valve (H type only), a water/refrigerant heat exchanger, a liquid receiver, a capillary expansion device, a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The rotary type hermetic compressor, mounted on spring anti-vibration mounts, is integrated in a compartment coated with reinforced acoustic insulation. It is also equipped with internal thermal protection
- The water/refrigerant heat exchanger is of copper/stainless steel coaxial type for an increased efficiency
- The units are equipped with a control system (POL423) utilising Modbus RTU
- The casing is made of galvanised steel sheet
- Condensate drain pan with an anti-corrosion treatment
- The electrical box is located on the hydraulic service side with a wide access panel
- The units are equipped with multi-position brackets for easy installation

Technical performance

ECOi-LOOP 15-30 C - cooling only			P-LPE015CA	P-LPE020CA	P-LPE030CA
ECOi-LOOP 15-30 H - reversible			P-LPE015HA	P-LPE020HA	P-LPE030HA
Total cooling capacity [1]		W	1507	2151	2902
Sensible cooling capacity [1]		W	1371	1733	2355
EER			4,51	5,05	4,25
Heating capacity [2]		W	1934	2510	3680
COP			5,49	5,70	4,97
Ventilation					
Number of fans				1	
Nominal air flow		m³/h	435	465	525
Motor power		W	24	38	53
Air filter	Number / efficiency		1 / Basic or G3M1	1 / Basic or G3M1	1 / Basic or G3M1
Hydraulic circuit					
Water heat exchanger	Number / type		1 / Coaxial	1 / Coaxial	1 / Coaxial
Maximum water pressure		bar	10	10	10
Nominal water flow		l/h	317	444	617
WPD at nominal water flow		kPa	8	12	18
Connections - inlet/outlet (Ø)		Inch	½ Male gas	½ Male gas	½ Male gas
Condensate outlet - external (Ø)		mm	16	16	16
Refrigerant circuit					
Number of refrigerant circuits			1	1	1
Compressor type			Rotary	Rotary	Rotary
Load		g	415	565	565
Electrical data					
Power supply	Voltage	V	230	230	230
	Phase		Single phase	Single phase	Single phase
	Frequency	Hz	50 ±10%	50 ±10%	50 ±10%
Input power [3]	Cooling	W	365	471	742
	Heating	W	389	491	806
Electric heating coil [4]	Number / capacity	- / W	1 / 600+600	1 / 800+800	1 / 1000+1000
	Input power	W	1200	1600	2000
Sound levels - without acoustic options					
Sound power - radiated	Lo / Med / Hi	dB(A)	41,9 / 43,1 / 44,4	42,7 / 44,5 / 46,5	45 / 46,8 / 48,9
Sound power - discharge	Lo / Med / Hi	dB(A)	45,6 / 49,1 / 53	49,1 / 53,6 / 58,3	51,7 / 57,2 / 61,9
Sound pressure [5]	Lo / Med / Hi	dB(A)	27,1 / 30 / 33,5	30 / 34,1 / 38,4	32,7 / 37,6 / 42
NR [5]	Lo / Med / Hi		22,4 / 25,7 / 29,4	25,8 / 30,1 / 34,4	28,6 / 33,6 / 37,9
Sound levels - with air outlet silencer and insulation around the fan					
Sound power - radiated	Lo / Med / Hi	dB(A)	42,3 / 43,2 / 44,5	42,7 / 44,4 / 46,5	44,4 / 46,6 / 48,9
Sound power - discharge	Lo / Med / Hi	dB(A)	32,2 / 35,2 / 38,5	34,7 / 38,5 / 42,5	36,1 / 40,6 / 44,6
Sound pressure [5]	Lo / Med / Hi	dB(A)	23,2 / 25 / 27,3	24,8 / 27,7 / 31	27 / 30,6 / 34
NR [5]	Lo / Med / Hi		18,8 / 20,4 / 22,7	20,1 / 23 / 26,4	23,2 / 25,9 / 29,5
Dimension - without air inlet/outlet options					
Length		mm	900	900	900
Width		mm	530	530	530
Height		mm	250	250	250
Weight - without air inlet/outlet options					
Operating weight		kg	48	48	48

1) Nominal cooling capacities based on entering air temperature of 27 °C DB, 19 °C WB with entering water temperature of 30 °C. 2) Nominal heating capacities based on entering air temperature of 20 °C DB, 15 °C WB with entering water temperature of 20 °C. 3) Input power at nominal conditions (compressor + fan at high speed). 4) Electric heating coil is available as an option. 5) Informative data, considering an hypothetical sound attenuation of the room and installation of 21 dB(A). In-line configuration with filter.

Accessories and options
Air outlet silencer
Basic or G3M1 filter
Circuit breaker
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
Drain outlet
Drain pump

Accessories and options
Electric heaters
Flow switch control
Insulation around the fan
Many air inlet/outlet and water connection configurations
Pressostatic valve (cooling only)
Room temperature sensor

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)

Accessories supplied loose	
P-372061	Kit remote keyboard panel

EC MOTOR GREEN VENTILATION | HIGH EER 5,05 | HIGH COP 5,70 | ROTARY COMPRESSOR | COAXIAL HEAT EXCHANGER | SUPER QUIET | VERY HIGH PERFORMANCE | COMMERCIAL SMART EDGE

Specifications subject to change without notice. For detailed information about ErP / Energy Labelling, please visit our websites www.aircon.panasonic.eu or www.ptc.panasonic.eu.

ECOi-LOOP-N 70-135 H · R513A

Water source heat pumps reversible.

Cooling capacity: 7,0 to 13,3 kW.
Heating capacity: 8,1 to 14,6 kW.

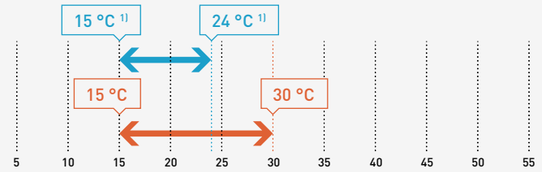
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

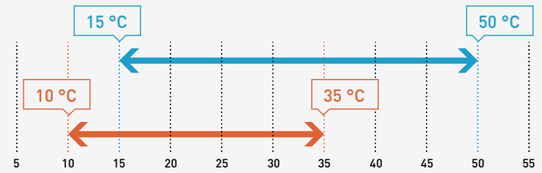
SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.



1) From 21 to 33 °C DB. *Maximum water pressure 10 bars.

The range at a glance

- 1 version: H (reversible)
- 6 sizes
- Horizontal installation
- Nominal air flow from 1730 to 3680 m³/h
- In-line or perpendicular air flow
- Up to 495 Pa according to size
- Operating range: from 15 °C to 32 °C ambient air temperature
- Water inlet temperature from 11 °C to 45 °C

Advantages

- Very high performances: EER up to 3,95 and COP up to 4,58
- Low energy consumption EC fan
- Increased robustness: coaxial heat exchanger
- Easy access to the internal components: a wide removable panel allows an easy access to the electrical panel and the access to the filter is from the side of the unit, without removing the return duct
- 100% factory tested

Equipment

- The refrigerant circuit comprises a scroll type hermetic compressor, a cycle reversal valve, a water/refrigerant heat exchanger, a bi-flow thermostatic expansion valve, a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The scroll type hermetic compressor, mounted on spring anti-vibration mounts, is integrated in a compartment coated with reinforced acoustic insulation. It is also equipped with internal thermal protection
- The water/refrigerant heat exchanger is of copper/stainless steel coaxial type for an increased efficiency
- The units are equipped with a control system (POL423) utilising Modbus RTU
- The casing is made of galvanised steel sheet
- Condensate drain pan with an anti-corrosion treatment
- The electrical box is located inside the compressor compartment with a wide access panel

Technical performance

ECOi-LOOP-N 70-135 H - reversible			P-LPN070HA	P-LPN085HA	P-LPN100HA	P-LPN110HA	P-LPN120HA	P-LPN135HA
Total cooling capacity [1]		W	7011	8407	10290	11183	12105	13301
Sensible cooling capacity [1]		W	5960	7146	8541	9282	10047	11040
Total absorbed power [2]		W	1776	2275	2743	3234	3161	3784
EER Compressor			4,53	4,21	4,36	4,0	4,46	4,1
EER according to EN 14511			3,95	3,7	3,75	3,46	3,83	3,52
Total heating capacity [3]		W	8069	9808	11307	12514	13834	14639
Total absorbed power [2]		W	1761	2256	2590	3073	3081	3467
COP Compressor			5,27	4,96	5,12	4,75	5,25	5,0
COP according to EN 14511			4,58	4,35	4,37	4,07	4,49	4,22
Ventilation								
EC voltage		V	3,80	5,50	7,80	8,80	7,60	8,60
Air flow	Min (LS)	m³/h	1123	1407	1837	2001	2157	2390
	Med (MS)	m³/h	1425	1786	2331	2539	2730	3034
	Max (nominal) (HS)	m³/h	1727	2165	2826	3078	3309	3677
Nominal static pressure		Pa	100	100	100	100	100	100
Fan absorbed power		W	328	393	552	631	617	737
Fan power		W	684	653	703	738	671	722
Air filter	Number / efficiency		1 / G2M1	1 / G2M1	1 / G2M1	1 / G2M1	1 / G2M1	1 / G2M1
Hydraulic circuit								
Water heat exchanger	Number / type		1 / Coaxial	1 / Coaxial	1 / Coaxial	1 / Coaxial	1 / Coaxial	1 / Coaxial
Maximum water pressure		Bar	10	10	10	10	10	10
Nominal water flow	Cooling [1]	l/h	1497	1818	2274	2508	2649	2957
	Heating [3]	l/h	1882	2256	2514	2738	3143	3463
Cutoff water flow	Cooling	l/h	749	909	1137	1254	1325	1479
	Heating	l/h	941	1128	1257	1369	1572	1732
WPD at nominal water flow	Cooling [1]	kPa	35,9	49,8	39,6	46,6	30,6	38,3
	Heating [3]	kPa	52,7	71,3	46,8	53,9	43,4	53
Hydraulic connections - inlet/outlet		Inch	1 Male gas	1 Male gas	1 Male gas	1 Male gas	1 Male gas	1 Male gas
Condensate outlet (Ø)		mm	19	19	19	19	19	19
Refrigerant circuit								
Number of refrigerant circuits			1	1	1	1	1	1
Compressor type			Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Load		g	1040	1165	1108	1116	1355	1363
Electrical data								
Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Maximum current without heating		A	12,8	13,4	15,6	18,2	17,3	18,1
Starting current		A	53,5	53,5	53,5	78,5	71,4	78,4
Sound levels								
Sound power Lw - radiated	Lo / Med / Hi	dB(A)	60,6/65/65,4	59,5/65,3/66,1	61/66,9/69,4	62,1/67,7/10,4	58/62,6/67,4	58,8/63,9/68,8
Sound power Lw - discharge	Lo / Med / Hi	dB(A)	53,8/62,9/71	62,8/69,5/73,6	68,4/72,7/77,1	68,8/72,6/77,2	64,5/69,3/73,5	65,7/71,2/75,6
Sound power Lw	Lo / Med / Hi	dB(A)	63,7/68,1/72,6	65,5/71,4/74,7	69,6/74,1/78,1	70,1/74,3/78,5	66,5/70,9/75,1	67,5/72,7/77
Sound pressure Lp [4]	Lo / Med / Hi	dB(A)	49/54,3/56,2	49,5/54,3/56,4	55,3/58,8/62,6	54,4/57,6/61,9	52,5/56,8/60,5	52,7/58,5/62,1
NR [4]	Lo / Med / Hi		45,9/51,5/51,2	45,9/49,9/50,9	52,3/55,5/58,5	52,3/54,4/59,1	50,7/55,2/58,4	50,7/56,9/60,3
Dimension - without air inlet/outlet options								
Length		mm	1142	1142	1333	1333	1333	1333
Width		mm	762	762	818	818	818	818
Height		mm	516	516	580	580	580	580
Weight								
Operating weight		kg	134	134	153	153	160	160

1) Nominal cooling capacities based on entering air temperature of 27 °C DB, 19 °C WB with entering water temperature of 30 °C. 2) Input power at nominal conditions (compressor + fan at high speed).
3) Nominal heating capacities based on entering air temperature of 20 °C DB, 15 °C WB with entering water temperature of 20 °C. 4) Informative data, considering an hypothetical sound attenuation of the room and installation of 21 dB(A). In-line configuration with filter.

Accessories and options
G2M1 filter or G3 filter
Circuit breaker
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
Drain pump

Accessories and options
Electric heaters
Flow switch control
General default report
Many air configurations
Room temperature sensor

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)

Accessories supplied loose	
P-372061	Kit remote keyboard panel

EC MOTOR GREEN VENTILATION | HIGH EER 3,95 | HIGH COP 4,58 | SCROLL COMPRESSOR | COAXIAL HEAT EXCHANGER | SUPER QUIET | VERY HIGH PERFORMANCE | COMMERCIAL SMART EDGE

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ECOi-LOOP-N EVO C/H · R513A

Water source heat pumps cooling only and reversible.

Cooling capacity: 1,7 to 2,9 kW.
Heating capacity: 2,0 to 3,8 kW.

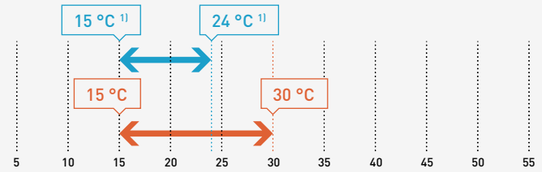
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

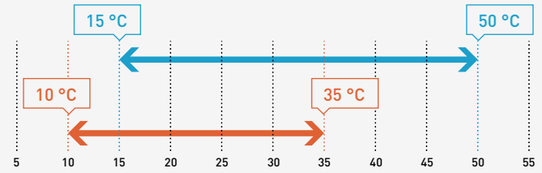
SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.



1) From 21 to 33 °C DB. *Maximum water pressure 10 bars.

The range at a glance

- Unique size available in C (cooling only) or H (reversible) versions
- Horizontal installation
- Air flow from 290 to 525 m³/h
- Inverter compressor technology
- Many air and water configurations available
- 140 Pa maximum external static pressure
- Operating range: from 15 °C to 32 °C ambient air temperature
- Water inlet temperature from 11 °C to 45 °C

Advantages

- Eco-friendly: R513A refrigerant with very low GWP (631) and low energy consumption EC fan
- Economic: Inverter compressor adapting its speed according to the required capacity
- Extra silent unit: NR<26 at low speed and reinforced insulation
- Very high-performance: EER up to 4,25 and COP up to 4,53
- Low height for an easy integration: only 250 mm
- Highly customisable: many aeraulic configurations and selection of the hydraulic service side
- Increased robustness: coaxial heat exchanger
- Easy access to the internal components: large electrical panel and filter accessible from 3 sides
- 100% factory tested

Equipment

- The refrigerant circuit comprises an Inverter rotary type hermetic compressor, a cycle reversal valve (for H type), a water/refrigerant heat exchanger, a liquid receiver, a thermostatic expansion valve, a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The Inverter rotary type hermetic compressor, mounted on spring anti-vibration mounts, is integrated in a compartment coated with reinforced acoustic insulation. It is also equipped with internal thermal protection
- The water/refrigerant heat exchanger is of copper/stainless steel coaxial type for an increased efficiency
- The unit is equipped with a complete control system (Modbus RTU or BACnet MSTP protocol communication)
- The casing is made of galvanised steel sheet
- Condensate drain pan with an anti-corrosion treatment
- The electrical box is located on the hydraulic service side with a wide access panel
- The units are equipped with multi-position brackets for easy installation

Technical performance

ECOi-LOOP-N EVO C - cooling only			P-LPVN030CA
ECOi-LOOP-N EVO H - reversible			**P-LPVN030HA**
Total cooling capacity [1]	Min - Max [2]	W	1687 - 2948
Sensible cooling capacity [1]	Min - Max [2]	W	1363 - 2337
EER	Min - Max [2]		4,25 - 3,06
Heating capacity [3]	Min - Max [2]	W	2004 - 3769
COP	Min - Max [2]		4,53 - 3,45
Ventilation			
Number of fans			1
Nominal air flow (at low and high speeds)	Min - Max [2]	m³/h	290 - 525
Motor power (at low and high speeds)	Min - Max [2]	W	13 - 54
Air filter	Number / efficiency		1 / Basic or G3
Hydraulic circuit			
Water heat exchanger	Number / type		1 / Coaxial
Maximum water pressure		bar	10
Nominal water flow	Cooling Min - Max [2]	l/h	354 - 662
	Heating Min - Max [2]	l/h	458 - 789
WPD at nominal water flow [4]	Cooling Min - Max [2]	kPa	9 - 19,5
	Heating Min - Max [2]	kPa	12,3 - 24,6
Connections - inlet/outlet (Ø)		Inch	½ Male gas
Condensate outlet - external (Ø)		mm	16
Refrigerant circuit			
Number of refrigerant circuits			1
Compressor type			Inverter rotary
Load		g	514
Electrical data			
Power supply	Voltage	V	230
	Phase		Single phase
	Frequency	Hz	50 ±10%
Input power [5]	Cooling Min - Max [2]	W	397 - 964
	Heating Min - Max [2]	W	442 - 1093
Electric heating coil [6]	Number / capacity Min - Max [2]	- / W	1 / 600 + 600 - 1 / 1000 + 1000
	Input power Min - Max [2]	W	1200 - 2000
Sound levels - without acoustic options			
Sound power - radiated	Min - Max [2]	dB(A)	41,9 - 51,5
Sound power - discharge	Min - Max [2]	dB(A)	47,9 - 62,8
Sound pressure [7]	Min - Max [2]	dB(A)	29,3 - 43
NR [7]	Min - Max [2]		25,8 - 39,2
Sound levels - with air outlet silencer and insulation around the fan			
Sound power - radiated	Min - Max [2]	dB(A)	42,3 - 51,6
Sound power - discharge	Min - Max [2]	dB(A)	33,2 - 44,4
Sound pressure [7]	Min - Max [2]	dB(A)	24,5 - 35
NR [7]	Min - Max [2]		19,5 - 30,4
Dimension - without air inlet/outlet options			
Length		mm	900
Width		mm	636
Height		mm	250
Weight - without air inlet/outlet options			
Operating weight		kg	51

1) Nominal cooling capacities based on entering air temperature of 27 °C DB, 19 °C WB with entering water temperature of 30 °C. 2) Thermal load. 3) Nominal heating capacities based on entering air temperature of 20 °C DB, 15 °C WB with entering water temperature of 20 °C. 4) Without valve. 5) Input power at nominal conditions (compressor + fan at high speed). 6) Electric heating coil is available as an option. 7) Informative data, considering an hypothetical sound attenuation of the room and installation of 21 dB. In-line configuration with filter.

Accessories and options
Air outlet silencer
Basic or G3M1 filter
Circuit breaker
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
Drain outlet
Drain pump

Accessories and options
Electric heaters
Flow switch control
General default report
Insulation around the fan
Many air inlet/outlet and water connection configurations
Room temperature sensor

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)

Accessories supplied loose	
P-372061	Kit remote keyboard panel

EC MOTOR GREEN VENTILATION | HIGH EER 4,25 | HIGH COP 4,53 | INVERTER | COAXIAL HEAT EXCHANGER | INVERTER ROTARY COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE | COMMERCIAL SMART EDGE

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ECOi-LOOP HRW H and ECOi-LOOP HRWE H · R407C

Water source heat pumps reversible.

Cooling capacity: 5,3 to 30,0 kW.
Heating capacity: 5,8 to 38,1 kW.

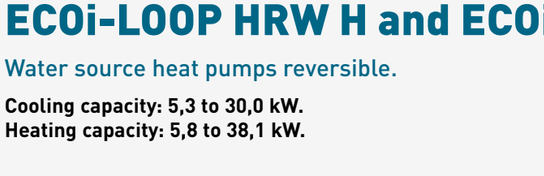
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.

1) From 21 to 38 °C DB. 2) From 20 to 48 °C for 96-120. *Maximum water pressure 16 bars.

The range at a glance

- 1 version: H (reversible)
- 10 sizes
- Horizontal installation
- Versions: standard or HE** (very high-efficiency)
- Nominal air flow from 1180 to 5600 m³/h
- AC fan: 3-speed direct drive fan motor for sizes 19 to 72 and belt drive with variable pitch pulley for sizes 96 and 120
- Operating range: from 15 °C to 38 °C ambient air temperature
- Water inlet temperature from 13°C to 48 °C

Advantages

- Low sound levels: acoustic insulation between ventilation and compressor compartments
- Very high-efficiency versions (HE)*: EER up to 4,74 and COP up to 4,46
- In-line or perpendicular air flow
- Easy access to components through wide removable panels
- Condensate drain pan with an anti-corrosion treatment and a float-type safety system
- 100% factory tested

Equipment

- The refrigerant circuit comprises a scroll or rotary type hermetic compressor, a cycle reversal valve (for H type), a water/refrigerant heat exchanger, a liquid receiver, a bi-flow thermostatic expansion valve and a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The rotary or scroll type hermetic compressor, mounted on rubber anti-vibration mounts, is integrated in a compartment coated with reinforced acoustic insulation. It is also equipped with internal thermal protection
- The units are equipped with a control system (POL423) utilising Modbus RTU
- The water/refrigerant heat exchanger is made of brazed stainless steel plates, for improved efficiency
- Condensate drain pan with an anti-corrosion treatment and a float-type safety system
- A G2-M1air filter is provided within the unit

*HE versions only available for reversible units.

Technical performance

ECOi-LOOP HRW H - reversible	P-LPHM***HA***1)		019	027	—	030	—	036	—	042	—	048	060	—	072	—	096	—	120
ECOi-LOOP HRWE H - reversible	P-LPHEM***HA***1)		—	—	027	—	030	—	036	—	042	—	—	060	—	072	—	096	—
Total cooling capacity 2)		W	5278	7419	7320	8691	8710	10138	11060	11366	12500	12965	14344	16700	17174	20600	21743	24500	29951
Sensible cooling capacity 2)		W	4257	5824	5600	6315	6676	7278	9070	8849	9542	10051	10988	13900	13536	17700	17986	19500	24413
EER			4,20	3,72	4,00	3,77	4,15	3,77	4,31	3,44	4,00	4,03	3,23	4,44	3,26	4,74	3,84	4,61	4,21
Heating capacity 3)		W	5826	8342	9252	9759	9960	11036	12200	14422	14450	14904	16147	18800	21500	22600	26637	28500	38109
COP			4,40	3,69	4,21	3,50	4,30	3,38	4,28	3,84	4,36	4,25	3,33	4,20	3,15	4,23	3,54	4,46	4,25
Ventilation																			
Number of fans			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nominal air flow		m³/h	1250	1190	1180	1490	1500	1580	1580	2040	2040	2750	2840	2840	3570	3800	4700	4700	5600
Motor power		W	450	450	450	950	950	950	950	950	950	1500	1500	1500	1500	736	1100	1100	1500
Air filter	Number / efficiency		2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1	2 / G2-M1
Hydraulic circuit																			
Number of plate heat exchanger			1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Maximum water pressure		bar	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
Nominal water flow		l/h	921	1540	1620	1764	1800	2030	2306	2592	2600	2822	3348	3550	3924	4300	4860	4960	6408
WPD at nominal water flow		kPa	13	17	13	23	20	25	21	33	28	34	40	35	61	50	55	55	80,5
Connections - inlet/outlet (Ø)		Inch	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G ¾ INT	ISO G 1 ¼	ISO G ¾ INT	ISO G 1 ¼	ISO G 1 ¼	ISO G 1 ¼	ISO G 1 ¼
Condensate outlet - external (Ø)		mm	19	19	19	19	19	19	19	19	19	19	19	19	19	22	22	22	22
Refrigerant circuit																			
Number of refrigerant circuits				1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Compressor type			Rotary	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Load		g	1160	1483	2534	1594	1950	1950	3200	3200	2800	3200	3200	3400	2700	3800	5100	5100	5100
Electrical data																			
Power supply	Voltage	V	230	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400	400
	Phase		Single phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50 ±10%	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral	50 + Neutral
Input power 4)	Cooling	W	1557	2118	1981	2658	2357	3044	2909	3584	3423	4200	4989	4278	6280	5279	6317	5954	8547
	Heating	W	1611	2332	2382	2983	2475	3460	3203	3920	3479	4300	5150	5098	7347	6188	7895	7115	10224
Electric heating coil	Number / capacity	- / W	2 / 1500 + 750	1 / 3750	1 / 3750	1 / 3750	1 / 3750	1 / 4500	1 / 4500	1 / 5400	1 / 5400	1 / 6500	1 / 7500	1 / 7500	1 / 9000	1 / 9000	1 / 13000	1 / 13000	1 / 16000
Sound levels																			
Sound power - radiated	Lo / Med / Hi	dB(A)	51 / 54 / 58	54 / 56 / 57	54 / 56 / 57	53 / 54 / 57	53 / 54 / 57	53 / 56 / 58	53 / 56 / 58	54 / 56 / 58	54 / 56 / 58	55 / 59 / 63	55 / 59 / 63	55 / 59 / 63	57 / 60 / 63	55 / 59 / 62	70 / 69 / 68	70 / 69 / 68	72 / 69 / 70
NR	Lo / Med / Hi		34 / 37 / 40	33 / 34 / 37	33 / 34 / 37	33 / 35 / 38	33 / 35 / 38	34 / 37 / 41	34 / 37 / 41	36 / 40 / 43	36 / 40 / 43	39 / 43 / 46	39 / 43 / 46	39 / 43 / 46	36 / 39 / 44	36 / 39 / 44	56 / 54 / 52	56 / 54 / 52	56 / 53 / 50
Dimension																			
Length		mm	900	1050	1050	1050	1050	1050	1250	1250	1250	1250	1250	1250	1250	1680	1680	1680	1680
Width		mm	600	600	660	660	660	660	705	705	705	705	705	705	705	955	955	955	955
Height		mm	439	460	460	460	460	460	513	513	513	513	513	583	513	770	770	770	770
Weight																			
Operating weight		kg	80	100	112	100	100	112	133	133	135	140	144	149	149	253	253	259	262

1) ***HWA: units without RCS, HRA: units with RCS, HBA: units with RCS + EH, HHA: units with EH. 2) Nominal cooling capacities based on: entering air temperature of 27 °C DB, 19 °C WB with entering water temperature of 30 °C. 3) Nominal heating capacities based on: entering air temperature of 20 °C DB, 15 °C WB with entering water temperature of 20 °C. 4) Absorbed power (compressor + fan) at nominal conditions. Check data and configuration on the technical documentation.

Accessories and options
Circuit breaker
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
EH - Electric heaters
General alarm dry contact

Accessories and options
Main switch
Motorized water valve
Room sensor
G3 filter (available upon request)

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)

Accessories supplied loose	
P-372061	Kit remote keyboard panel

HIGH EER 4,74 | HIGH COP 4,46 | PLATE HEAT EXCHANGER | ROTARY/SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE | COMMERCIAL SMART EDGE

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ECOi-LOOP FS H · R407C

Water source heat pumps reversible.

Cooling capacity: 2,7 kW.
Heating capacity: 3,2 kW.

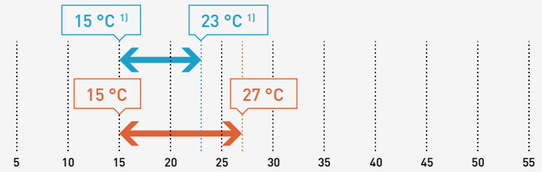
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

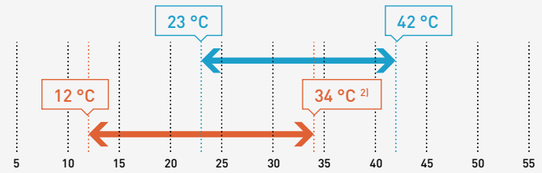
SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.



1) From 21 to 32 °C DB. 2) 32 °C for ECOi-LOOP FS 07 in low speed. *Maximum water pressure 10 bars.

The range at a glance

- 1 version: H (reversible)
- 1 size
- Vertical installation
- 4 versions: VC (standard version with cabinet), VCL (low height version with cabinet), VN (standard version without cabinet) and VNL (low height version without cabinet)
- EER up to 3,25 and COP up to 3,49
- Nominal air flow from 400 to 510 m³/h
- 3-speed AC fan (or optional low consumption EC fan)
- Many hydraulic and electric configurations available
- Front or bottom air intake
- Operating range: from 15 °C to 32 °C ambient air temperature
- Water inlet temperature from 12 °C to 42 °C

Advantages

- Low sound levels: acoustic insulation between ventilation and compressor compartments
- Design and elaborate finish cabinet enabling harmonious integration (RAL9010)
- Low energy consumption EC fan (option)
- Highly customisable. Many air routeing configurations and selection of hydraulic service side
- Easy access to components through a removable front panel
- Brazed stainless steel plate heat exchanger for improved efficiency
- 100% factory tested

Equipment

- The refrigerant circuit comprises a rotary type hermetic compressor, a cycle reversal valve, a water/refrigerant heat exchanger, a liquid receiver, a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The rotary type hermetic compressor, mounted on spring anti-vibration mounts, is integrated in a compartment coated with reinforced acoustic insulation. It is also equipped with internal thermal protection
- The units are equipped with a control system (POL423) utilising Modbus RTU
- The water/refrigerant heat exchanger is made of brazed stainless steel plates, for improved efficiency
- RAL9010 painted cabinet for versions VC and VCL
- Condensate drain pan with an anti-corrosion treatment
- A G2 air filter is provided within the unit

Technical performance

ECOi-LOOP FS H - reversible			P-LPFSM12HA
Total cooling capacity [1]		W	2743
Sensible cooling capacity [1]		W	2340
EER			3,25
Heating capacity [2]		W	3156
COP			3,49
Ventilation			
Number of fans			1
Air flow	Lo / Med / Hi	m³/h	400 / 460 / 510
Motor power (with AC / EC fan)		W	75 / 40
Air filter	Number / efficiency		1 / G2
Hydraulic circuit			
Number of plate heat exchanger			1
Maximum water pressure		bar	10
Nominal water flow		l/h	616
WPD at nominal water flow		kPa	12
Connections - inlet/outlet (ø)		Inch	ISO G ½ INT
Condensate outlet - external (Ø)		mm	15 x 20
Refrigerant circuit			
Number of refrigerant circuits			1
Compressor type			Rotary
Load		g	750
Electrical data			
Power supply	Voltage	V	230
	Phase		Single phase
	Frequency	Hz	50 ±10%
Input power - AC fan [3]	Cooling	W	892
	Heating	W	954
Sound levels - AC fan			
Sound pressure [4]	Lo / Med / Hi	dB(A)	43 / 45 / 46
NR [4]	Lo / Med / Hi		38 / 40 / 41
Dimension			
Standard with cabinet (VC)	L x W x H	mm	1138 x 251 x 720 min / 750 max (821 with feet)
Low height with cabinet (VCL)	L x W x H	mm	1323 x 251 x 580 min / 610 max (683 with feet)
Standard without cabinet (VN)	L x W x H	mm	1043,5 (1086 with feet) x 229 x 667,5 min / 697,5 max (769,5 with feet)
Low height without cabinet (VNL)	L x W x H	mm	1182,5 (1183 with feet) x 229 x 525 min / 555 max (627 with feet)
Weight			
Without cabinet / with cabinet - operating		kg	60 / 75

1) Nominal cooling capacities based on: entering air temperature of 27 °C DB/19 °C WB, with entering water temperature of 30 °C. 2) Nominal heating capacities based on: entering air temperature of 20 °C DB/15 °C WB, with entering water temperature of 20 °C. 3) Absorbed power (compressor + fan) at nominal conditions. 4) Sound pressure considering a local of 100 m³, a reverberation time of 0,5 sec and a distance of 1 m.

Accessories and options
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
EC fan
Feet

Accessories and options
General remote alarm contact
Low noise
Many electric, hydraulic and aeraulic configurations
Thermal overload

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)
P-372061	Kit remote keyboard panel

Accessories supplied loose	
P-372734	Kit front air intake cabinet
P-372642	Kit front air intake cabinet (low height)

HIGH EER 3,25 | HIGH COP 3,49 | EC MOTOR GREEN VENTILATION | PLATE HEAT EXCHANGER | ROTARY COMPRESSOR | SUPER QUIET | COMMERCIAL SMART EDGE

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ECOi-LOOP-N FS H · R513A

Water source heat pumps reversible.

Cooling capacity: 1,7 to 2,0 kW.
Heating capacity: 1,8 to 2,6 kW.

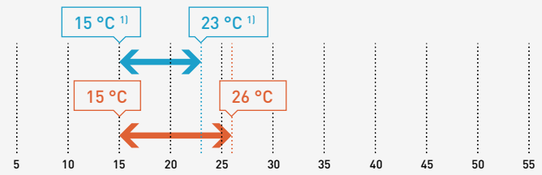
Optional controller. RCS remote control.

Optional controller. SRC - mini BMS controller.

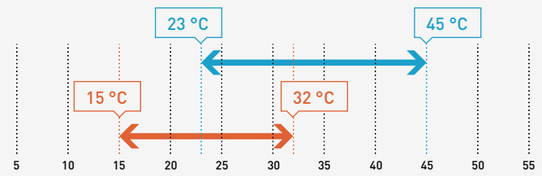
SEE PAGE 536 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

Operating limits

Air inlet temperature.



Water inlet temperature.



1) From 21 to 32 °C DB. *Maximum water pressure 10 bars.

The range at a glance

- 1 version: H (reversible)
- 2 sizes
- Vertical installation
- 4 versions: VC (standard version with cabinet), VCL (low height version with cabinet), VN (standard version without cabinet) and VNL (low height version without cabinet)
- EER up to 4,9 and COP up to 4,6
- Nominal air flow from 250 to 460 m³/h
- 3-speed AC fan (or optional low consumption EC fan)
- Many hydraulic and electric configurations available
- Front or bottom air intake
- Operating range: from 15 °C to 32 °C ambient air temperature
- Water inlet temperature from 15 °C to 45 °C

Advantages

- Low sound levels: acoustic insulation between ventilation and compressor compartments
- Design and Elaborate finish cabinet enabling harmonious integration (RAL9010)
- Low energy consumption EC fan (option)
- Highly customisable. Many air routeing configurations and selection of hydraulic service side
- Easy access to components through a removable front panel
- Brazed stainless steel plate heat exchanger for improved efficiency (coaxial exchanger upon request)
- 100% factory tested

Equipment

- The refrigerant circuit comprises a rotary type hermetic compressor, a cycle reversal valve, a water/refrigerant heat exchanger, a liquid receiver, a capillary expansion device, a finned coil, HP and LP pressure switches and 2 Schrader valves (HP and LP)
- The rotary type hermetic compressor is installed in a compartment covered with a 20 mm thick Isofeutre thermal-acoustic insulation. It is also equipped with internal thermal protection
- The units are equipped with a control system (POL423) utilising Modbus RTU
- The water/refrigerant heat exchanger is made of brazed stainless steel plates, for improved efficiency. A coaxial heat exchanger is available on request
- RAL9010 painted cabinet for versions VC and VCL
- Condensate drain pan with an anti-corrosion treatment
- A G2 air filter is provided within the unit

Technical performance

ECOi-LOOP-N FS H - reversible			P-LPFSN07HA	P-LPFSN09HA
Total cooling capacity [1]		W	1690	2040
Sensible cooling capacity [1]		W	1410	1600
Input power (with EC / AC fan) [2]		W	345 / 355	480 / 487
EER according to EN 14511 (with EC / AC fan)			4,9 / 4,75	4,25 / 4,19
Heating capacity [3]		W	1790	2630
Input power (with EC / AC fan) [2]		W	395 / 405	610 / 617
COP according to EN 14511 (with EC / AC fan)			4,6 / 4,41	4,31 / 4,26
Ventilation				
Air flow	Min	m³/h	250	340
	Nominal	m³/h	340	400
	Max	m³/h	400	460
Nominal input power (with EC / AC fan)		W	15 / 25	20 / 27
Motor power (with EC / AC fan)		W	40 / 75	40 / 75
Air filter	Number / efficiency		1 / G2	1 / G2
Hydraulic circuit				
Number of plate heat exchanger			1	1
Maximum water pressure		Bar	10	10
Nominal water flow	Cooling [1]	l/h	351	434
	Heating [3]	l/h	405	586
Cutoff water flow		l/h	180	180
WPD at nominal water flow	Cooling [1]	kPa	3,8	5,8
	Heating [3]	kPa	5,1	10,8
Hydraulic connections - inlet/outlet		Inch	Female ISO G ½ INT	Female ISO G ½ INT
Condensate outlet (Ø)		mm	15 x 20	15 x 20
Refrigerant circuit				
Number of refrigerant circuits			1	1
Type of compressor			Rotary	Rotary
Load		g	500	490
Electrical data				
Power supply	Voltage	V	230	230
	Phase		Single phase	Single phase
	Frequency	Hz	50 ±10%	50 ±10%
Maximum current [4]		A	4,6	5,7
Starting current [5]		A	16	16,5
Sound levels				
Sound power Lw	Lo / Med / Hi	dB(A)	47,2 / 49,8 / 51,5	49,8 / 51,5 / 54,3
Sound pressure Lp	Lo / Med / Hi	dB(A)	38,2 / 40,8 / 42,5	40,8 / 42,5 / 45,3
NR	Lo / Med / Hi	dB(A)	32 / 34 / 36	34 / 36 / 40
Sound levels - extra low noise version				
Sound power Lw	Lo / Med / Hi	dB(A)	42,5 / 44,6 / 46,5	44,7 / 46,5 / 48,6
Sound pressure Lp	Lo / Med / Hi	dB(A)	33,5 / 35,6 / 37,5	35,7 / 37,5 / 39,6
NR	Lo / Med / Hi	dB(A)	28 / 30 / 32	30 / 32 / 34
Dimension				
Standard with cabinet (VC)	L x W x H	mm	1138 x 260 x 720 min / 750 max (821 with feet)	1138 x 260 x 720 min / 750 max (821 with feet)
Low height with cabinet (VCL)	L x W x H	mm	1322 x 260 x 582 min / 612 max (683 with feet)	1322 x 260 x 582 min / 612 max (683 with feet)
Standard without cabinet (VN)	L x W x H	mm	1055 (1084 with feet) x 241 x 667 min / 697 max (769 with feet)	1055 (1084 with feet) x 241 x 667 min / 697 max (769 with feet)
Low height without cabinet (VNL)	L x W x H	mm	1185 (1270 with feet) x 241 x 525 min / 555 max (626 with feet)	1185 (1270 with feet) x 241 x 525 min / 555 max (626 with feet)
Weight				
Without cabinet / with cabinet - operating		kg	55 / 70	58 / 73

1) Nominal cooling capacities based on: entering air temperature of 27 °C DB/19 °C WB, with entering water temperature of 30 °C. 2) Absorbed power (compressor + fan) at nominal conditions. 3) Nominal heating capacities based on: entering air temperature of 20 °C DB/15 °C WB, with entering water temperature of 20 °C. 4) Maximum currents are given at +/- 5%. 5) Starting currents are given at +/- 10%.

Accessories and options
Modbus RTU protocol-standard. Controller with BACnet MSTP - optional (BACnet IP, LON and Modbus TCP/IP available upon request)
EC fan
Feet

Accessories and options
General remote alarm contact
Low noise
Many electric, hydraulic and aeraulic configurations
Thermal overload

Accessories supplied loose	
P-393446	RCS kit remote control with thermostat (POL822)
P-375281	SRC - mini BMS controller (only with Modbus RTU)
P-372061	Kit remote keyboard panel

Accessories supplied loose	
P-372734	Kit front air intake cabinet
P-372642	Kit front air intake cabinet (low height)

HIGH EER 4,90 · HIGH COP 4,60 · EC MOTOR GREEN VENTILATION · PLATE HEAT EXCHANGER · ROTARY COMPRESSOR · SUPER QUIET · COMMERCIAL SMART EDGE

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Water source heat pumps control systems

SRC - mini BMS controller.

Smart controller. Mini building management system.
With the SRC - mini BMS controller - you can now remotely control multiple units or zones of units with a single interface.
Its time programming function offers you the possibility to fully control and rationalise the energy consumption of your HVAC system.
This smart controller is intuitive and easy to use thanks to its color touch screen, logical structure and clear control icons.
The modern and refined design fits perfectly in to any modern interior.

· Supervise fan coil units, chillers/heat pumps, air handling units and water source heat pumps
· Manage up to 31 units
· Communicate via Modbus protocol
· Time programming function
· A modern and refined design
· 3,5'' color touch screen
· Wall mounting

Used as a mini BMS.
With the SRC you can create up to 15 zones including several Panasonic units belonging to the same product lines.
· Chillers / heat pumps
· Air handling units
· Fan coil units

Used as a remote control.
The SRC can also control, in a unique zone, one or several units belonging to the same product line.
· Fan coil units
· Water source heat pumps

Control system with protocol communication.

Ventilation:
· Compatibility: 3-speed AC fan motor or EC fan motor
· Manual speed (3 levels)
· Automatic speed

Communication:
· Modbus RTU or BACnet MSTP
· Modbus TCP/IP or LON or BACnet IP upon request

Operating mode:
· OFF / Comfort / ECO

Function type:
· Summer
· Winter
· Ventilation
· Auto changeover (adjustment of the automatic mode according to the setpoint)

Setpoint:
· Extract air temperature
· Room thermostat
· BMS

RCS remote control.

Main functions:
· ON / OFF
· Comfort / ECO modes
· Operating mode setting
· Setpoint adjustment
· Room temperature (OFF)
· Ventilation setting (manual or automatic)
· Time display and setting
· Alarm summary
· Zoning (up to 15 units)
· Scheduling