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.

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

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

1 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.

2 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.

3 Water source heat pumps - ECOi-LOOP

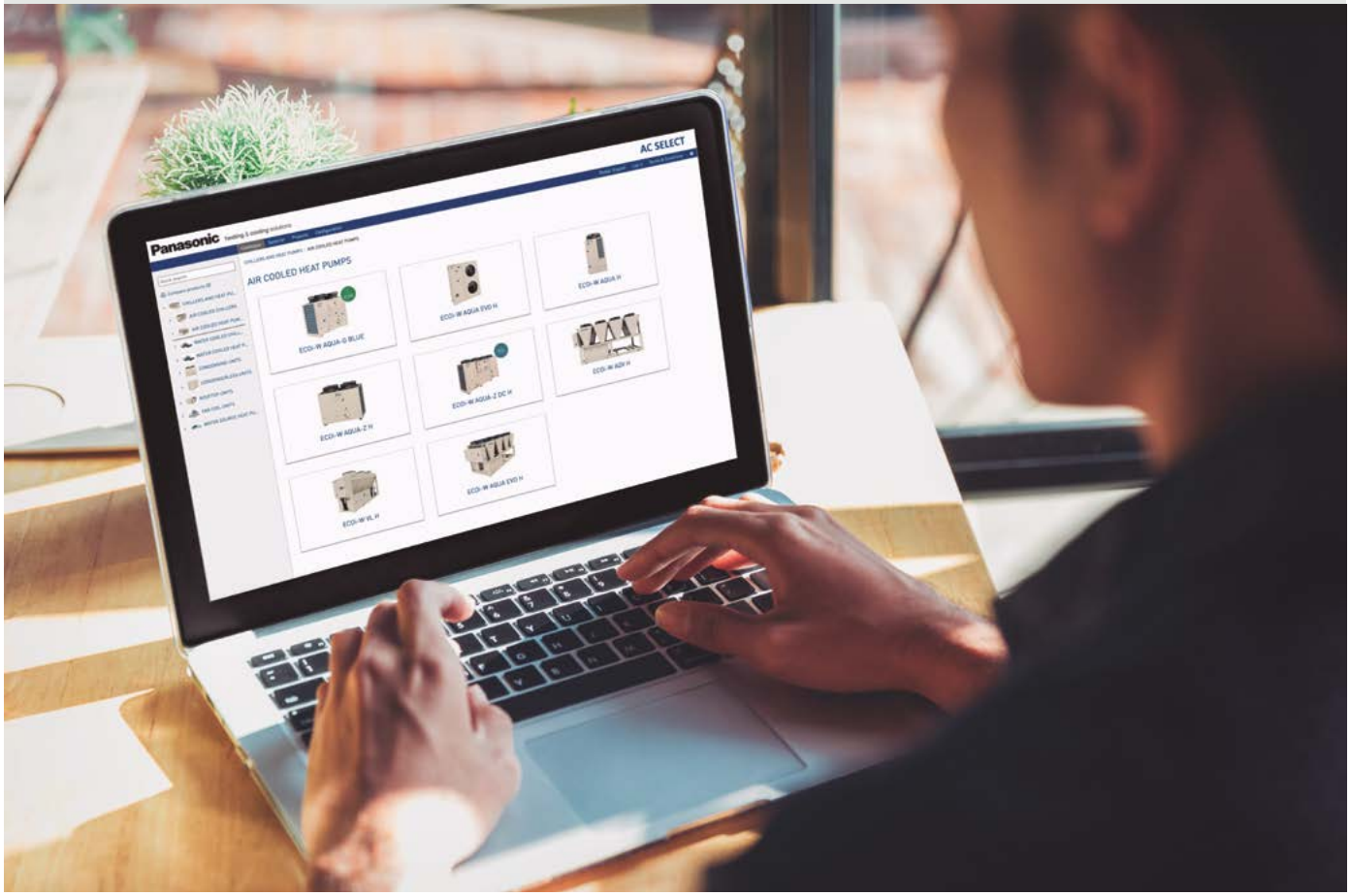
Water source heat pumps are ideal for best in class hotels, offices or shopping centers. ECOi-LOOP solutions offer improved comfort by having several different indoor climates inside a building, while maintaining the energy through an internal closed water loop.

MADE IN EUROPE

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/

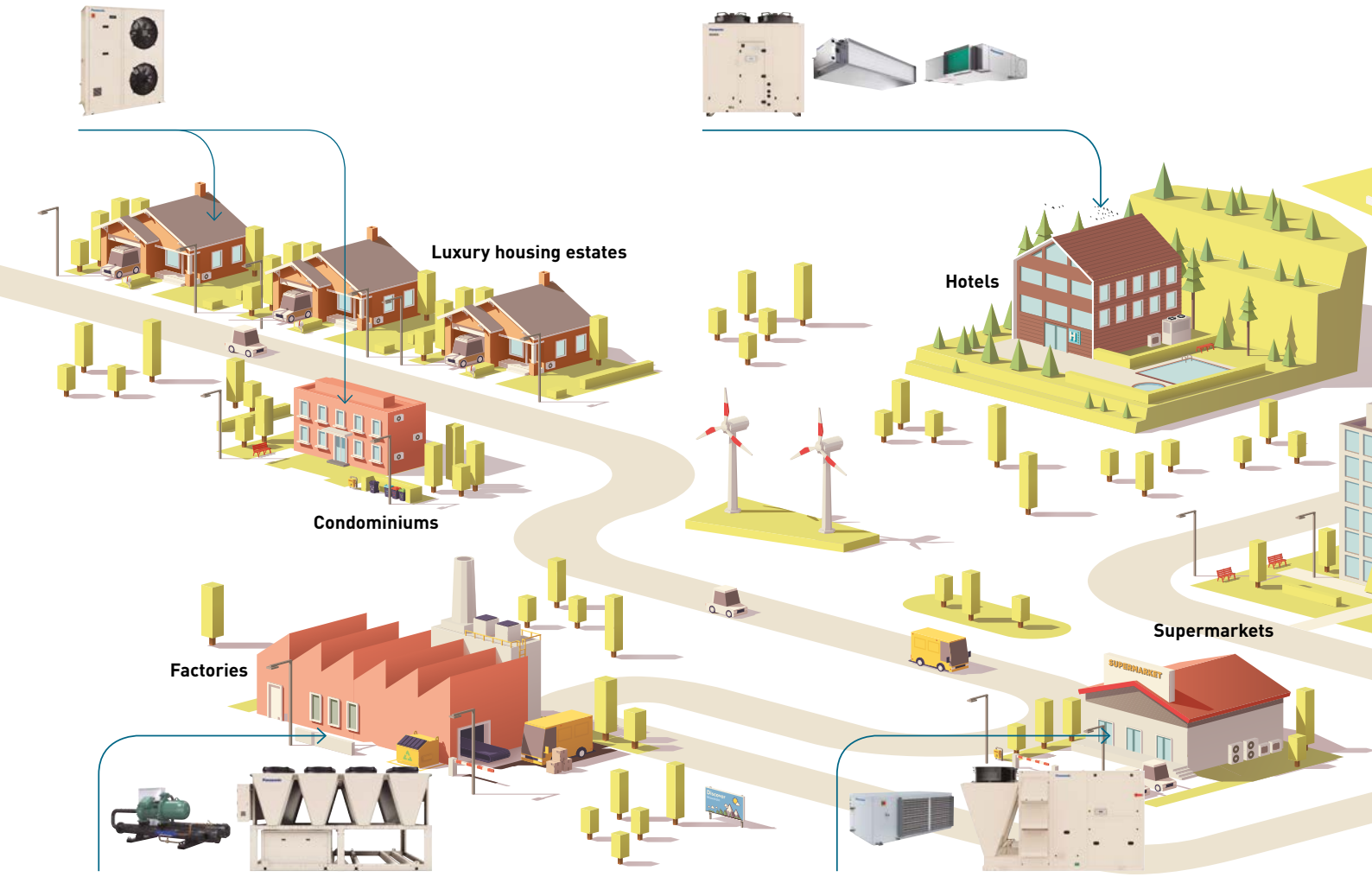


A wide coverage of application

Energy efficiency, high performance and comfort.

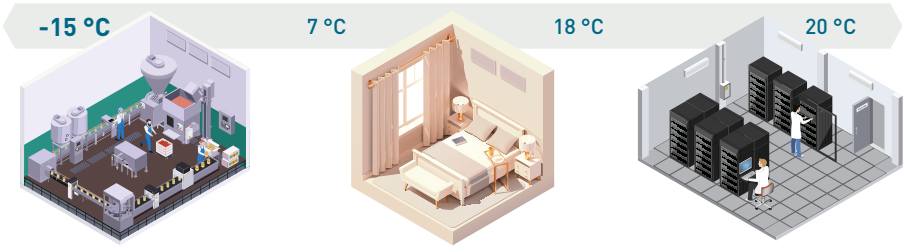
Chillers and heat pumps.
In residential applications a good indoor climate is important to ensure greater comfort and well-being. Our chillers and heat pump units with small capacities and DHW management are the ideal solutions.

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.



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.

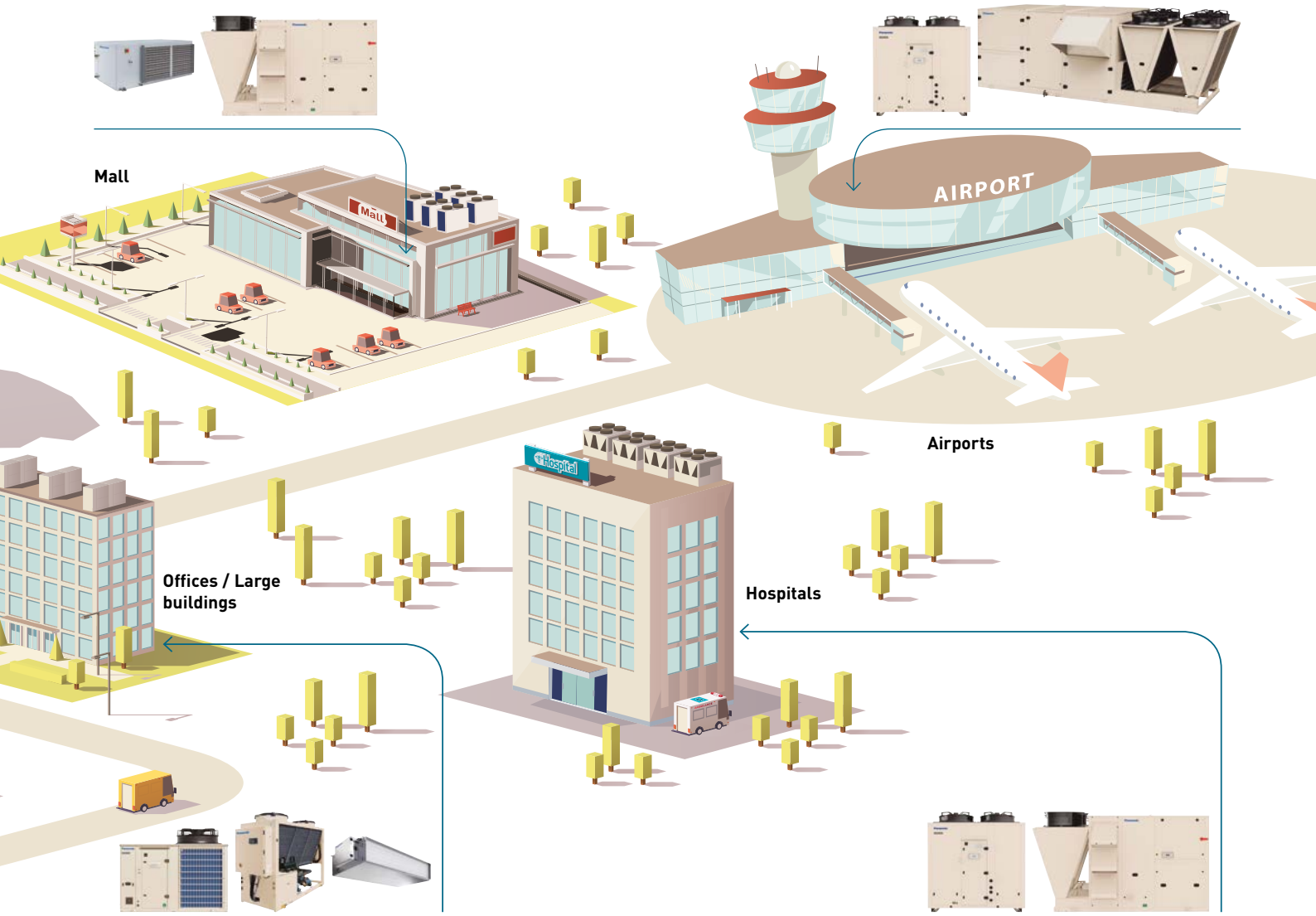
Comfort.
Homes, offices, shopping malls, hospitals, schools

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.

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.

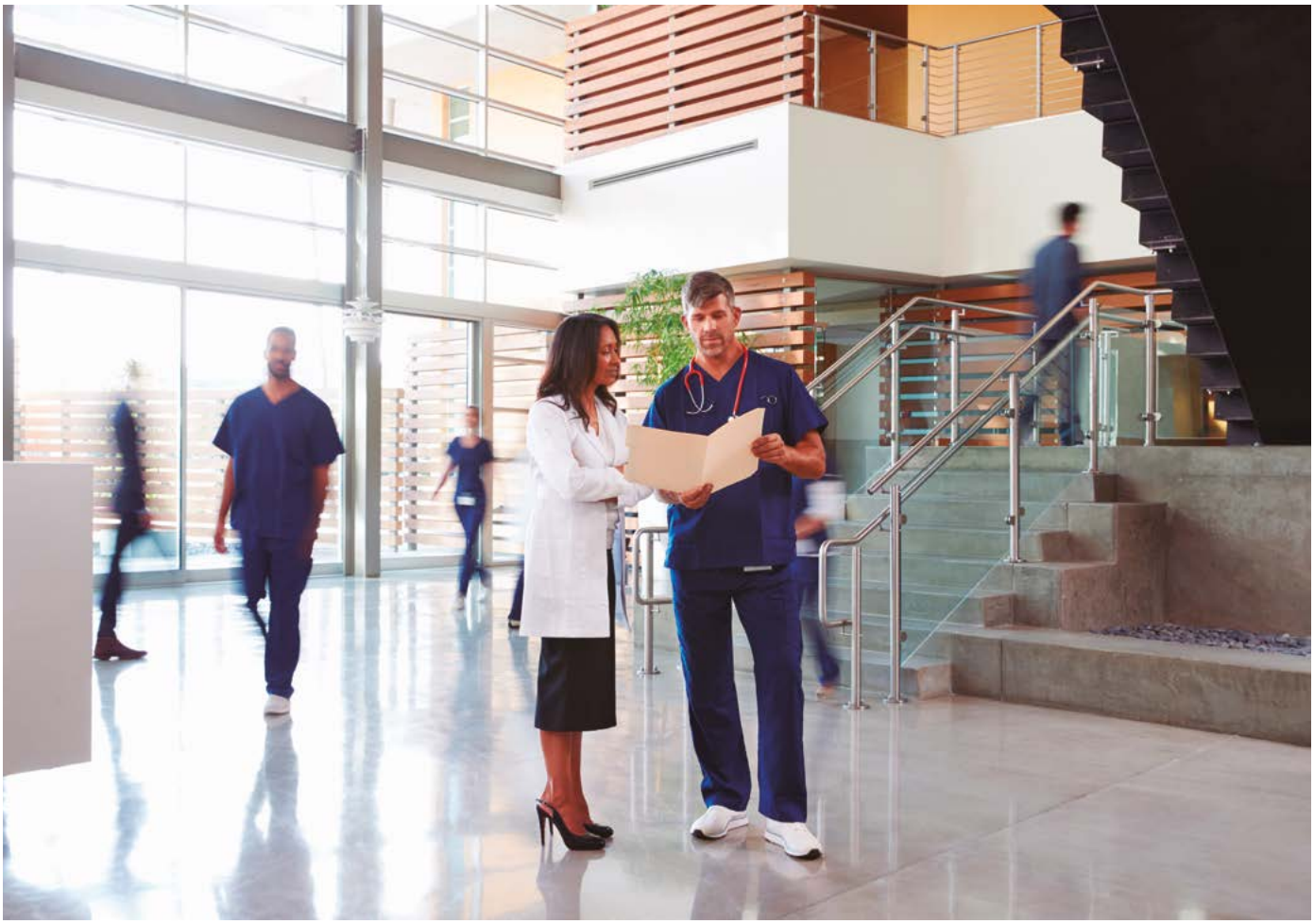


Chillers and heat pumps, and fan coils.
In offices, indoor climate is important for staff productivity and health. Panasonic chillers, heat pumps and fan coil units help create comfortable environments with high temperature control. Thanks to their natural refrigerant, R290 units are also the best solution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



1

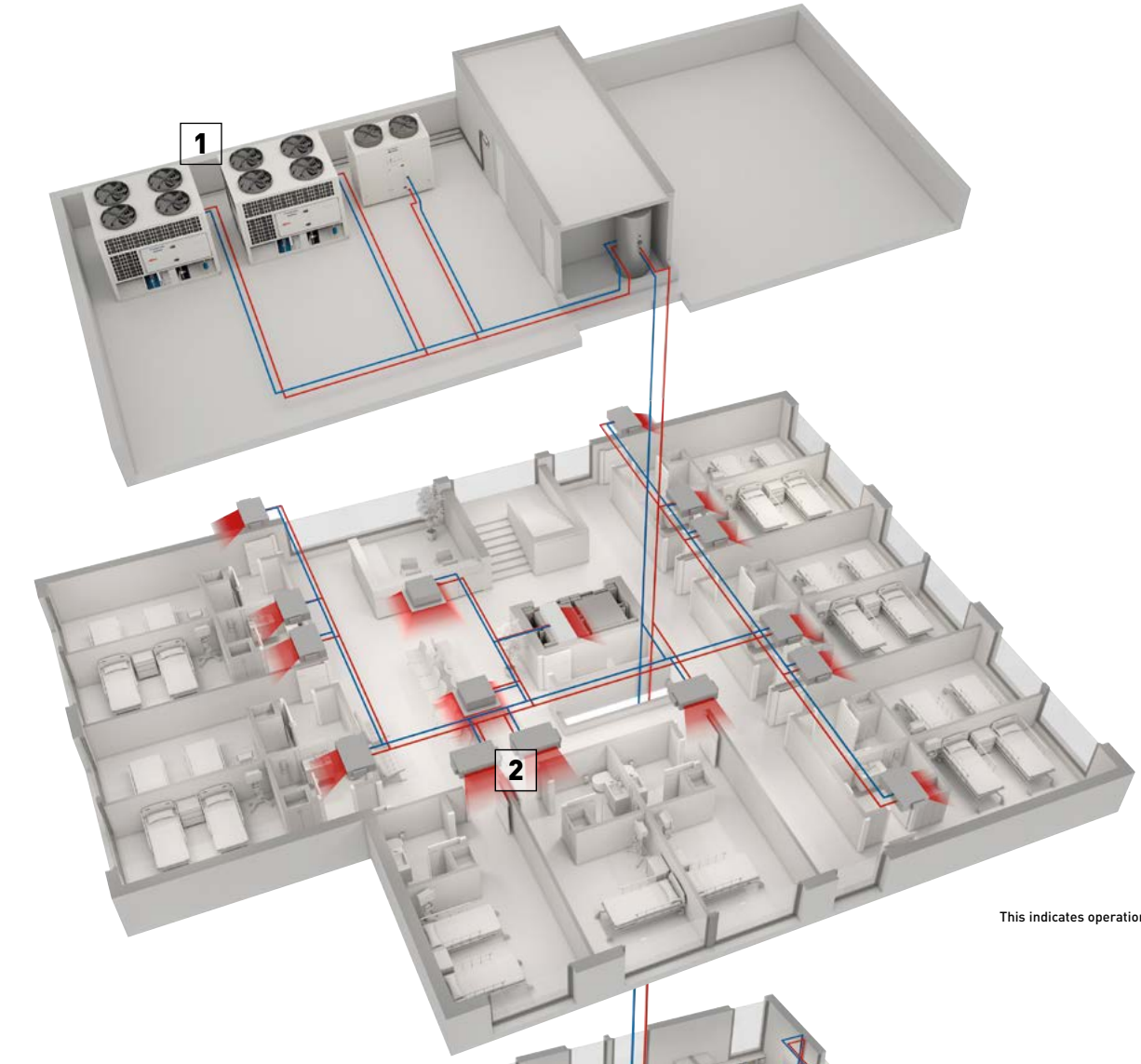
High quality chillers and heat pumps.
ECOi-W Series provides a fully customisable design to meet the business application needs, with a capacity range from 20 kW to 1650 kW. Reliable quality and an optimised design for service and maintenance are ideal for hospital projects.

2

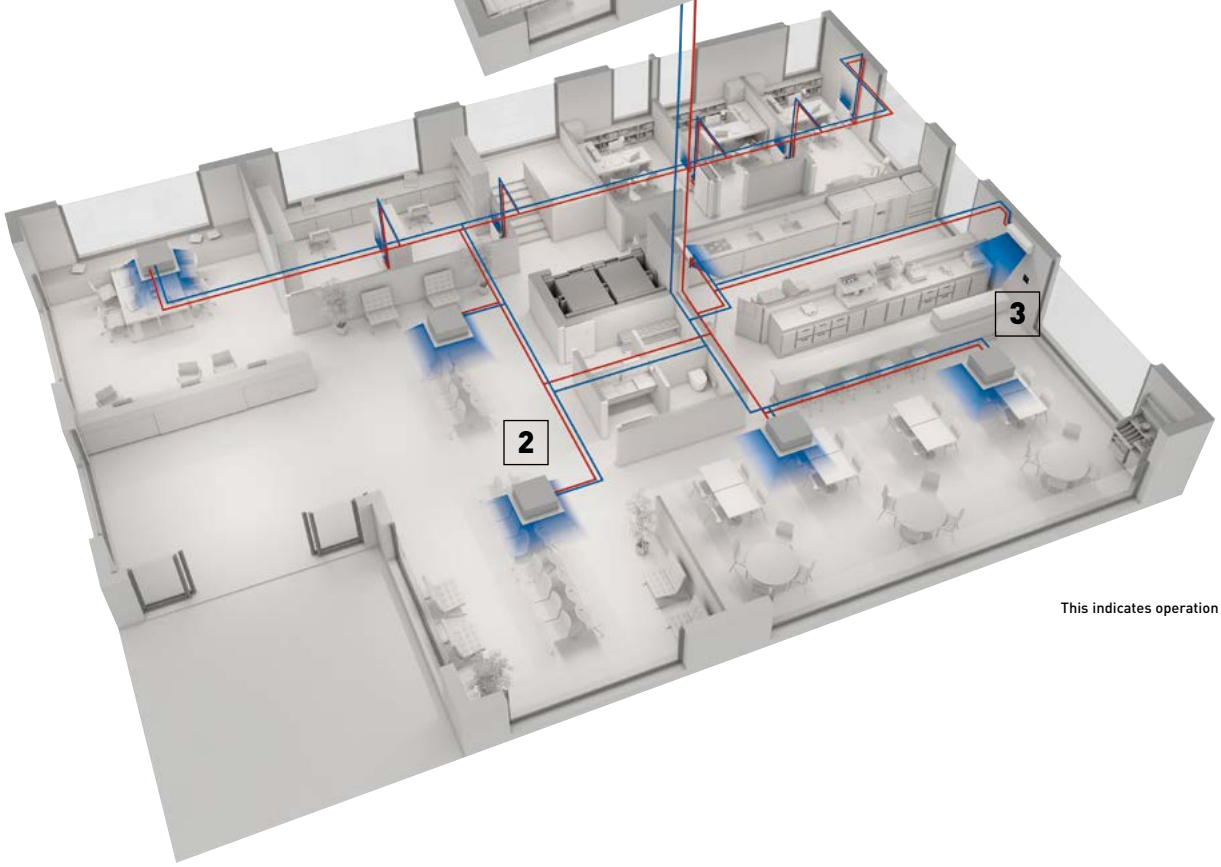
A wide variety of fan coils.
A wide variety of units to suit your needs, with flexible installation options. High efficiency and low noise operation allows for optimum comfort.
Operation in both heating and cooling is possible.

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.



This indicates operation in winter.



This indicates operation in summer.

Air cooled chillers, heat pumps and condensing units

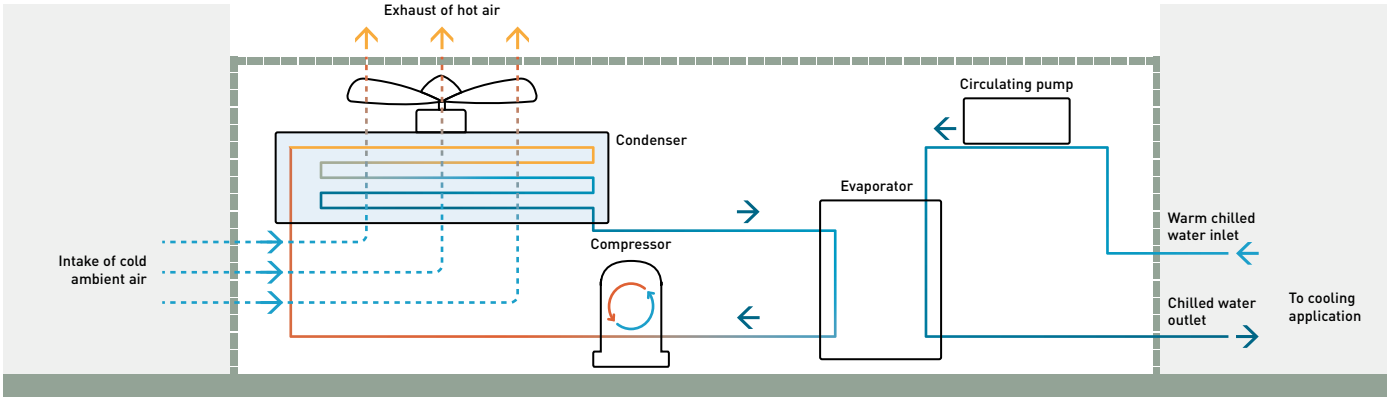
Energy efficiency, high performance and comfort!
The ECOi-W hydronic systems offer the perfect combination of comfort and high efficiency. They are perfect for any type of building. The air cooled chiller variant of the system is also a fundamental part of many industrial processes.

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

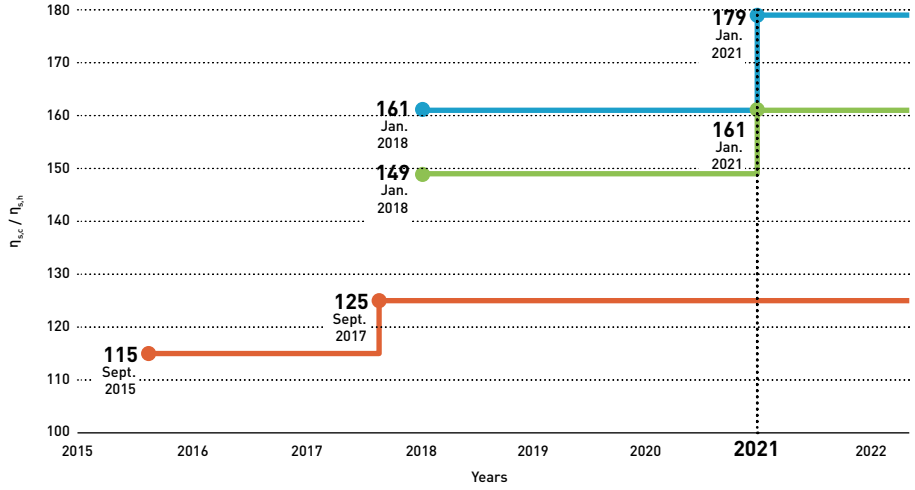
In-house manufactured coils

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 BLUE. A revolutionary solution

Reversible heat pumps with high leaving water temperature.

Introducing a revolutionary solution for sustainable cooling and heating needs, ECOi-W AQUA-G BLUE powered by R290, a natural refrigerant. It delivers both sustainability and efficiency in one innovative package.

Natural refrigerant R290 with GWP 0,02 [1].

Reliable quality.

Scroll compressors.

HIGH SEER Max. 4,4 [2]
HIGH SCOP Max. 3,9 [3]

High seasonal efficiency.

A++ [4]

High energy efficiency class.

DHW management.

70 °C

Maximum 70 °C leaving water temperature.

Quiet operation.

640 kW

Boost the capacity up to 640 kW.

1) Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC). 2) Size 50. According EN 14825 and Following COMMISSION REGULATION (EU) 2016/2281. 3) Size 70. According EN 14825 and Following COMMISSION REGULATION (EU) No 813/2013. 4) Scale A+++ to D. According EN 14825 and Following COMMISSION REGULATION (EU) No 813/2013.

Air cooled heat pumps R290.
The future of efficient commercial air to water heat pumps.

Care about the environment and get greater efficiency.
ECOi-W AQUA-G BLUE is born from a perfect combination of new green technology and our existing ECOi-W product range already known for its performance and reliability.
It operates with the natural R290 refrigerant that offers greater efficiency while having almost no impact on the environment with one of the lowest **GWP (Global Warming Potential): only 0,02!***
Make the choice to reach incredible efficiencies, extend the operating limits, and contribute to environmental preservation.

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

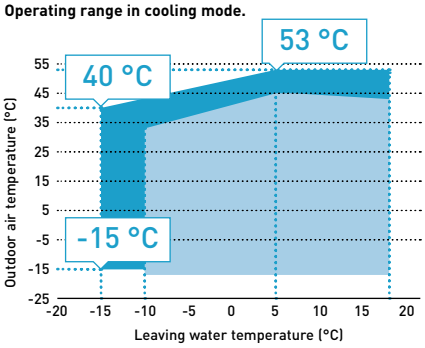
50 kW

60 kW

70 - 80 kW

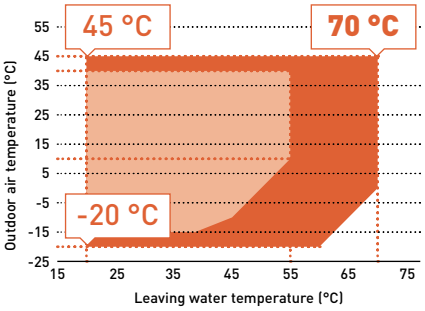
Extended operating limits

Operating range in cooling mode.



ECOi-W AQUA-G BLUE (R290) | ECOi-W AQUA-Z (R32)

Operating range in heating mode.



ECOi-W AQUA-G BLUE (R290) | ECOi-W AQUA-Z (R32)

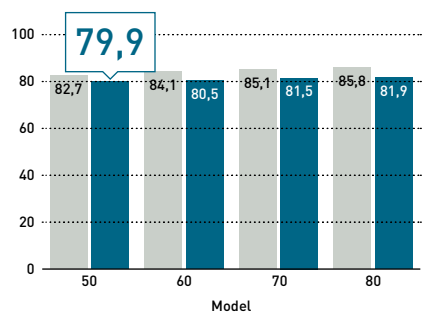
70 °C

Cooling mode.
A water outlet temperature of -15 °C ensures optimal operation temperature for process equipment in factories.

Heating mode.
Ideal solution for Heating and Domestic Hot Water production. Reaching **70 °C** from 0 °C outside air temperature.

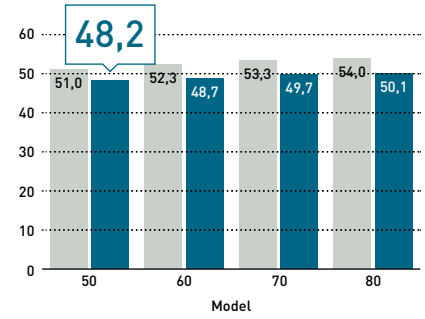
Quiet operation. Discover a unique feature of ECOi-W AQUA-G BLUE

Sound power level (dB(A)).



Standard mode | Silent mode

Sound pressure level (dB(A)).



Standard mode | Silent mode

Silent mode.
Silent mode with an impressively low sound power level of only 79,9 dB(A), pressure level of only 48,2 dB(A). ECOi-W AQUA-G BLUE provides the perfect balance of efficiency and silent operation.
Optional compressor jackets for size 50 and optional compressor box for sizes 60-70-80 are available to provide an additional level of noise reduction.

Quick selection guide - Air cooled chillers

Page		Size	Cooling capacity (kW)	SEER	Sound power (dB(A))	Dimension 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. 490		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
		45	45,3	4,40	80	2180 x 1986 x 1160
		55	52,0	4,53	80	2180 x 1986 x 1160
P. 492		65	66,1	4,53	80	2180 x 1986 x 1160
		75	73,1	4,68	80	2180 x 1986 x 1160
		90	90,9	4,45	83	2180 x 2286 x 1160
		105	104,0	4,50	83	2180 x 2286 x 1160
		125	123,0	4,55	83	2180 x 2286 x 1160
		140	132,0	4,40	85	2856 x 2295 x 2210
		150	146,0	4,45	85	2856 x 2295 x 2210
P. 494		170	164,0	4,38	87	2856 x 2321 x 2210
		190	181,0	4,40	88	2856 x 2321 x 2210
		210	208,0	4,25	88	2856 x 2321 x 2210
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
		70	69,7	4,61	81	2180x 1986 x 1160
	 R32	75	78,2	4,72	81	2180x 1986 x 1160
		85	82,8	4,45	84	2180x 2286 x 1160
		100	100,0	4,88	86	2180x 2286 x 1160
P. 496		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 1152
	 R32	170	170,0	4,90	90,4	3795 x 2240 x 1152
		190	189,0	4,68	91,1	2676 x 2250 x 2211
		210	212,0	4,62	91,5	2676 x 2250 x 2211
P. 498	 R32	230	229,0	4,48	92,0	2676 x 2250 x 2211
		260	260,0	4,40	92,4	2676 x 2250 x 2211
		290	307,0	4,63	93,3	3801 x 2250 x 2211
	 R32	320	326,0	4,33	94,3	3801 x 2250 x 2211
		350	346,0	4,43	95,2	3801 x 2250 x 2211
		380	377,0	4,35	95,4	3801 x 2250 x 2211

* 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
	105	103,0	4,78	84	2555 x 2185 x 1095
P. 500 	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	230	231,0	4,25	92	3500 x 2500 x 2150
	260	263,0	4,25	93	3500 x 2500 x 2150
	280	284,0	4,23	93	3500 x 2500 x 2150
P. 508 	300	310,0	4,18	94	4550 x 2500 x 2150
	330	331,0	4,20	95	4550 x 2500 x 2150
	360	362,0	4,10	95	4550 x 2500 x 2150
	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
P. 512 	530 S [2]	513,7	4,78	87	6680 x 2500 x 2175
	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
	590	565,8	4,80	100	6764 x 2510 x 2192
	660	643,5	4,66	100	7816 x 2510 x 2192
R513A	730	704,3	4,56	101	7816 x 2510 x 2192
P. 514 	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.

Quick selection guide - Air 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 AQUA EVO H · R410A					
	20	21,0 / 20,4	**3,30 / 3,75**	74	1477 x 1615 x 539
P. 486	30	28,0 / 26,1	**3,98 / 3,68**	75	1477 x 1615 x 539
ECOi-W AQUA-G BLUE H · R290	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
P. 488	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
ECOi-W AQUA H · R410A	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
P. 490	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
	45	44,3 / 48,5	**4,20 / 3,38**	80	2180 x 1986 x 1160
	55	50,9 / 58,2	**4,41 / 3,38**	80	2180 x 1986 x 1160
P. 492	65	64,1 / 67,3	**4,51 / 3,55**	80	2180 x 1986 x 1160
	75	71,0 / 76,0	**4,63 / 3,53**	80	2180 x 1986 x 1160
	90	88,7 / 88,2	**4,40 / 3,40**	83	2180 x 2286 x 1160
	105	101,0 / 101,0	**4,44 / 3,43**	83	2180 x 2286 x 1160
	125	119,0 / 119,0	**4,49 / 3,43**	83	2180 x 2286 x 1160
	140	128,0 / 144,0	**4,39 / 3,30**	85	2856 x 2295 x 2210
	150	142,0 / 154,0	**4,36 / 3,33**	85	2856 x 2295 x 2210
P. 494	170	164,0 / 170,0	**4,31 / 3,30**	87	2856 x 2321 x 2210
	190	178,0 / 195,0	**4,23 / 3,28**	88	2856 x 2321 x 2210
	210	208,0 / 218,0	**4,28 / 3,23**	88	2856 x 2321 x 2210

* Dimensions without water tank.

Page		Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension L x H x W (mm)
ECOi-W AQUA-Z H · R32		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
	R32	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
P. 496		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
	R32	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	R32	150	150,0 / 154,0	**4,75 / 3,83**	89,6	3795 x 2240 x 1152
		170	167,0 / 178,0	**4,71 / 3,90**	90,4	3795 x 2240 x 1152
	R32	190	184,0 / 190,0	**4,45 / 3,46**	91,1	2678 x 2250 x 2211
		210	204,0 / 201,0	**4,39 / 3,44**	91,5	2678 x 2250 x 2211
		220**	208,0 / 219,0	**5,03 / 3,86**	91,3	2676 x 2300 x 2211
P. 498		230	224,0 / 241,0	**4,34 / 3,64**	92,0	2678 x 2250 x 2211
		260	251,0 / 256,9	**4,21 / 3,52**	92,4	2678 x 2250 x 2211
	R32	270**	265,0 / 288,0	**5,01 / 3,82**	92,8	3801 x 2300 x 2211
		290	291,1 / 285,6	**4,34 / 3,51**	93,3	3801 x 2250 x 2211
		300**	295,0 / 312,0	**5,01 / 3,92**	93,1	3801 x 2300 x 2211
		320	307,7 / 301,3	**4,33 / 3,50**	94,3	3801 x 2250 x 2211
		350	330,0 / 337,0	**4,40 / 3,50**	95,2	3801 x 2250 x 2211
		380	364,0 / 384,0	**4,34 / 3,66**	95,4	3801 x 2250 x 2211
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
P. 500		115	106,9 / 119,0	**4,17 / 3,77**	84	2555 x 2185 x 1095
		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

* Dimensions without water tank. ** 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 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
P. 504	1004	246,3 / 270,8	**3,50 / 3,39**	94	4300 x 2300 x 1100
	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
ECOi-W AQUA EVO H · R410A	230	213,6 / 229,0	**4,13 / 3,46**	92	3500 x 2500 x 2150
	260	243,7 / 262,3	**4,05 / 3,48**	93	3500 x 2500 x 2150
	280	261,1 / 279,6	**4,10 / 3,44**	93	3500 x 2500 x 2150
P. 508	300	287,8 / 305,6	**3,83 / 3,51**	94	4550 x 2500 x 2150
	330	307,4 / 327,2	**3,80 / 3,44**	95	4550 x 2500 x 2150
	360	340,5 / 361,4	**3,93 / 3,48**	95	4550 x 2500 x 2150
	400	365,6 / 404,0	**4,65 / 3,46**	92	5620 x 2500 x 2175
	450	410,3 / 450,9	**4,53 / 3,47**	93	5620 x 2500 x 2175
	490	444,9 / 492,7	**4,70 / 3,37**	93	6680 x 2500 x 2175
	530	479,3 / 532,1	**4,55 / 3,38**	94	6680 x 2500 x 2175
P. 512	580 S [2]	520,1 / 585,6	**4,60 / —**	80	7760 x 2500 x 2175
	620 S [2]	566,3 / 627,1	**4,60 / —**	88	8800 x 2500 x 2175
	670 S [2]	608,3 / 676,7	**4,55 / —**	88	8800 x 2500 x 2175
	750 S [2]	686,6 / 757,4	**4,55 / —**	89	9950 x 2500 x 2175
	800 S [2]	727,5 / 805,3	**4,58 / —**	89	9950 x 2500 x 2175

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

Quick selection guide - Air cooled condensing units

Page	Size	Cooling capacity (kW)	EER	Sound power (dB(A))	Dimension 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
P. 490	35	43,1	**2,90**	76	1000 x 1983 x 1000
	40	44,8	**2,99**	76	1000 x 1983 x 1000
	45	57,4	**2,94**	80	2180 x 1986 x 1160
	55	64,5	**2,89**	80	2180 x 1986 x 1160
	65	72,4	**2,97**	80	2180 x 1986 x 1160
P. 492	75	79,3	**2,91**	80	2180 x 1986 x 1160
	90	104,0	**2,65**	83	2180 x 2286 x 1160
	105	120,0	**2,79**	83	2180 x 2286 x 1160
	125	136,0	**2,66**	83	2180 x 2286 x 1160
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
P. 500	115	121,8	**3,30**	84	2555 x 2185 x 1095
	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
P. 504	1004	283,0	**3,12**	94	4300 x 2300 x 1100
	1104	315,0	**2,98**	95	4300 x 2300 x 1100
	1204	347,0	**2,90**	95	4300 x 2300 x 1100
ECOi-W AQUA EVO E · R410A	230	250,3	**3,36**	92	3500 x 2500 x 2150
	260	288,4	**3,42**	93	3500 x 2500 x 2150
	280	312,7	**3,42**	93	3500 x 2500 x 2150
P. 508	300	337,2	**3,39**	94	4550 x 2500 x 2150
	330	361,2	**3,45**	95	4550 x 2500 x 2150
	360	394,5	**3,37**	95	4550 x 2500 x 2150

* Dimensions without water tank.

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.

The range at a glance

· 1 version: H (heat pump)
· 2 sizes

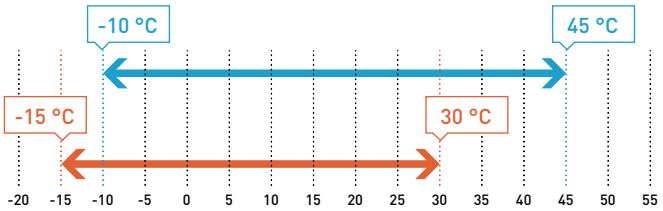
Advantages

· 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

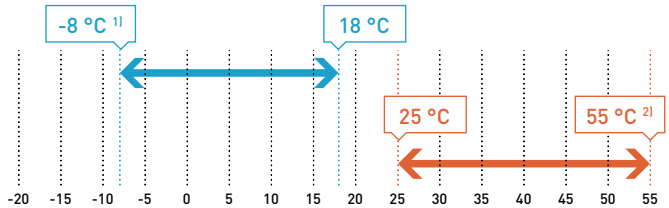
Operating limits

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.

Equipment

· Inverter driven compressor
· Plate evaporator (AISI 316)
· A single Inverter driven 3-phase scroll compressor equipped with variable frequency brushless motor (20-120 Hz)
· 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

AC SELECT.

Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Size			20	30
ECOi-W AQUA EVO H			**P-AQAVE0020HA**	**P-AQAVE0030HA**
Power supply	Voltage	V	400	400
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
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)		m^3/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)		m^3/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			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 water connections (evaporator)			Male gas threaded	Male gas threaded
Water inlet/outlet diameter		Inch	1 ¼	1 ¼

1) According EN 14511-2013: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C. 2) According 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 EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According 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	3WV DHW - 3 way valve for DHW production - ON / OFF - DN 20
P-375890	3WV SSP - 3 way valve for second set-point zone - 0-10 V - DN 25
P-375891	3WV SSP - 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

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)

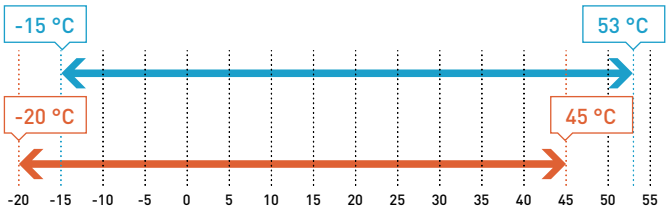
Advantages

- A super eco-friendly unit - employs natural refrigerant R290 with GWP 0,02
- 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

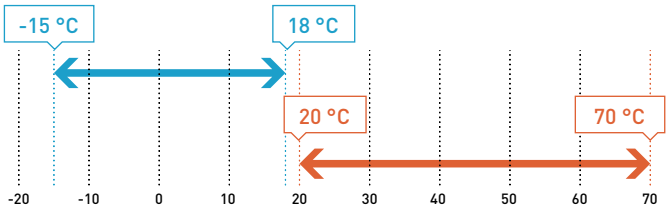
Operating limits

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
- Sealed electrical box. Non-flammable control box. The core parts are protected with a sealed metallic box
- 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

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Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical performance

Size			50	60	70	80
Power supply	Voltage	V	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50
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 water connections			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Water inlet/outlet diameter		Inch	1 ¼	2	2	2 ½
Buffer tank (option)						
Volume		l	200	300	300	300

1) According EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825 and following COMMISSION REGULATION (EU) 2016/2281.
3) According 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
Electrical 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 size 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

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

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.

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)

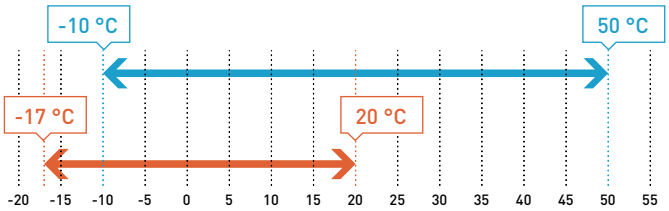
Advantages

- 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

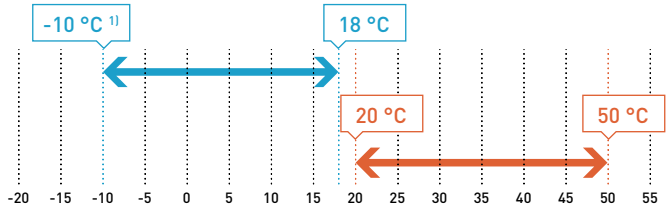
Operating limits

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.

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)

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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)		m³/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)		m³/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]			4,17	4,10	4,10	4,11	3,86
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)		m³/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 water 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
Water 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 EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According 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 45-125 C/H/E · R410A

Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 46,8 to 129,8 kW.
Heating capacity: 48,5 to 119,1 kW.

The range at a glance

- 3 versions: C (chiller), H (heat pump) and E (condensing unit)
- 7 sizes
- SEER up to 4,41
- SCOP up to 3,43
- 2 configurations: STD (standard) and HPF (high pressure fan)
- 2 acoustic options: STD (standard) and S (super low noise)

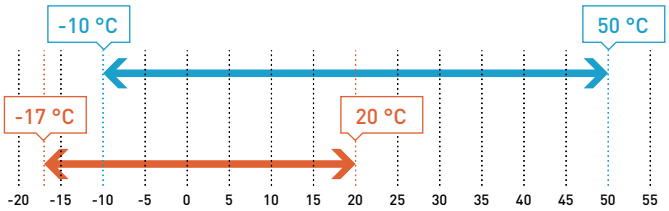
Advantages

- 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

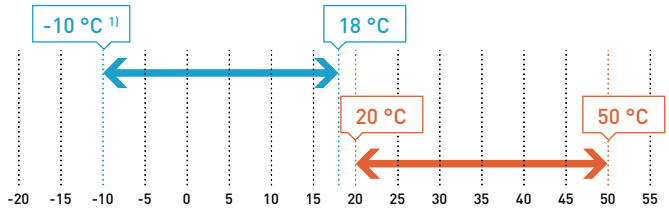
Operating limits

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.

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
- Complete integrated control system with an external control panel that displays the 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)

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
	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			**45**	**55**	**65**	**75**	**90**	**105**	**125**
ECOi-W AQUA 45-125 C - chiller			**P-AQAE0045CA**	**P-AQAE0055CA**	**P-AQAE0065CA**	**P-AQAE0075CA**	**P-AQAE0090CA**	**P-AQAE0105CA**	**P-AQAE0125CA**
Cooling capacity [1]		kW	45,3	52,0	66,1	73,1	90,9	104,0	123,0
Input power [1]		kW	15,4	17,6	21,7	24,0	30,7	34,9	40,6
EER [1]			2,95	2,96	3,05	3,05	2,96	2,98	3,03
SEER [2] [3]			**4,40**	**4,53**	**4,53**	**4,68**	**4,45**	**4,50**	**4,55**
$\eta_{s,c}$ [2] [3]			**173**	**178**	**178**	**184**	**175**	**177**	**179**
Nominal water flow (in the evaporator)		m³/h	7,8	8,9	11,4	12,6	15,6	17,9	21,2
Sound power (STD fan)		dB(A)	81	81	81	81	84	84	84
Sound pressure at 10 m (STD fan) [4]		dB(A)	48,8	48,8	48,8	48,8	51,8	51,8	51,8
ECOi-W AQUA 45-125 H - heat pump			**P-AQAE0045HA**	**P-AQAE0055HA**	**P-AQAE0065HA**	**P-AQAE0075HA**	**P-AQAE0090HA**	**P-AQAE0105HA**	**P-AQAE0125HA**
Cooling capacity [1]		kW	44,3	50,9	64,1	71,0	88,7	101,0	119,0
Input power [1]		kW	15,9	18,0	21,8	24,0	30,6	34,8	40,4
EER [1]			2,78	2,83	2,94	2,95	2,90	2,90	2,96
SEER [2]			**4,20**	**4,41**	**4,51**	**4,63**	**4,40**	**4,44**	**4,49**
$\eta_{s,c}$ [2]			**165**	**174**	**177**	**182**	**173**	**175**	**177**
Nominal water flow (in the evaporator)		m³/h	8,0	9,2	11,3	12,3	15,7	18,2	20,9
Heating capacity [5]		kW	48,5	58,2	67,3	76,0	88,2	101,0	119,0
Input power [5]		kW	17,3	20,4	22,5	24,3	33,8	38,4	45,5
COP [5]			2,80	2,86	2,99	3,12	2,61	2,63	2,62
COP [6]			3,89	3,83	3,80	3,82	3,80	3,80	3,82
SCOP [2] [7]			**3,38**	**3,38**	**3,55**	**3,53**	**3,40**	**3,43**	**3,43**
Energy efficiency class [2] [7]		**A+++ to D**	**A+**	**A+**	**A+**	**A+**	**—**	**—**	**—**
$\eta_{s,h}$ [2] [7]			**132**	**132**	**139**	**138**	**133**	**134**	**134**
Nominal water flow (in the evaporator)		m³/h	8,4	10,2	11,7	13,2	15,3	17,6	20,7
Sound power (STD fan)		dB(A)	81	81	81	81	84	84	84
Sound pressure at 10 m (STD fan) [4]		dB(A)	48,8	48,8	48,8	48,8	51,8	51,8	51,8
ECOi-W AQUA 45-125 E - condensing unit			**P-AQAE0045EA**	**P-AQAE0055EA**	**P-AQAE0065EA**	**P-AQAE0075EA**	**P-AQAE0090EA**	**P-AQAE0105EA**	**P-AQAE0125EA**
Cooling capacity [8]		kW	57,4	64,5	72,4	79,3	104,0	120,0	136,0
Input power [8]		kW	19,5	22,3	24,4	27,2	39,3	43,0	51,3
EER [8]			2,94	2,89	2,97	2,91	2,65	2,79	2,66
Sound power		dB(A)	80	80	80	80	83	83	83

Physical features

ECOi-W AQUA 45-125 C/H - chiller / heat pump			**45**	**55**	**65**	**75**	**90**	**105**	**125**
Dimension	Height (STD / HPF)	mm	1986 / 2025	1986 / 2025	1986 / 2026	1986 / 2026	2286 / 2379	2286 / 2379	2286 / 2379
	Width	mm	1160	1160	1160	1160	1160	1160	1160
	Length w/o / w water tank	mm	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680
Operating weight w/o / w water tank - 1 pump		kg	545 / 1010	545 / 1010	615 / 1080	615 / 1080	795 / 1260	905 / 1370	925 / 1390
Water connections									
Type of water 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
Water inlet/outlet diameter		Inch	2	2	2	2	2½	2½	2½
ECOi-W AQUA 45-125 E - condensing unit			**45**	**55**	**65**	**75**	**90**	**105**	**125**
Operating weight		kg	490	490	560	560	740	850	870
Dimension	H x W x L	mm	1986x1160x2180	1986x1160x2180	1986x1160x2180	1986x1160x2180	2286x1160x2180	2286x1160x2180	2286x1160x2180
Refrigerant connections									
Liquid / suction line		Inch	⅝ / 1 ⅝	⅝ / 1 ⅝	⅝ / 1 ⅝	⅝ / 1 ⅝	⅞ / 1 ⅝	⅞ / 1 ⅝	⅞ / 1 ⅝

1) According EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According 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
Desuperheater
Fan speed control
Finned coil blygold treatment (upon request) or epoxy
Electrical heater high or low power (H type only)

Accessories and options
Super low noise (S): acoustic box around the compressors
High pressure fan (HPF)
Modbus TCP/IP
Outdoor coil protection grid
Refrigerant gauges HP/LP

Accessories and options
Shut off valves
Soft starter
Variable or fixed* speed pumps
Water tank 300 L
Without neutral (upon request)
Water pressure switch

* Not available with ECOi-W AQUA C units 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

ErP | HIGH SEER 4,41 | HIGH SCOP 3,43 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE

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ECOi-W AQUA 140-210 C/H · R410A

Air cooled chillers and heat pumps.

Cooling capacity: 125,4 to 208,8 kW.
Heating capacity: 143,7 to 217,6 kW.

The range at a glance

- 2 versions: C (chiller) and H (heat pump)
- 5 sizes
- SEER up to 4,40
- SCOP up to 3,36

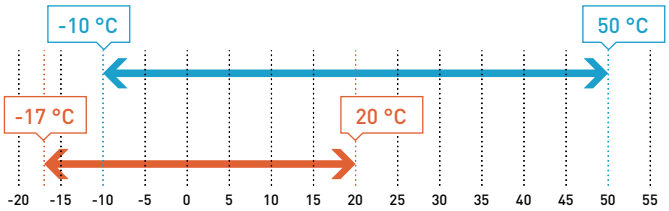
Advantages

- Very high performances
- Low noise units
- Wide operating limits
- Easy maintenance: great accessibility to the internal components
- Low footprint
- Patented antifrost coil
- 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

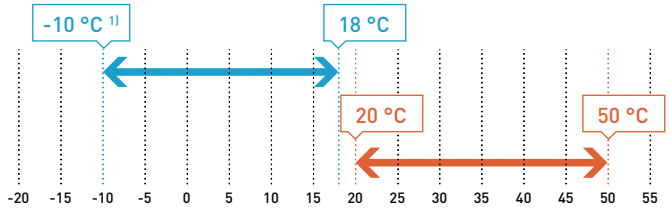
Operating limits

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.

Equipment

- 2 refrigerant circuits, each equipped 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 communication protocol as standard
- Super low noise units: acoustic box around the compressors
- Patented antifrost coil (H type)
- Night mode for energy savings and reduced sound levels
- Double water set point (H type)
- Water compensation curve control
- Return and leaving water temperature control
- Water filter and water flow switch
- Phase sequence monitor

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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			**140**	**150**	**170**	**190**	**210**
ECOi-W AQUA 140-210 C - chiller			**P-AQAE0140CA**	**P-AQAE0150CA**	**P-AQAE0170CA**	**P-AQAE0190CA**	**P-AQAE0210CA**
Cooling capacity [1]		kW	132	146	164	181	208
Input power [1]		kW	43,1	47,6	54,8	61,1	69,8
EER [1]			3,06	3,07	2,99	2,96	2,98
SEER [2] [3]			**4,40**	**4,45**	**4,38**	**4,40**	**4,25**
$\eta_{s,c}$ [2] [3]			**173**	**175**	**172**	**173**	**167**
Nominal water flow (in the evaporator)		m^3/h	22,7	25,1	28,2	31,1	35,8
Sound power (STD fan)		dB(A)	85	85	87	88	88
Sound pressure at 10 m (STD fan) [4]		dB(A)	53,4	53,4	55,0	56,1	56,1
ECOi-W AQUA 140-210 H - heat pump			**P-AQAE0140HA**	**P-AQAE0150HA**	**P-AQAE0170HA**	**P-AQAE0190HA**	**P-AQAE0210HA**
Cooling capacity [1]		kW	128	142	164	178	208
Input power [1]		kW	43,2	47,7	54,7	61,3	69,7
EER [1]			2,97	2,98	3,00	2,90	2,98
SEER [2]			**4,39**	**4,36**	**4,31**	**4,23**	**4,28**
$\eta_{s,c}$ [2]			**173**	**171**	**169**	**166**	**168**
Nominal water flow (in the evaporator)		m^3/h	21,6	23,7	25,9	30,2	33,7
Heating capacity [5]		kW	144	154	170	195	218
Input power [5]		kW	45,8	50,2	55,4	67,5	78,3
COP [5]			3,14	3,06	3,07	2,89	2,78
COP [6]			3,84	3,82	3,81	3,82	3,82
SCOP [2] [7]			**3,30**	**3,33**	**3,30**	**3,28**	**3,23**
$\eta_{s,h}$ [2] [7]			**129**	**130**	**129**	**128**	**126**
Nominal water flow (in the evaporator)		m^3/h	24,8	26,5	29,6	33,9	37,9
Sound power		dB(A)	85	85	87	88	88
Sound pressure at 10 m (STD fan) [4]		dB(A)	53,4	53,4	55	56,1	56,1

Physical features

ECOi-W AQUA 140-210 C/H - chiller / heat pump			**140**	**150**	**170**	**190**	**210**
Dimension	Height	mm	2295	2295	2321	2321	2321
	Width	mm	2210	2210	2210	2210	2210
	Length w/o / w water tank	mm	2856 / 3666	2856 / 3666	2856 / 3666	2856 / 3666	2856 / 3666
Operating weight w/o / w water tank - 1 pump		kg	1685 / 2139	1705 / 2159	1798 / 2253	1891 / 2343	2201 / 2653
Water connections							
Type of water connections (evaporator)			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Water inlet/outlet diameter		Inch	2 ½	2 ½	2 ½	2 ½	2 ½

1) According EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According 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.
* w/o: without, w: with.

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

Accessories and options
Hydraulic gauges
Modbus TCP/IP
Outdoor coil protection grid
Nordic pack (H type only)
Refrigerant gauges HP/LP
Shut off valves

Accessories and options
Soft starter
Variable or fixed* speed pumps
Water tank 300 L
Without neutral
Water pressure switch

* ECOi-W AQUA C units can't be Ecodesign compliant with this option.

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-372614	Victaulic® to threaded pipe connection

ErP | HIGH SEER 4,40 | HIGH SCOP 3,36 | AIR COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | SUPER QUIET | VERY HIGH PERFORMANCE

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ECOi-W AQUA-Z 50-170 C/H · R32

Air cooled chillers and heat pumps.

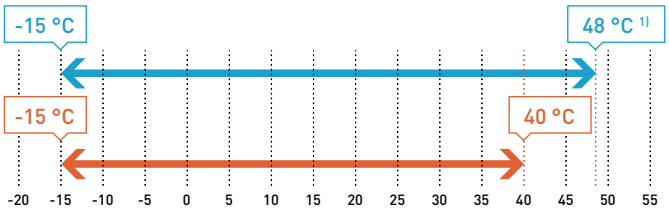
Cooling capacity: 51,6 to 173,0 kW.
Heating capacity: 51,7 to 180,0 kW.

R32 REFRIGERANT

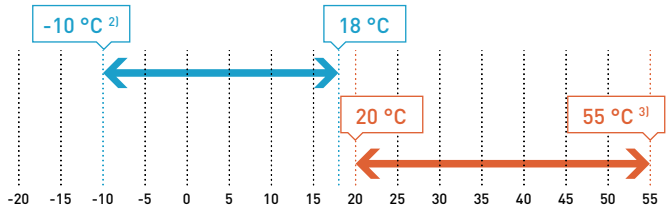
Operating limits

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		16,5	19,3	22,1	24,2	27,2	32,5	37,0	41,0	48,2	54,5
COP (STD AC / STD EC) *[6]			3,12/3,27	3,10/3,21	3,24/3,43	3,24/3,41	3,19/3,30	3,31/3,45	3,31/3,42	3,36/3,42	3,30/3,48	3,31/3,40
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 water 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
Water inlet/outlet diameter		Inch	2	2	2	2	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½

1) According EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN 14511-2018: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C DB.
6) According EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) According 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
Electrical heater for the water tank
Fin&Tube Al/Cu with epoxy / Blygold treatment
High efficiency EC fan

Accessories and options
High pressure fan (HPF)
Outdoor coil protection grid
Power factor corrector capacitors
Refrigerant gauges HP/LP
Shut off valves
Soft starter

Accessories and options
Variable speed pumps
Water pressure switch *
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

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

Air cooled chillers and heat pumps.

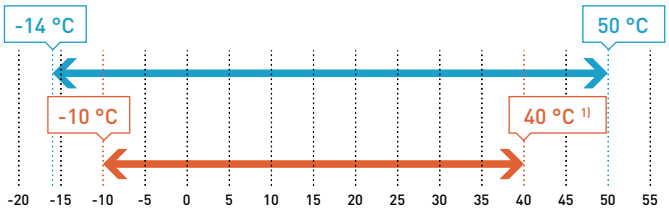
Cooling capacity: 151 to 377 kW.
Heating capacity: 154 to 384 kW.

R32
REFRIGERANT

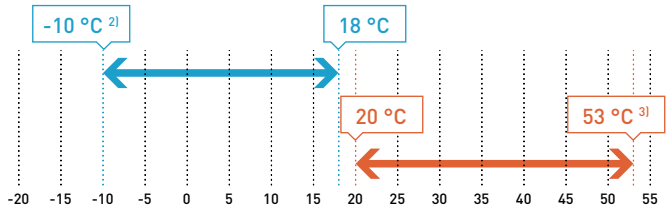
Operating limits

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)
- 10 sizes for C version and 13 sizes for H version
- 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
- New intelligent control logic
- Easy maintenance: great accessibility to the internal components
- Cascade controller available for multi system operation with capacity boost up to 3040 kW
- SG Ready
- 100% factory tested

Equipment

- 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

Technical performance

Size			150	170	190	210	230	260	290	320	350	380
ECOi-W AQUA-Z DC 150-380 C - chiller	**P-AQADZ****CA**		**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD 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	3,0/3,1
SEER [2]			**4,93/5,2**	**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**	**4,35/4,8**
$\eta_{s,c}$ [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		m³/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)		dB(A)	89,6/89,0	90,4/89,9	91,1/90,9	91,5/91,3	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)		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****HA**		**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD EC**	**STD AC / STD EC**	**STD EC**	**STD AC / STD EC**	**STD AC / STD EC**	**STD AC / STD EC**
Cooling capacity [1]		kW	150/150	167/167	184/183	204/204	208	224/224	251/251	265	291,1/289,3	295	307,7/310,7	330/331	364/364,3
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**	**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	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	154/154	178/179	190/190	201/201	219	241/241	256,9/258,5	288	285,6/284,8	312	301,3/316,5	337/340	384/384,5
Input power [3]		kW	48,8/48,2	54,9/54,4	61,3/58,6	68,5/65,9	67	75,4/72	87,6/85,0	88,3	97,5/93,2	94,6	103,2/100,1	111/107	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 / 157,1**	**152,8 / 156,8**	**135,6 / 152,7**	**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	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)		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) [5]		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)		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) [5]		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

Physical features

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	1152	1152	2211	2211	2211	2211	2211	2211	2211	2211	2211	2211	2211
	Length	mm	3795	3795	2676	2676	2676	2676	2676	3801	3801	3801	3801	3801	3801

1) According EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825 and Following COMMISSION REGULATION (EU) 2016/2281.
3) According EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According 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.

Accessories and options
Anti-vibration rubber mount *
Desuperheater for sizes 190-380
Energy meter for power input
Fin&Tube Al/Cu with Epoxy / Blygold treatment
High efficiency EC fan
High pressure fan (HPF)

Accessories and options
Mechanical gauges kit (HP and LP manometers)
Coil guards for sizes 150-170
Chiller grilles and drain pan for sizes 190-380
Power factor corrector capacitors
Shut off valves *
Soft starter

Accessories and options
Super low noise (S) version
Compressor jackets
Compressor box for sizes 190-380
Variable speed pumps
Water pressure switch
Water tank

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

Accessories supplied loose	
P-586595	Cascade controller
P-372061	Remote keyboard panel
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
P-477042	AVS - anti-vibration spring for sizes 150-170
P-477044	AVS - anti-vibration Spring for sizes 190-260 C version
P-477045	AVS - anti-vibration Spring for sizes 190-260 H version

Accessories supplied loose	
P-477047	AVS - anti-vibration Spring for sizes 270-380
P-477043	AVS - anti-vibration Spring with tank for sizes 150-170
P-477046	AVS - anti-vibration Spring with tank for sizes 190-260
P-477048	AVS - anti-vibration Spring with tank for sizes 290-380 C version
P-477049	AVS - anti-vibration Spring with tank for sizes 270-380 H version
P-348619	WF - water filter

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

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ECOi-W AQV C/H/E · R410A

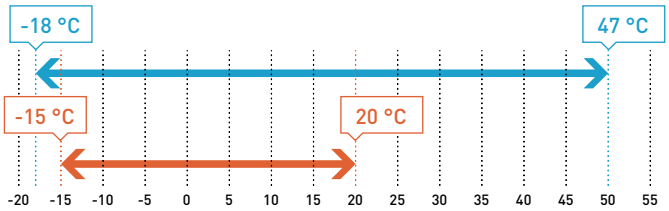
Air cooled chillers, heat pumps and condensing units.

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

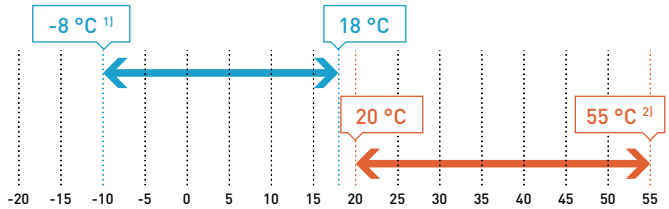
Operating limits

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)		m^3/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)		m^3/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)		m^3/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 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 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

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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)		m^3/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)		m^3/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)		m^3/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)		m^3/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)		m^3/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)		m^3/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 EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According 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

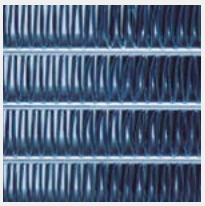
Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50	50	50
Size			**85**	**95**	**105**	**115**	**125**	**140**
ECOi-W AQV 85-140 E STD / HSE / HPF - condensing unit			**P-AQVE0085EA**	**P-AQVE0095EA**	**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

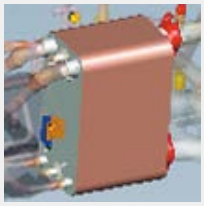
ECOi-W AQV 85-140 C/H/E - chiller / heat pump / condensing unit			**85**	**95**	**105**	**115**	**125**	**140**
Dimension	H x W x L	mm	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 2555	2185 x 1095 x 3155	2185 x 1095 x 3155
Operating weight (C type)	STD / HT / S	kg	1058 / 1058 / 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 water connections (evaporator)			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Water 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.

Special Inverter fan.
Option.



Bluefin coil.
As standard on H models.



True dual circuit evaporator.
Optimised heat transfer coefficient.

3 pump option.
Energy saving in partial load.

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.

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

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.

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)		m^3/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)		m^3/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)		m^3/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)		m^3/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)		m^3/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)		m^3/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 EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According 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
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)		m^3/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)		m^3/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
Size			**704**	**804**	**904**	**1004**	**1104**	**1204**
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 EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN 14825. 3) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According 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 water connections (evaporator)			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Water 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 230-360 C/H/E · R410A

Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 231 to 360,7 kW.
Heating capacity: 229 to 361,4 kW.

Operating limits

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

ECOi-W AQUA EVO 230-360 C - chiller				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol*	°C	From -10 to 5
		Temperature spread	K	From 3 to 7
	Maximum operating pressure		bar	6
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 5 to 48
		L	°C	From 0 to 46
		S	°C	From -14 to 44
		EC-HT	°C	From -18 to 50
External static pressure	STD fans		Pa	0
	High pressure fan (HPF)		Pa	<120
ECOi-W AQUA EVO 230-360 H - heat pump				
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
Outdoor air temperature	Air entering temperature cooling	STD / L / S	°C	5 to 48 / 0 to 46 / -14 to 44
		EC-HT	°C	From -18 to 50
Warm liquid	Liquid outlet temperature	Water	°C	From 20 to 55
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature heating	STD / L / S / EC	°C	From -10 to 20
		Polar Version	°C	From -13 to 20
		HT	°C	From -13 to 20
External static pressure	STD fans		Pa	0
	High pressure fan (HPF)		Pa	<120
ECOi-W AQUA EVO 230-360 E - condensing unit				
Evaporating temperature			°C	From 1 to 15
Outdoor air temperature		STD	°C	From 5 to 48
		L	°C	From -14 to 46
		S	°C	From -14 to 44
		EC-HT	°C	From -18 to 50

* For Liquid outlet temperature <0 °C provide Brine Version (available for C; upon request for H).

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 (high efficiency fan)
- 3 acoustic options: STD (standard), L (low noise) and S (super low noise)

Advantages

- High seasonal performances: SEER up to 4,3
- 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
- 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)
- Electronic expansion valve
- Microchannel coils (C type)
- E-coating coil treatment
- Brine version: chiller for process application LWT -10 °C (C type)
- Polar version: heat pump for extreme conditions (H type)
- Plate heat exchanger evaporator
- Compressor acoustic box
- Compressor jackets (standard as super low noise)
- Fan speed control (standard as super low noise)
- Phase sequence control
- Water differential pressure switch

Technical performance

Power supply [1]	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			**230**	**260**	**280**	**300**	**330**	**360**
ECOi-W AQUA EVO 230-360 C - chiller			**P-AQAVE0230CA**	**P-AQAVE0260CA**	**P-AQAVE0280CA**	**P-AQAVE0300CA**	**P-AQAVE0330CA**	**P-AQAVE0360CA**
Nominal cooling capacity [2]		kW	231	263	284	310	331	362
Input power [2]		kW	74,8	84,6	91,3	99,0	104,7	116,8
EER [2] / EER*			3,1 / 3,1	3,1 / 3,2	3,1 / 3,2	3,1 / 3,2	3,2 / 3,2	3,1 / 3,2
SEER [3] [4]			**4,25**	**4,25**	**4,23**	**4,18**	**4,20**	**4,10**
$n_{s,c}$ [3] [4]			**167**	**167**	**166**	**164**	**165**	**161**
Nominal water flow (in the evaporator)		m^3/h	39,6	45,2	48,8	53,2	56,9	62,1
Sound power [5]		dB(A)	92	93	93	94	95	95
Sound pressure 10 m [6]		dB(A)	60	61	61	62	63	63
ECOi-W AQUA EVO 230-360 C L - chiller			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	224	256	276	301	322	351
Input power [2]		kW	74,4	84,5	92,0	99,7	104,9	117,8
EER [2] / EER*			3 / 3,02	3,0 / 3,1	3,0 / 3,0	3,0 / 3,1	3,1 / 3,1	3 / 3,03
SEER [3] [4]			**4,28**	**4,28**	**4,25**	**4,25**	**4,25**	**4,10**
$n_{s,c}$ [3] [4]			**168**	**168**	**167**	**167**	**167**	**161**
Nominal water flow (in the evaporator)		m^3/h	38,4	43,9	47,4	51,7	55,3	60,2
Sound power [5]		dB(A)	87	88	88	89	90	90
Sound pressure 10 m [6]		dB(A)	55	56	56	57	58	58
ECOi-W AQUA EVO 230-360 C S - chiller			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	210	242	259	283	305	329
Input power [2]		kW	79,2	88,6	97,4	105,6	109,7	123,7
EER [2] / EER*			2,7 / 2,7	2,7 / 2,8	2,7 / 2,7	2,7 / 2,7	2,8 / 2,8	2,7 / 2,7
SEER [3] [4]			**4,1**	**4,15**	**4,1**	**4,1**	**4,1**	**4,1**
$n_{s,c}$ [3] [4]			**161**	**163**	**161**	**161**	**161**	**161**
Nominal water flow (in the evaporator)		m^3/h	36,1	41,5	44,6	48,6	52,4	56,6
Sound power [5]		dB(A)	82	83	83	85	86	86
Sound pressure 10 m [6]		dB(A)	50	51	51	53	54	54
ECOi-W AQUA EVO 230-360 C HT - chiller			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	232	265	286	312	333	364
Input power [2]		kW	77,6	87,9	94,7	103,7	109,9	121,7
EER [2]			2,99	3,01	3,02	3,01	3,03	2,99
SEER [3] [4]			**4,63**	**4,65**	**4,63**	**4,68**	**4,65**	**4,43**
$n_{s,c}$ [3] [4]			**182**	**183**	**182**	**184**	**183**	**174**
Nominal water flow (in the evaporator)		m^3/h	40,0	45,6	49,3	53,7	57,3	62,7
Sound power [5]		dB(A)	94	96	96	97	98	98
Sound pressure 10 m [6]		dB(A)	62	64	64	65	66	66

1) Voltage 400 V +/- 10%. 2) According 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 EN 14825. 5) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 6) 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 (-14 °C in cooling mode – standard as super low noise version)
Hydrokit with 1 or 2 pumps with or without buffer tank (500 L)
Mechanical gauges

Accessories and options
Overload protection for compressors
Power factor corrector capacitors
Several communication protocols
Soft starter
Unit protection grilles
Variable pump

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-348619	Water filter
P-348619	Water filter

ErP | HIGH SEER 4,68 | HIGH SCOP 3,58 | 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 [1]	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			**230**	**260**	**280**	**300**	**330**	**360**
ECOi-W AQUA EVO 230-360 H - heat pump			**P-AQAVE0230HA**	**P-AQAVE0260HA**	**P-AQAVE0280HA**	**P-AQAVE0300HA**	**P-AQAVE0330HA**	**P-AQAVE0360HA**
Nominal cooling capacity [2]		kW	214	244	261	288	307	341
Input power [2]		kW	73,2	83,8	90,7	98,5	103,5	117,0
EER [2]			2,92	2,91	2,88	2,92	2,97	2,91
EER* / EER**			2,96 / 2,75	2,95 / 2,73	2,91 / 2,71	2,96 / 2,75	3,02 / 2,78	2,95 / 2,74
SEER / $\eta_{s,c}$ [3]			**4,13 / 162**	**4,05 / 159**	**4,1 / 161**	**3,83 / 150**	**3,8 / 149**	**3,93 / 154**
SEER* / SEER [3]**			**4,22**	**4,13**	**4,2**	**3,93**	**3,8**	**4,05**
$\eta_{s,c}$ * / $\eta_{s,c}$ ** [3]			**166**	**162**	**165**	**154**	**149**	**159**
Nominal water flow (in the evaporator)		m³/h	36,8	42,0	45,0	49,5	52,9	58,6
Nominal heating capacity [4] [5]	40-45 °C / 30-35 °C	kW	229 / 234	262 / 269	280 / 286	306 / 311	327 / 334	361 / 368
Input power [4] [5]	40-45 °C / 30-35 °C	kW	70,9 / 58,7	81,7 / 67,8	87,4 / 72,3	94,9 / 77,8	101,9 / 83,7	112,6 / 92,7
COP [4] [5]	40-45 °C / 30-35 °C		3,23 / 3,98	3,21 / 3,96	3,20 / 3,95	3,22 / 4,00	3,21 / 3,99	3,21 / 3,97
COP* / COP**			3,27 / 3,03	3,26 / 3,01	3,25 / 3,02	3,27 / 3,02	3,26 / 2,99	3,26 / 3,02
SCOP [3] [6]			**3,46**	**3,48**	**3,44**	**3,51**	**3,44**	**3,48**
$\eta_{s,h}$ [3] [6]			**135**	**136**	**135**	**137**	**135**	**136**
Nominal water flow (in the evaporator)		m³/h	39,7	45,5	48,5	53,0	56,8	62,7
Sound power [7]		dB(A)	92	93	93	94	95	95
Sound pressure at 10 m [8]		dB(A)	60	61	61	62	63	63
ECOi-W AQUA EVO 230-360 H L - heat pump			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	207	237	253	279	299	330
Input power [2]		kW	73,7	83,7	91,4	99,1	103,1	117,5
EER [2] / EER*			2,81 / 2,85	2,83 / 2,87	2,77 / 2,81	2,82 / 2,86	2,90 / 2,94	2,81 / 2,84
SEER / $\eta_{s,c}$ [3]			**4,13 / 162**	**4,05 / 159**	**4,1 / 161**	**3,83 / 150**	**3,8 / 149**	**3,93 / 154**
SEER / $\eta_{s,c}$ * [3]			**3,7 / 145**	**3,65 / 143**	**3,63 / 142**	**2,58 / 100**	**2,65 / 103**	**4,17 / 164**
Nominal water flow (in the evaporator)		m³/h	35,7	40,8	43,6	48,1	51,5	56,8
Nominal heating capacity [4] [5]	40-45 °C / 30-35 °C	kW	224 / 228	256 / 261	272 / 277	299 / 304	321 / 326	354 / 359
Input power [4] [5]	40-45 °C / 30-35 °C	kW	69,0 / 56,5	79,4 / 65,2	84,8 / 69,8	92,7 / 75,2	99,6 / 81,0	109,9 / 89,8
COP [4] [5]	40-45 °C / 30-35 °C		3,24 / 4,03	3,22 / 4,00	3,21 / 3,97	3,23 / 4,04	3,22 / 4,03	3,22 / 4,00
COP* [4]			3,32	3,31	3,29	3,31	3,31	3,30
SCOP [3] [6]			**3,46**	**3,48**	**3,44**	**3,51**	**3,44**	**3,48**
$\eta_{s,h}$ [3] [6]			**135**	**136**	**135**	**137**	**135**	**136**
Nominal water flow (in the evaporator)		m³/h	38,8	44,3	47,2	52,0	55,7	61,4
Sound power [7]		dB(A)	87	88	88	89	90	90
Sound pressure at 10 m [8]		dB(A)	55	56	56	57	58	58
ECOi-W AQUA EVO 230-360 H S - heat pump			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	194	224	239	263	284	311
Input power [2]		kW	77,6	88,2	96,6	104,5	108,2	124,2
EER [2] / EER*			2,51 / 2,54	2,54 / 2,58	2,47 / 2,50	2,52 / 2,55	2,62 / 2,66	2,50 / 2,53
SEER / $\eta_{s,c}$ [3]			**4,13 / 162**	**4,05 / 159**	**3,60 / 141**	**3,83 / 150**	**3,8 / 149**	**3,93 / 154**
SEER / $\eta_{s,c}$ * [3]			**3,7 / 145**	**3,65 / 143**	**3,63 / 142**	**2,58 / 100**	**2,65 / 103**	**4,17 / 164**
Nominal water flow (in the evaporator)		m³/h	33,5	38,6	41,1	45,3	48,8	53,5
Nominal heating capacity [4] [5]	40-45 °C / 30-35 °C	kW	220 / 223	251 / 255	267 / 271	295 / 298	315 / 320	349 / 353
Input power [4] [5]	40-45 °C / 30-35 °C	kW	67,2 / 55,1	77,2 / 63,5	82,4 / 67,8	90,4 / 73,5	96,9 / 78,9	107,4 / 87,6
COP [4] [5]	40-45 °C / 30-35 °C		3,27 / 4,05	3,25 / 4,02	3,24 / 4,00	3,26 / 4,06	3,25 / 4,05	3,25 / 4,03
SCOP [3] [6]			**3,46**	**3,48**	**3,44**	**3,51**	**3,44**	**3,48**
$\eta_{s,h}$ [3] [6]			**135**	**136**	**135**	**137**	**135**	**136**
Nominal water flow (in the evaporator)		m³/h	38,1	43,5	46,3	51,2	54,7	60,5
Sound power [7]		dB(A)	82	83	83	85	86	86
Sound pressure at 10 m [8]		dB(A)	50	51	51	53	54	54
ECOi-W AQUA EVO 230-360 H HT - heat pump			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [2]		kW	216	246	263	290	310	343
Input power [2]		kW	77,0	88,4	95,1	103,7	109,9	123,1
EER [2]			2,80	2,78	2,77	2,80	2,82	2,79
SEER / $\eta_{s,c}$ [3]			**3,8 / 149**	**3,73 / 146**	**3,78 / 148**	**4,28 / 168**	**3,95 / 155**	**4,08 / 160**
Nominal water flow (in the evaporator)		m³/h	37,1	42,3	45,4	50,0	53,3	59,1
Nominal heating capacity [4]		kW	232	266	284	310	332	367
Input power [4]		kW	75,7	87,2	92,7	101,2	109,0	119,8
COP [4]			3,07 / 3,76	3,05 / 3,73	3,06 / 3,73	3,06 / 3,76	3,04 / 3,73	3,06 / 3,74
SCOP [3] [6]			**3,56**	**3,57**	**3,53**	**3,61**	**3,55**	**3,58**
$\eta_{s,h}$ [3] [6]			**139**	**140**	**138**	**141**	**139**	**140**
Nominal water flow (in the evaporator)		m³/h	40,3	46,1	49,2	53,8	57,5	63,6
Sound power [7]		dB(A)	94	96	96	97	98	98
Sound pressure at 10 m [8]		dB(A)	62	64	64	65	66	66

1) Voltage 400 V +/- 10%. 2) According EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) According EN 14825. 4) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 7) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 8) Sound pressures refer to ISO 3744 standard, parallelepiped shape.
* High efficiency units (EC) with Inverter fans. ** H type units with high static pressure fans.

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			**230**	**260**	**280**	**300**	**330**	**360**
ECOi-W AQUA EVO 230-360 E - condensing unit			**P-AQAVE0230EA**	**P-AQAVE0260EA**	**P-AQAVE0280EA**	**P-AQAVE0300EA**	**P-AQAVE0330EA**	**P-AQAVE0360EA**
Nominal cooling capacity [1]		kW	250	288	313	337	361	395
Input power [1]		kW	74,6	84,4	91,6	99,4	105	117
Sound power [2]		dB(A)	92	93	93	94	95	95
Sound pressure at 10 m [3]		dB(A)	60	61	61	62	63	63
ECOi-W AQUA EVO 230-360 E L - condensing unit			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [1]		kW	242	279	302	326	351	381
Input power [1]		kW	75,4	84,8	92,6	100	105	118
Sound power [2]		dB(A)	87	88	88	89	90	90
Sound pressure at 10 m [3]		dB(A)	55	56	56	57	58	58
ECOi-W AQUA EVO 230-360 E S - condensing unit			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [1]		kW	225	262	281	305	330	356
Input power [1]		kW	80,1	89,6	98,4	107	111	126
Sound power [2]		dB(A)	82	83	83	85	86	86
Sound pressure at 10 m [3]		dB(A)	50	51	51	53	54	54
ECOi-W AQUA EVO 230-360 E HT - condensing unit			**230**	**260**	**280**	**300**	**330**	**360**
Nominal cooling capacity [1]		kW	253	291	316	341	364	398
Input power [1]		kW	78,2	88,9	95,8	105	111	123
Sound power [2]		dB(A)	94	96	96	97	98	98
Sound pressure at 10 m [3]		dB(A)	62	64	64	65	66	66

Physical features

ECOi-W AQUA EVO 230-360 C/H - chiller / heat pump			**230**	**260**	**280**	**300**	**330**	**360**
Dimension	H x W x L	mm	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 4550	2500 x 2150 x 4550	2500 x 2150 x 4550
Operating weight - chiller	STD / L	kg	1693	1890	1953	2227	2345	2519
	S	kg	1698	1895	1958	2232	2350	2524
	HT	kg	1743	1950	2013	2297	2425	2599
Operating weight - heat pump	STD / L	kg	2078	2343	2458	2702	2887	3063
	S	kg	2083	2348	2463	2707	2892	3068
	HT	kg	2128	2403	2518	2772	2967	3143
Water connections								
Type of water connections (evaporator)			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Water inlet/outlet diameter		Inch	3	3	3	3	3	3
ECOi-W AQUA EVO 230-360 E - condensing unit			**230**	**260**	**280**	**300**	**330**	**360**
Dimension	H x W x L	mm	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 4550	2500 x 2150 x 4550	2500 x 2150 x 4550
Shipping weight		kg	1542	1726	1788	1946	2061	2235
Refrigerant connections								
Connection type			To be brazed	To be brazed	To be brazed	To be brazed	To be brazed	To be brazed
Inlet diameter		Inch	1 5/8 - 2 1/8	1 5/8 - 2 1/8	1 5/8 - 2 1/8	2 1/8	2 1/8	2 1/8
Outlet diameter		Inch	7/8 - 1 1/8	7/8 - 1 1/8	7/8 - 1 1/8	1 1/8	1 1/8	1 1/8

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature. 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 AQUA EVO 400-800 C/H · R410A

Air cooled chillers and heat pumps.

Cooling capacity: 390,4 to 775,4 kW.
Heating capacity: 404 to 805,3 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
ECOi-W AQUA EVO 400-800 H - heat pump				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol	°C	From -3 to 5
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 10 to 46
		S / EC / EC S	°C	From -18 to 46
Warm liquid	Liquid outlet temperature	Water	°C	From 25 to 55
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature heating	STD	°C	From -10 to 20
		S / EC / EC S	°C	From -10 to 35
		HT	°C	From -13 to 35
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

- 2 versions: C (chiller) and H (heat pump)
- 8 sizes (C type) / 9 sizes (H type)
- 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
- Polar version: heat pump for extreme conditions
- 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

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)
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)

Technical performance

Power supply [1] V / Phase / Hz		400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/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] / $\eta_{s,c}$ [3] [4]	**— / %**	**4,48 / 176**	**4,63 / 182**	**4,58 / 180**	**4,78 / 188**	**4,58 / 180**	**4,59 / 180,7**	**4,73 / 186**	**4,70 / 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] / pressure at 10 m [6]	dB(A)	92 / 60	87 / 54	87 / 54	87 / 54	94 / 61	94 / 61	89 / 56	89 / 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] / $\eta_{s,c}$ [3] [4]	**— / %**	**4,65 / 183**	**4,58 / 180**	**4,68 / 184**	**4,55 / 179**	**4,78 / 188**	**4,87 / 192**	**4,65 / 183**	**4,68 / 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] / pressure at 10 m [6]	dB(A)	92 / 60	93 / 61	93 / 60	94 / 61	94 / 61	94 / 61	95 / 62	95 / 62

Power supply [1] V / Phase / Hz		400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50	400/3ph/50
Size		**400**	**450**	**490**	**530**	**580 S**	**620 S**	**670 S**	**750 S**	**800 S**
ECOi-W AQUA EVO 400-800 H AC - heat pump	**P-AQAVE**	**0400HA**	**0450HA**	**0490HA**	**0530HA**	**0580HA**	**0620HA**	**0670HA**	**0750HA**	**0800HA**
Nominal cooling capacity [2]	kW	365,58	410,32	444,87	479,32	520,14	566,34	608,33	686,63	727,45
Input power [2]	kW	129,64	144,48	157,76	169,37	179,36	194,62	209,77	235,96	250,84
EER [2]		2,82	2,84	2,82	2,83	2,90	2,91	2,90	2,91	2,90
SEER [4] / $\eta_{s,c}$ [4]	**— / %**	**4,65 / 183**	**4,53 / 178**	**4,70 / 185**	**4,55 / 179**	**4,60 / 181**	**4,60 / 181**	**4,55 / 179**	**4,55 / 179**	**4,58 / 180**
Nominal water flow (in the evaporator)	m³/h	63,6	71,4	77,4	83,5	90,6	98,7	106,0	119,6	126,8
Nominal heating capacity [7]	kW	404,0	450,9	492,7	532,1	585,6	627,1	676,7	757,4	805,3
Input power [7]	kW	125,9	140,9	154,0	166,3	183,0	193,0	209,5	233,8	247,8
COP [7]		3,21	3,20	3,20	3,20	3,20	3,25	3,23	3,24	3,25
COP [8]		3,87	3,81	3,84	3,86	3,95	4,01	3,963,85	4,02	3,99
SCOP [4] / $\eta_{s,h}$ [4]	**— / %**	**3,46 / 135**	**3,47 / 136**	**3,37 / 132**	**3,38 / 132**	**— / —**	**— / —**	**— / —**	**— / —**	**— / —**
Nominal water flow (in the evaporator)	m³/h	70,4	78,6	85,9	92,7	102,0	109,3	118,0	132,1	140,5
Sound power [5] / pressure at 10 m [6]	dB(A)	92 / 60	93 / 61	93 / 60	94 / 61	88 / 55	88 / 55	88 / 55	89 / 56	89 / 56
ECOi-W AQUA EVO 400-800 H EC - heat pump		**400**	**450**	**490**	**530**	**580 S**	**620 S**	**670 S**	**750 S**	**800 S**
Nominal cooling capacity [2]	kW	373,5	419,2	454,5	498,7	533,0	580,0	621,5	704,0	746,0
Input power [2]	kW	129,0	144,1	156,9	168,6	178,0	194,0	208,2	236,0	251,0
EER [2]		2,90	2,91	2,90	2,90	2,99	2,99	2,99	2,99	2,97
SEER [4] / $\eta_{s,c}$ [4]	**— / %**	**4,93 / 194**	**4,83 / 190**	**4,97 / 196**	**4,88 / 192**	**4,75 / 187**	**4,73 / 186**	**4,70 / 185**	**4,65 / 183**	**4,65 / 183**
Nominal water flow (in the evaporator)	m³/h	64,4	72,3	78,4	84,5	92,9	101,1	107,2	122,7	130,1
Nominal heating capacity [7]	kW	404,0	450,9	492,7	532,1	585,0	626,0	676,7	757,0	805,0
Input power [7]	kW	122,6	137,1	149,7	161,8	178,0	188,0	203,7	229,0	242,0
COP [7]		3,30	3,29	3,29	3,29	3,29	3,34	3,32	3,31	3,32
COP [8]		4,00	3,93	3,97	3,99	4,09	4,15	4,10	4,17	4,14
SCOP [4] / $\eta_{s,h}$ [4]	**— / %**	**3,62 / 142**	**3,62 / 142**	**3,53 / 138**	**3,53 / 138**	**— / —**	**— / —**	**— / —**	**— / —**	**— / —**
Nominal water flow (in the evaporator)	m³/h	69,3	77,3	84,5	91,2	102,0	109,3	116,0	132,1	140,5
Sound power [5] / pressure at 10 m [6]	dB(A)	92 / 60	93 / 61	93 / 60	94 / 61	88 / 55	88 / 55	88 / 55	89 / 56	89 / 56

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 water connections			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Water inlet/outlet diameter		Inch	4	4	4	4	4	5	6	6
ECOi-W AQUA EVO 400-800 H - heat pump			**400**	**450**	**490**	**530**	**580 S**	**620 S**	**670 S**	**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	2500 x 2175
	Length STD / EC / HPF	mm	5620	5620	6680	6680	7760	8800	8800	9950	9950
	Length S / EC S	mm	6680	6680	7760	7760	8800	9850	9850	12050	12050
Operating weight	STD / EC / HPF	kg	3769	3938	4412	4744	5214	5554	5691	6790	6985
	S / EC S	kg	4131	4293	4764	5101	5567	5919	6059	7497	7683
Water connections (evaporator)											
Type of water connections			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Water inlet/outlet diameter		Inch	4	4	4	4	4	5	5	6	6

1) Voltage 400 V +/- 10%. 2) According 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 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. 7) According EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 8) According EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB.

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 | HIGH SCOP 3,47 | 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

ECOi-W SW-N EVO 380-1260 C · R513A

Air cooled chillers.

Cooling capacity: 366 to 1240,5 kW.

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

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

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	123,9	142,9	165,6	181,1	206,2	228,6	253,4	290,2	322,3	332,0	370,4	408,1
EER [1]			2,95	3,10	3,02	3,12	3,12	3,08	3,07	3,09	3,05	3,15	3,12	3,04
$EER_{CONDITION\ B}$ (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 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

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.

Water cooled chillers, heat pumps and condenserless units

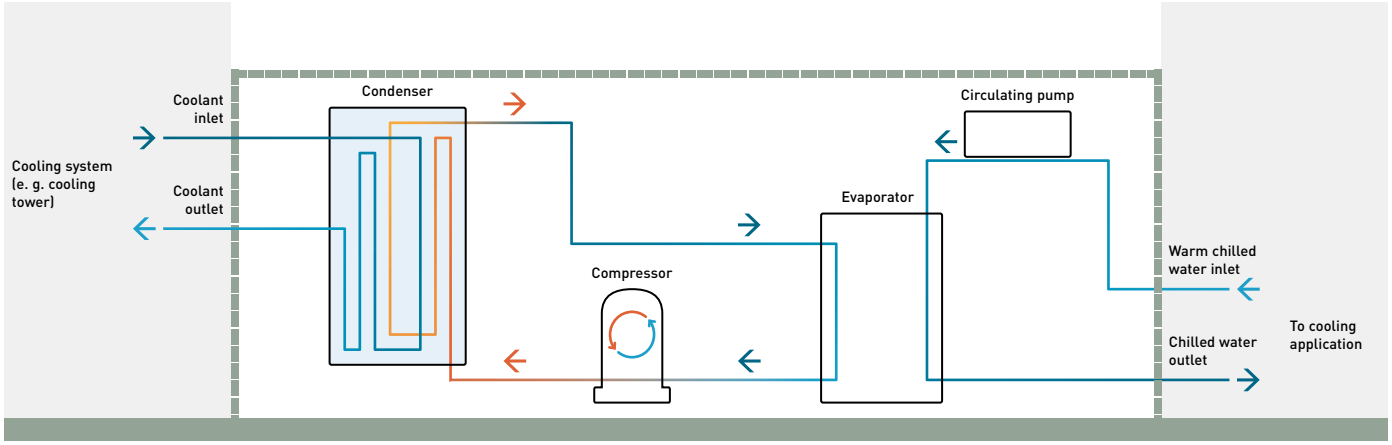
Quality and comfort for all your projects with ECOi-W units! Perfect for any type of building, the system consists of water cooled chillers or heat pumps that provide cold or hot water to water terminals. This system is particularly well suited for applications such as office buildings, hotels, shopping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

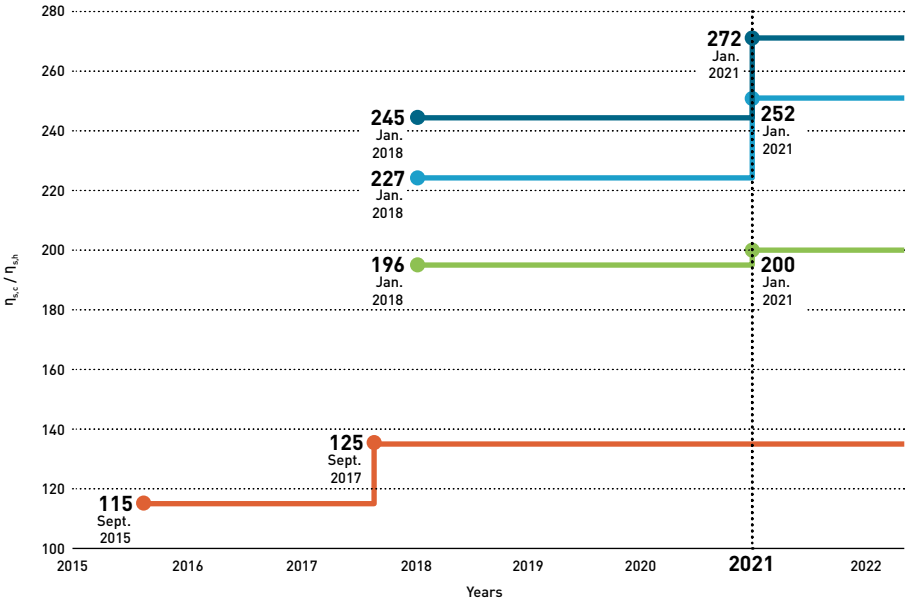
Advantages:

· 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
P. 522		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
		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
P. 522		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
		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
P. 524		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
		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
P. 526		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 / 23,7	5,13 / 5,17	65	821 x 1350 x 455
	25	26,0 / 28,9	5,00 / 5,45	67	821 x 1350 x 455
	30	30,1 / 33,6	4,88 / 5,33	67	821 x 1350 x 455
P. 522	35	34,0 / 38,5	5,10 / 5,05	68	821 x 1350 x 455
	40	38,2 / 42,9	5,00 / 4,83	68	821 x 1350 x 455
	45	45,5 / 51,2	5,47 / 5,28	70	821 x 1350 x 455
	50	49,9 / 57,7	4,70 / 5,70	70	1210 x 1500 x 850
	60	58,9 / 68,2	4,88 / 5,88	70	1210 x 1500 x 850
	75	76,1 / 86,3	4,47 / 5,70	72	1210 x 1500 x 850
	90	88,6 / 102,2	4,83 / 5,78	73	1210 x 1500 x 850
P. 522	120	114,9 / 132	4,92 / 5,75	78	1210 x 1500 x 850
	150	144,3 / 164,2	4,97 / 5,63	81	1210 x 1500 x 850
	170	165,7 / 190,1	5,65 / 5,95	81	1210 x 1500 x 850
	190	185,4 / 212,3	5,10 / 5,63	81	1210 x 1500 x 850
	524	150,7 / 170,2	4,65 / 5,40	81	2250 x 1845 x 850
	604	176,2 / 201,1	4,92 / 5,20	82	2250 x 1845 x 850
	704	204,5 / 231,8	4,92 / 5,38	85	2250 x 1845 x 850
	804	225,4 / 256,5	4,68 / 5,35	87	2250 x 1845 x 850
	904	263,1 / 295,6	5,15 / 5,73	89	2250 x 1845 x 850
P. 524	1004	291,3 / 331	5,10 / 5,85	90	2250 x 1845 x 850
	1104	332 / 376,6	5,27 / 5,83	90	2250 x 1845 x 850
	1204	370,5 / 418,5	5,30 / 5,85	90	2250 x 1845 x 850
	1404	421,1 / 468,0	6,43 / —	92	2250 x 1845 x 850
	1604	459,8 / 508,4	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
	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
P. 526	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
P. 522		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
		60	53,4	70	1210 x 1500 x 850
		75	67,5	72	1210 x 1500 x 850
P. 522		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
		904	224,2	89	2250 x 1845 x 850
P. 524		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
		990	817,2	98	5100 x 1680 x 1520
P. 526		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

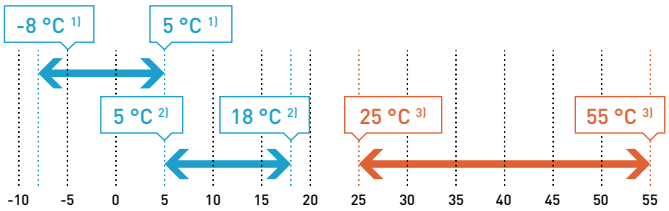
Water cooled chillers, heat pumps and condenserless units.

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

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%.

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)

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
	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
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	49,9	58,9	76,1	88,6	114,9	144,3	165,7	185,4
Input power [1]		kW	4,61	5,71	6,90	7,68	8,69	10,2	12,0	13,9	17,5	21,1	27,0	33,3	38,2	43,3
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**	**4,88**	**5,1**	**5**	**5,48**	**4,7**	**4,88**	**4,47**	**4,83**	**4,92**	**4,97**	**5,65**	**5,1**
$\eta_{s,c}$ [2]			**202**	**197**	**192**	**201**	**197**	**216**	**185**	**192**	**176**	**190**	**194**	**196**	**223**	**201**
Heating capacity [6]		kW	23,9	29,1	34,0	38,8	43,3	51,5	58,8	65,9	87,7	104	134	167	193	215
Input power [6]		kW	5,77	7,06	8,36	9,50	10,6	12,5	14,1	16,8	20,8	24,9	32,1	39,4	45,9	51,4
COP [6]			4,13	4,13	4,07	4,09	4,08	4,11	4,16	3,93	4,22	4,16	4,17	4,23	4,20	4,19
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]			**5,30**	**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. 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)

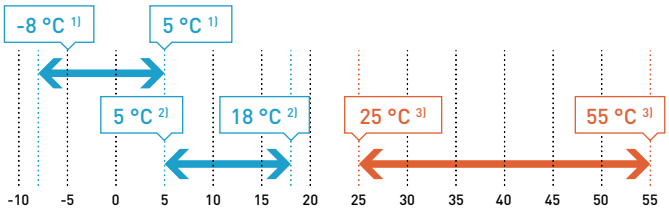
Advantages

- 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%.

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

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

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)

Accessories supplied loose	
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	150,7	176,2	204,5	225,4	263,1	291,3	332,0	370,5	421,1	459,8
Input power [1]		kW	43,6	43,6	49,4	55,5	61,0	67,7	77,7	86,9	97,0	109,0
EER [1]			4,04	4,04	4,14	4,06	4,31	4,30	4,27	4,26	4,34	4,19
SEER [2]			**4,65**	**4,92**	**4,92**	**4,68**	**5,15**	**5,1**	**5,27**	**5,3**	**6,43**	**6,47**
$\eta_{s,c}$ [2]			**183**	**194**	**194**	**184**	**203**	**201**	**208**	**209**	**254**	**256**
Heating capacity [6]		kW	172	203	234	259	298	333	380	422	471	509
Input power [6]		kW	41,9	50,8	57,6	65,1	72,5	80,8	92,1	103	121	135
COP [6]			4,11	4,00	4,07	3,99	4,12	4,12	4,12	4,10	3,91	3,76
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. 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.

ErP | HIGH SEER 6,47 | HIGH SCOP 5,85 | WATER COOLED | PLATE HEAT EXCHANGER | SCROLL COMPRESSOR | VERY HIGH PERFORMANCE

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.

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

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

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-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-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

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	Evaporator	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	Condenser	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	Evaporator	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	Evaporator	Inch	6	6	6	6	8	8
Connection type	Condenser		Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®
Inlet/outlet diameter	Condenser	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	Evaporator	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	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

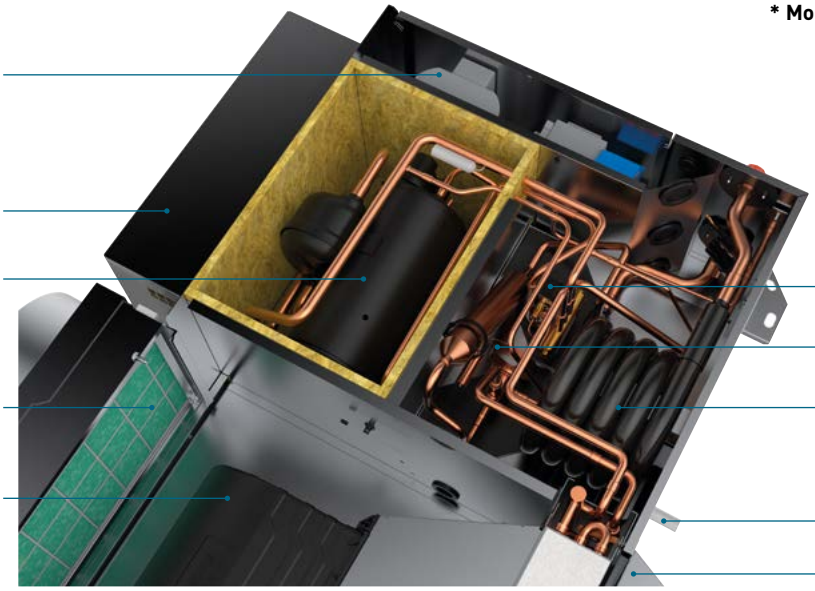
One building, different needs!
ECOi-LOOP water source heat pumps are ideal for best in class hotels, offices or shopping centers. This solution offers improved comfort by having several different indoor climates inside a building, while maintaining the energy through an internal closed water loop.

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.

Environmentally friendly and economic

*** 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] (m^3/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]
	20	2,2 / 2,5	30	465	0-140	EC	900 x 530 x 250 [2]
P. 534	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]
	100	10,3 / 11,3	56	2826	0-335	EC	1333 x 818 x 580 [2]
P. 536	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							
		2,9 / 3,8	25,8 [3]	525	0-140	EC	900 x 636 x 250 [2]
P. 538							

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

Page	Size	Cooling and heating capacity (kW)	NR sound levels (at MS)	Nominal air flow [1] (m^3/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. 540	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							
	12	2,7 / 3,2	40	510	0	AC/EC	1138 x 251 x 821 [2]
P. 542							
ECOi-LOOP-N FS H · R513A	7	1,7 / 1,8	34	340	0	AC/EC	1138 x 260 x 821 [2]
	9	2,0 / 2,6	36	400	0	AC/EC	1138 x 260 x 821 [2]
P. 544							

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.

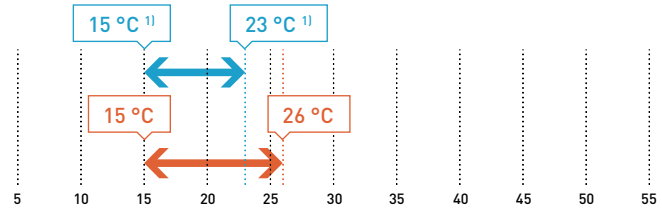
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

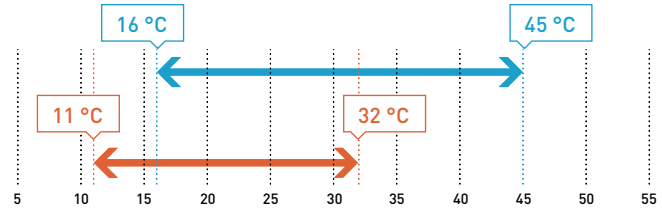
SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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 features

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

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.

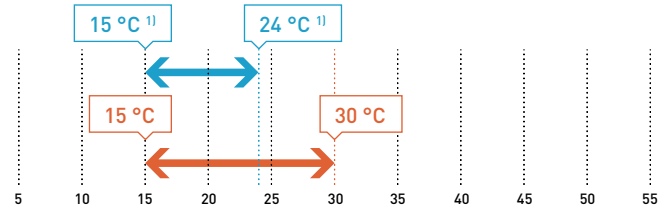
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

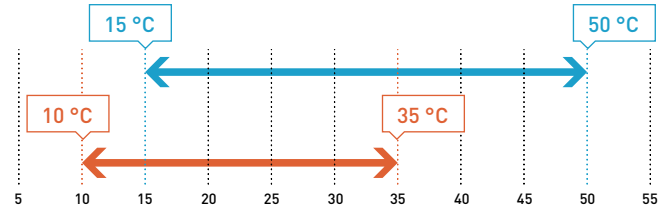
SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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

AC SELECT.

Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical features

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

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.

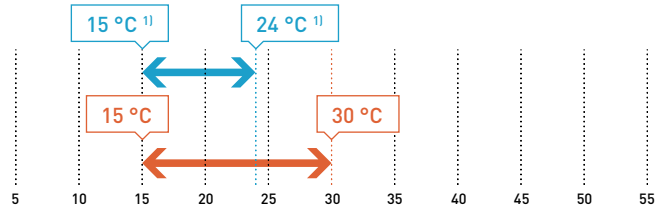
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

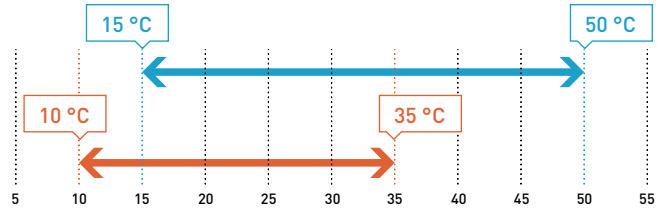
+ SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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 features

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

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.

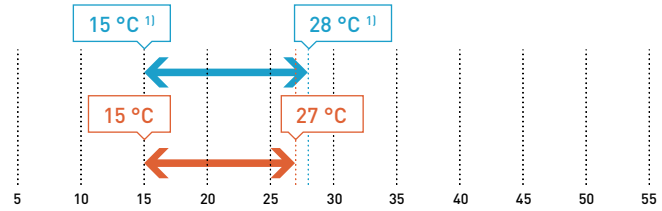
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

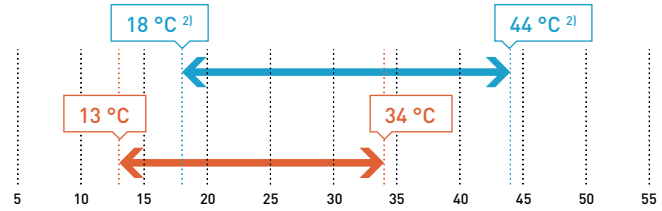
+ SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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.

AC SELECT.

Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical features

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

ECOi-LOOP FS H · R407C

Water source heat pumps reversible.

Cooling capacity: 1,9 to 2,7 kW.
Heating capacity: 2,4 to 3,2 kW.

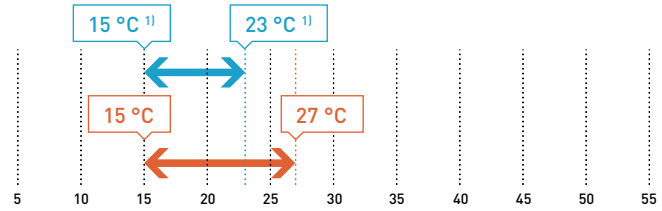
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

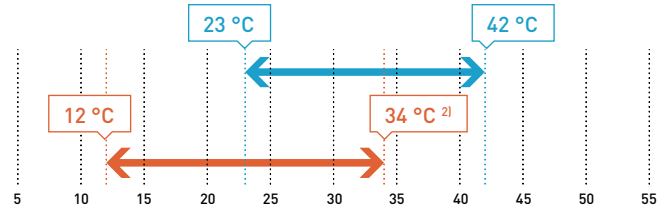
SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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 m^3/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

AC SELECT.

Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical features

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

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.

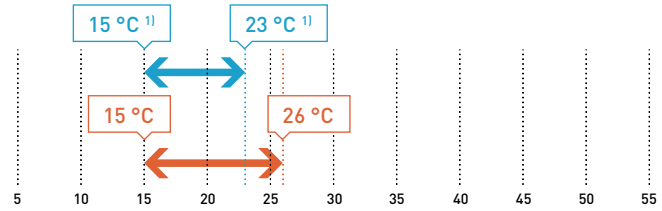
Optional controller.
RCS remote control.

Optional controller.
SRC - mini BMS controller.

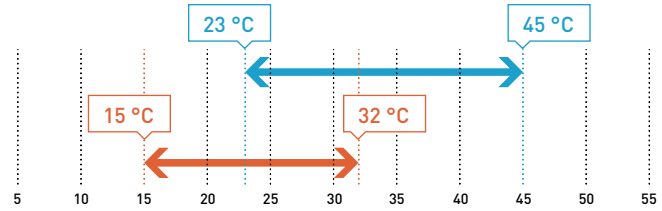
SEE PAGE 546 FOR MORE DETAILS ABOUT WATER SOURCE HEAT PUMPS CONTROL SYSTEMS

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

AC SELECT.

Smart and user-friendly selection tool. Configure your air conditioning solution at required conditions: https://acselect.panasonic.eu/

Technical features

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)	LxWxH	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)	LxWxH	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)	LxWxH	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)	LxWxH	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

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.

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