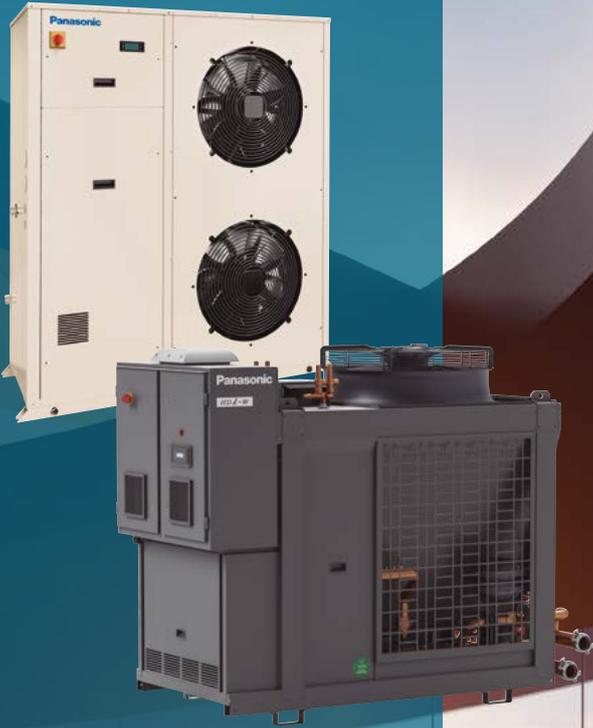


ECO i - W



Chillers, heat pumps and water source heat pumps

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

ABOUT

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PRODUCT SPECIFICATIONS

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

ECOi-W AQUA EVO H	→ 478
ECOi-W AQUA-G BLUE 50-80 H	→ 480
ECOi-W AQUA-G EVO 60-110 H	→ 482
ECOi-W AQUA 20-40 C/H/E	→ 484
ECOi-W AQUA-Z EVO 40-50 H	→ 486
ECOi-W AQUA-Z 50-170 C/H	→ 488
ECOi-W AQUA-Z DC 150-380 C/H	→ 490
ECOi-W AQV C/H/E	→ 494
ECOi-W VL H/E	→ 498
ECOi-W AQUA EVO 400-800 C	→ 502
ECOi-W SW-N EVO 380-1260 C	→ 504

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

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Water source heat pumps - ECOi-LOOP

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ECOi-LOOP-N 70-135 H · R513A	→ 526
ECOi-LOOP-N EVO C/H · R513A	→ 528
ECOi-LOOP HRW H and ECOi-LOOP HRWE H · R407C	→ 530
ECOi-LOOP FS H · R407C	→ 532
ECOi-LOOP-N FS H · R513A	→ 534

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The reasons to choose Panasonic as your partner

Unrivalled 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 conditions.

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

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



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

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



Water source heat pumps - ECOi-LOOP

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



AC SELECT.

Use AC SELECT to choose and configure your hydronic solution.

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



<https://acselect.panasonic.eu/>

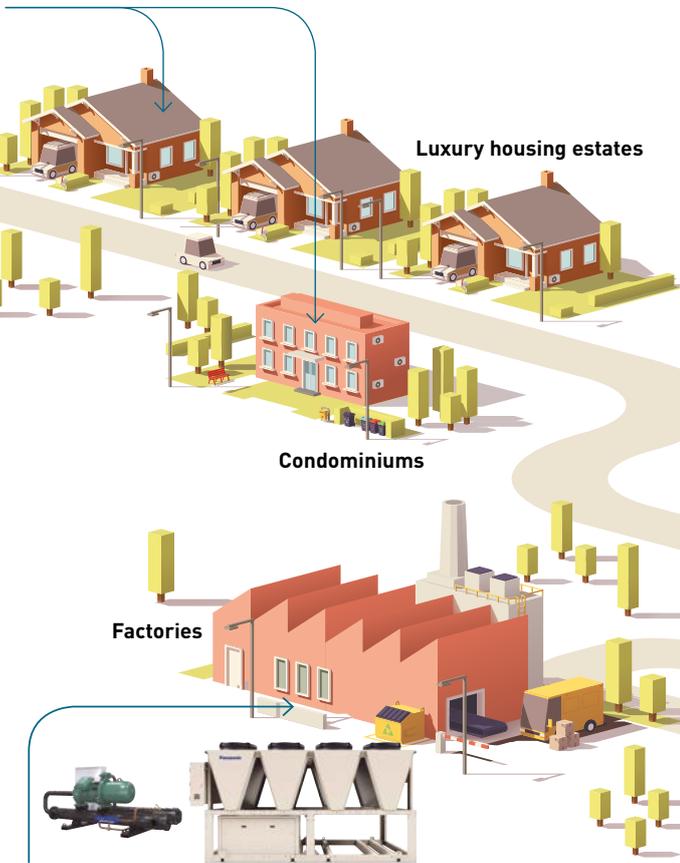


A wide coverage of applications

Energy efficiency, high performance and comfort.

Chillers and heat pumps.

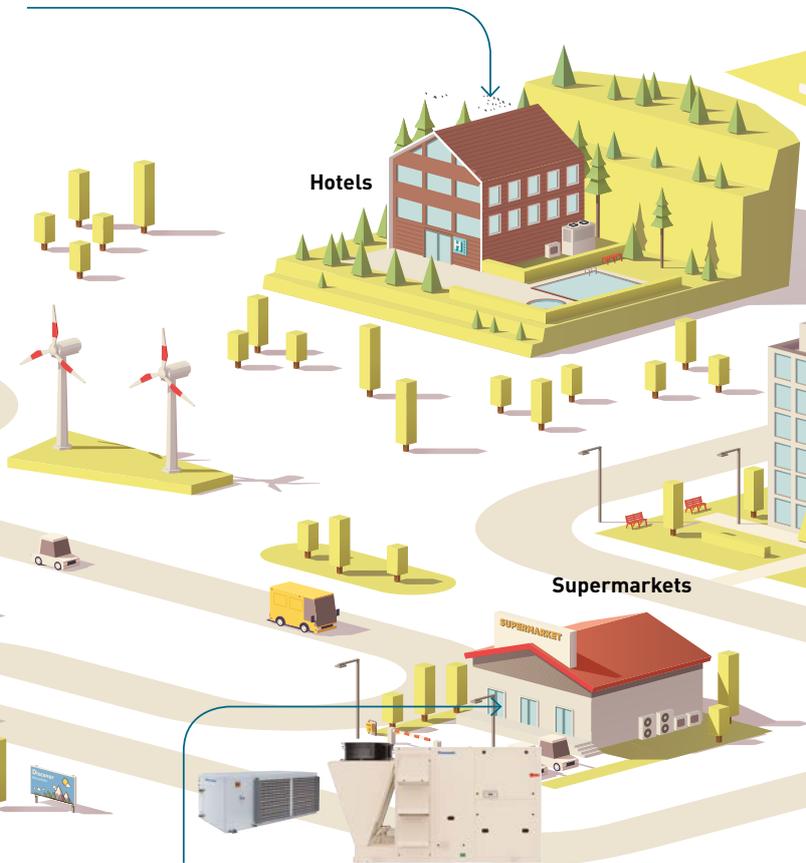
In residential applications a good indoor climate is important to ensure greater comfort and well-being. Our chillers and heat pump units with small capacities and DHW management are the ideal solutions.



Chillers and heat pumps, fan coils and water source heat pumps.

Ensuring a comfortable environment for the guests is the main challenge in all the types of hotel.

Panasonic offers a complete system thanks to the wide capacity range of its chillers, the design and low-noise operation of its fan coil units and the zone independent management of different spaces with its water source heat pumps.



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.



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.



Mall

**Chillers and heat pumps, and rooftops.**

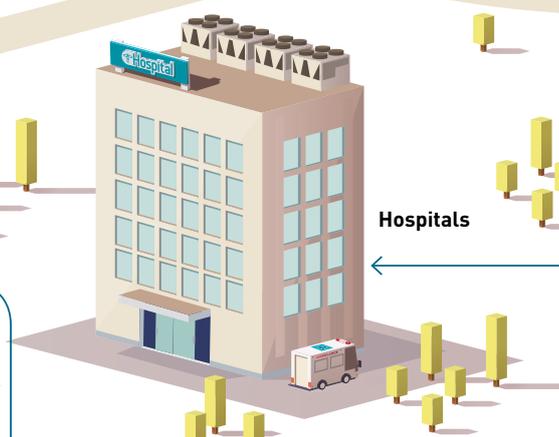
Energy consumption at airports has significant variability, and the number of users and passengers fluctuates throughout the day. For optimal air quality management and to meet the large energy needs of facilities, Panasonic offers a wide range of solutions like chillers and heat pumps and rooftops that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



Airports



Offices / Large buildings



Hospitals

**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.

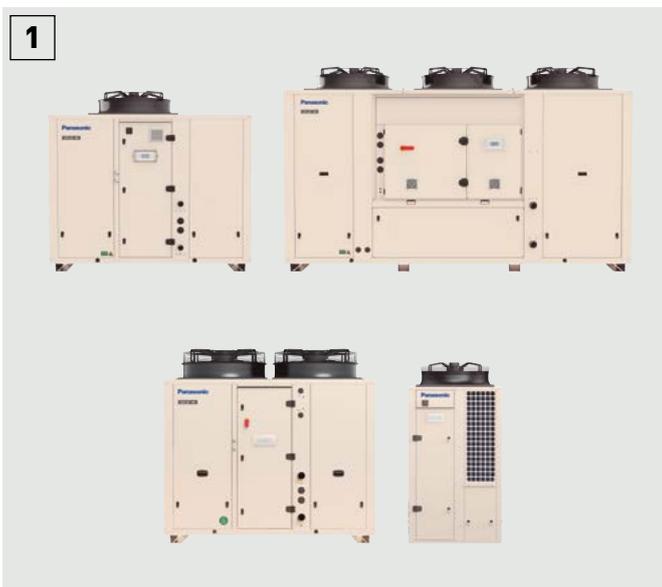
Chillers and heat pumps, and rooftops.

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.



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.



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.

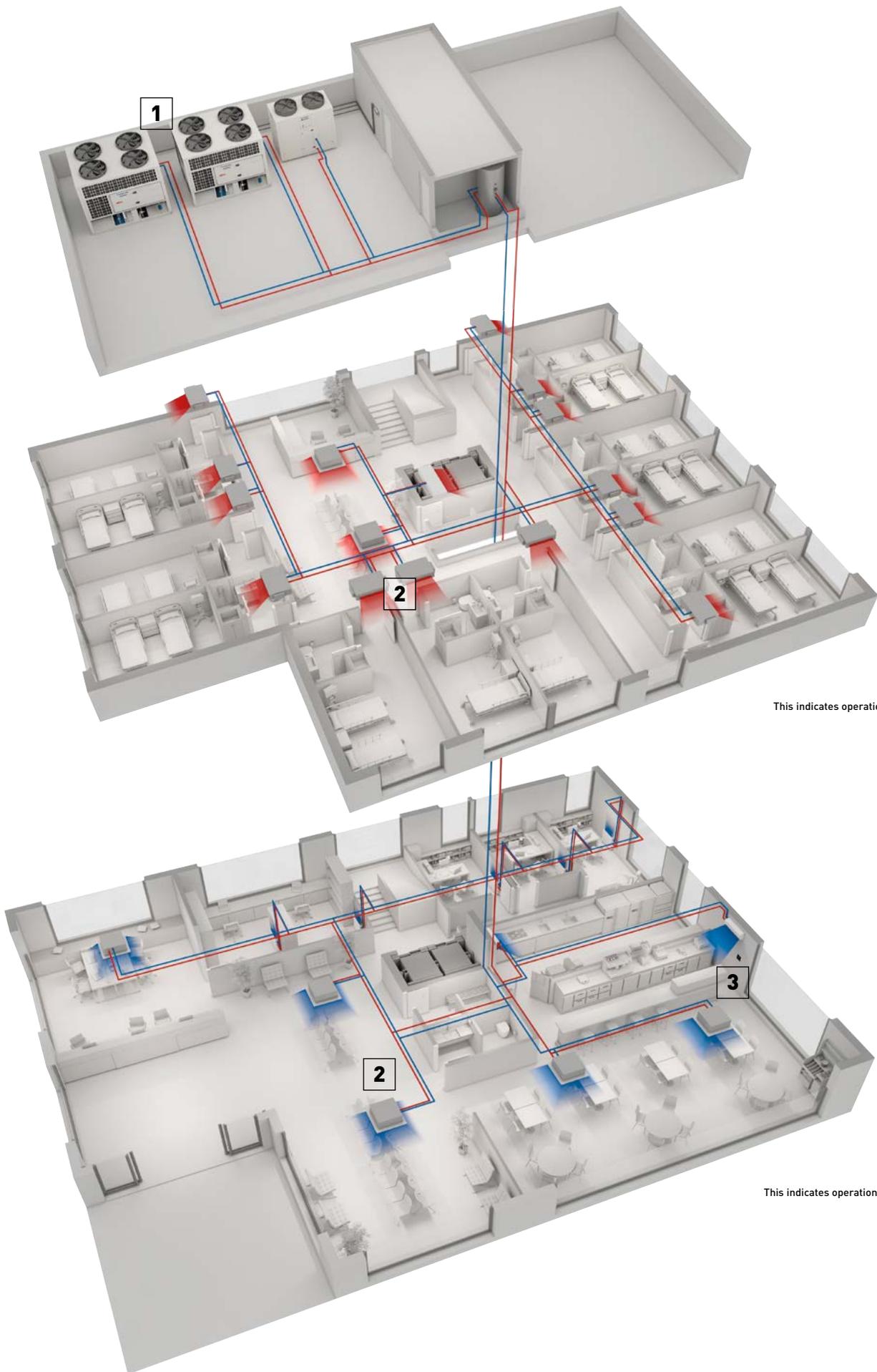
Operation in both heating and cooling is possible.



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.

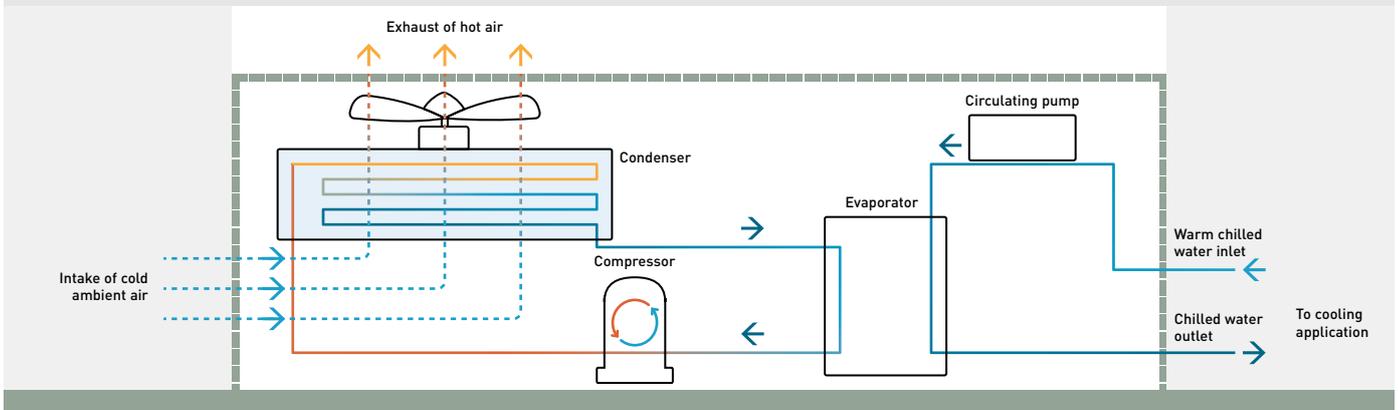


An air cooled chiller uses ambient air to cool and condense the hot refrigerant in the condenser.

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.



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.



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.

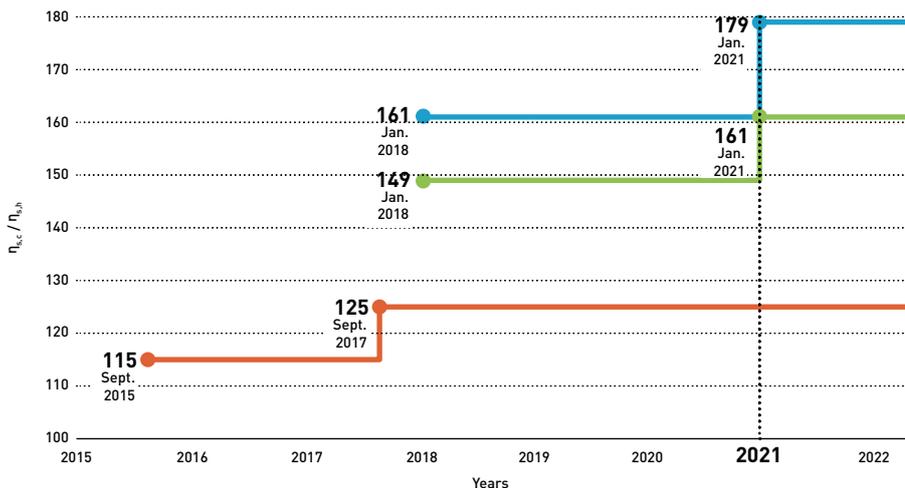


Microchannel coils

Significant reduction on refrigerant charge and operating weight.



Ecodesign



Air to water comfort chiller ¹⁾

≤400 kW. Minimum η_{ec} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

>400 kW. Minimum η_{ec} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

Air to water heat pumps ²⁾

≤400 kW. Minimum η_{ah} to be Ecodesign compliant. COMMISSION REGULATION (EU) No813/2013.

>400 kW. Minimum η_{ah} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

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

ECOi-W AQUA-G EVO range.

Unmatched innovation

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



INVERTER



**INVERTER SCROLL
COMPRESSORS**



HIGH SEASONAL EFFICIENCY



**A++¹⁾ HIGH ENERGY
EFFICIENCY CLASS**



**DHW
MANAGEMENT**



**75 °C MAXIMUM 75 °C LEAVING
WATER TEMPERATURE**



SMALL FOOTPRINT

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

NEW



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

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

Inverter technology: reliable performances under variable load conditions

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

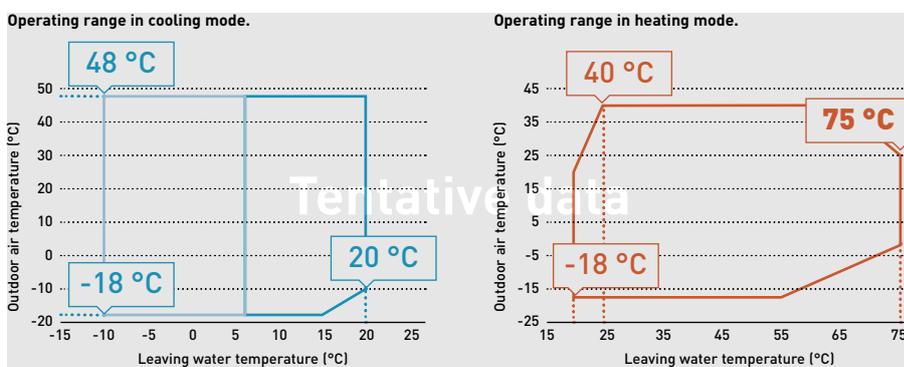
Enhanced capacity with cascade and modular configurations

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

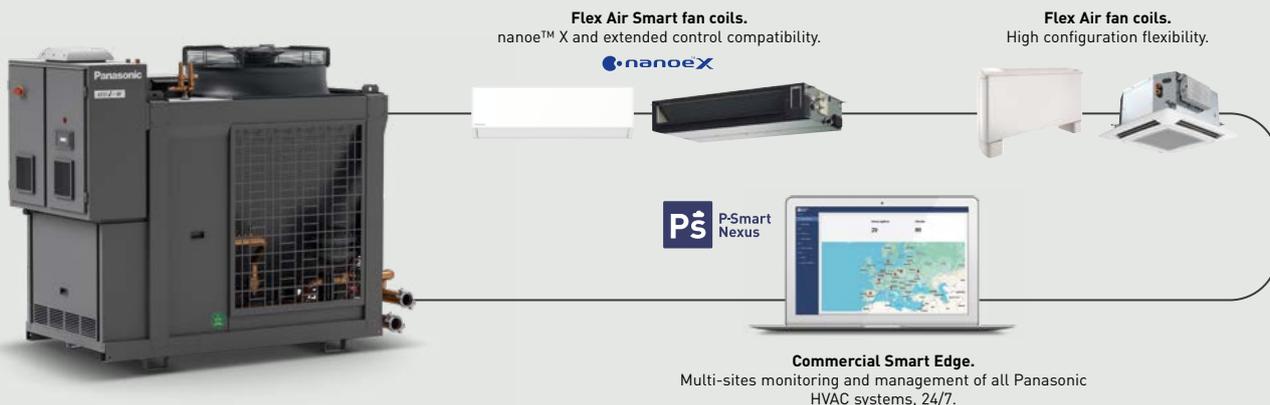
*Up to 440 kW.

Extended operating limits for high temperature heating

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



Comprehensive range of solutions for commercial applications.



Extension of the R290 heat pump range.

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

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

*Size 50.



Quick selection guide - Air cooled chillers

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

1) Dimensions without water tank.

Page	Size	Cooling capacity (kW)	SEER	Sound power (dB(A))	Dimension ¹⁾ L x H x W (mm)
P. 498	ECOi-W AQR 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
	115	110,1	4,80	84	2555 x 2185 x 1095
	125	121,9	4,73	88	3155 x 2185 x 1095
P. 502	ECOi-W AQUA EVO C - R410A				
	400	390,4	4,48	92	4580 x 2500 x 2175
	450 S ²⁾	431,1	4,63	87	5620 x 2500 x 2175
	490 S ²⁾	470,2	4,58	87	6680 x 2500 x 2175
	530 S ²⁾	513,7	4,78	87	6680 x 2500 x 2175
	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
P. 504	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
	730	704,3	4,56	101	7816 x 2510 x 2192
	810	778,1	4,62	101	8868 x 2510 x 2192
	900	896,9	4,56	102	9920 x 2510 x 2192
	980	983,5	4,60	102	10972 x 2510 x 2192
	1060	1047,4	4,87	103	12024 x 2510 x 2192
	1160	1154,0	4,86	103	13076 x 2510 x 2192
1260	1240,5	4,85	103	13076 x 2510 x 2192	

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

Increased capacity with modular configuration units.

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

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



R32

Quick selection guide - Air cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension ¹⁾ LxHxW (mm)		
P. 478	20	Cooling: 21,0	3,30 / 3,75	74	1477 x 1615 x 539		
		Heating: 20,4					
P. 480	30	Cooling: 28,0	3,98 / 3,68	75	1477 x 1615 x 539		
	50	Cooling: 48,2				4,40 / 3,70	83
		Heating: 49,2					
P. 480	60	Cooling: 56,1	4,30 / 3,70	84	2180 x 2011 x 1160		
	70	Cooling: 64,9				4,30 / 3,90	85
		Heating: 73,5					
	80	Cooling: 74,1				4,20 / 3,80	85
Heating: 83,6							
P. 482	60	Cooling: 56,7	4,07 / 4,32	79	1998 x 2385 x 1116		
		Heating: 61,2					
	80	Cooling: 67,4	4,84 / 4,13	80	1998 x 3385 x 1116		
Heating: 80,8							
P. 484	20	Cooling: 18,7	4,68 / 3,50	75	1000 x 1983 x 1000		
		Heating: 19,5					
	25	Cooling: 23,7	4,31 / 3,38	75	1000 x 1983 x 1000		
Heating: 26,9							
P. 486	30	Cooling: 26,4	5,59 / 4,22	79,5	2209 x 1732 x 1100		
	40	Cooling: 41,5				5,65 / 4,52	80,5
		Heating: 41,0					
	50	Cooling: 48,5				5,65 / 4,52	80,5
Heating: 48,2							

1) Dimensions without water tank.

New ECOi-W AQUA-G EVO.

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



NATURAL REFRIGERANT R290 WITH GWP 0,02*



INVERTER TECHNOLOGY

880 kW BOOST CAPACITY UP TO 880 KW



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

Quick selection guide – Air cooled heat pumps

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

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

Quick selection guide – Air cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension ¹⁾ LxHxW (mm)
P. 494 	85	81,0 91,8	4,25 / 3,61	84	2555 x 2185 x 1095
	95	89,9 102,8	4,68 / 3,64	84	2555 x 2185 x 1095
	105	98,9 110,0	4,63 / 3,78	84	2555 x 2185 x 1095
	115	106,9 119,0	4,17 / 3,77	84	2555 x 2185 x 1095
	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
P. 498 	704	173,2 200,1	3,63 / 3,41	93	4300 x 2300 x 1100
	804	197,1 223,2	3,55 / 3,42	93	4300 x 2300 x 1100
	904	226,4 254,7	3,35 / 3,28	94	4300 x 2300 x 1100
	1004	246,3 270,8	3,50 / 3,39	94	4300 x 2300 x 1100
	1104	273,1 302,1	3,53 / 3,30	95	4300 x 2300 x 1100
	1204	299,9 337,4	3,43 / 3,19	95	4300 x 2300 x 1100

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

Quick selection guide – Air cooled condensing units

Page	Size	Cooling capacity (kW)	EER	Sound power (dB(A))	Dimension ¹⁾ LxHxW (mm)
P. 484 	25	32,4	3,24	75	1000 x 1983 x 1000
	30	33,7	3,15	75	1000 x 1983 x 1000
	35	43,1	2,90	76	1000 x 1983 x 1000
	40	44,8	2,99	76	1000 x 1983 x 1000
P. 494 	85	92,1	3,36	84	2555 x 2185 x 1095
	95	103,2	3,29	84	2555 x 2185 x 1095
	105	113,2	3,32	84	2555 x 2185 x 1095
	115	121,8	3,30	84	2555 x 2185 x 1095
	125	134,7	3,23	88	3155 x 2185 x 1095
	140	151,0	3,23	88	3155 x 2185 x 1095
P. 498 	704	199,0	2,90	93	4300 x 2300 x 1100
	804	224,0	3,00	93	4300 x 2300 x 1100
	904	258,0	2,98	94	4300 x 2300 x 1100
	1004	283,0	3,12	94	4300 x 2300 x 1100
	1104	315,0	2,98	95	4300 x 2300 x 1100
	1204	347,0	2,90	95	4300 x 2300 x 1100

1) Dimensions without water tank.

Commercial Smart Edge

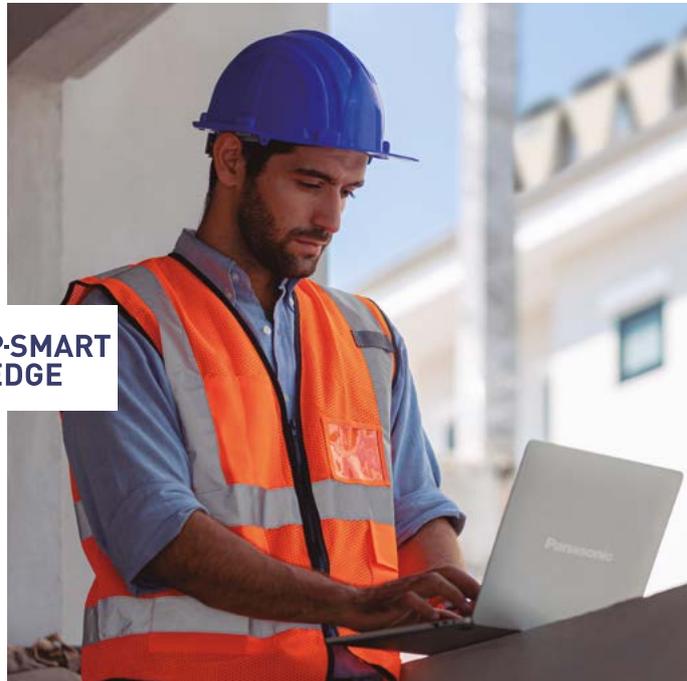
Manage the entire Panasonic HVAC portfolio from a single platform – on-site or remotely, 24/7.

 **COMPATIBLE WITH ENTIRE HVAC RANGE**

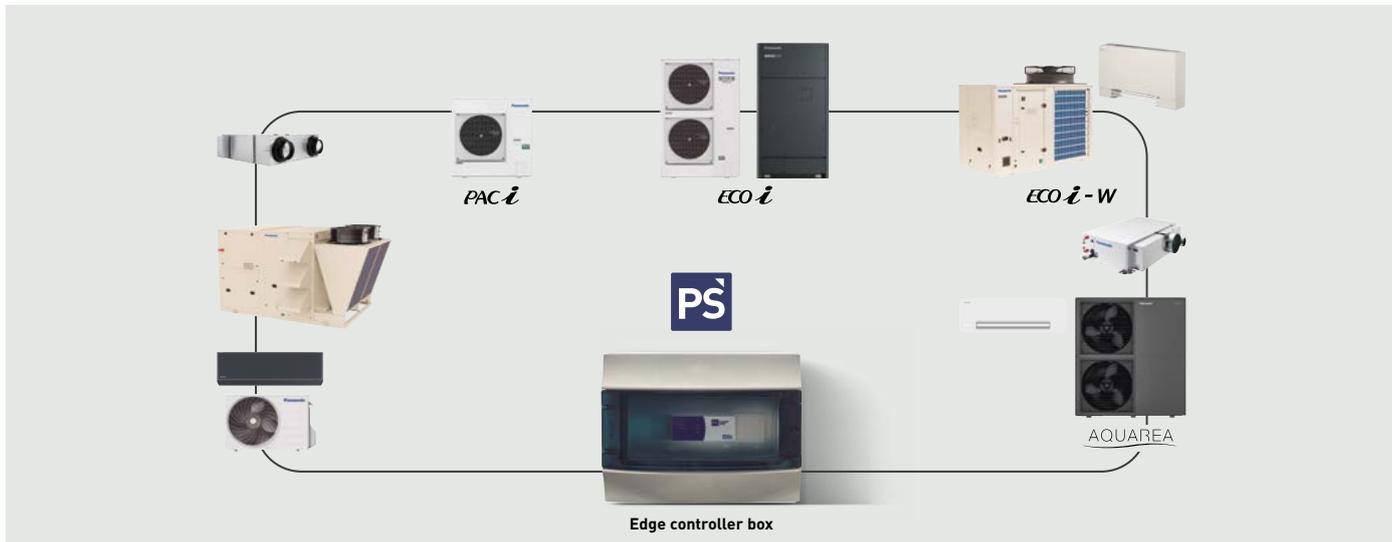
 **SIMPLIFIED COMMISSIONING**

 **OPTIMISED PLANT MANAGEMENT**

 **ADVANCED ANALYTICS**



PS P-SMART EDGE



PS P-SMART EDGE

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

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



PS P-Smart Nexus

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



Model code	Control points	Indoor unit connections ¹⁾
PAW-CSE-1B	100	4
PAW-CSE-2B	200	10

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

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



ECOi-W AQUA EVO H - R410A

Air cooled heat pumps Inverter.

Cooling capacity: 20,0 to 35,9 kW.

Heating capacity: 20,4 to 34,0 kW.



The range at a glance

- 1 version: H (heat pump)
- 2 sizes

Advantages

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

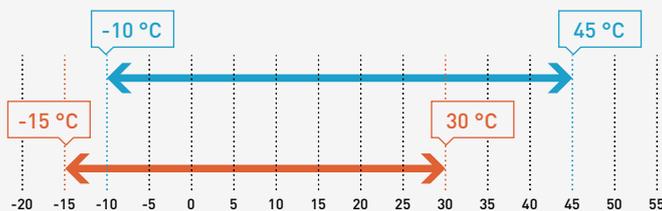
Equipment

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

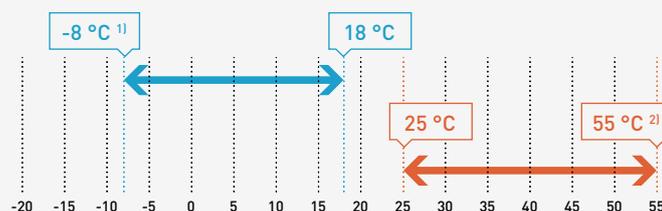
Operating limits

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.

AC SELECT.

Smart and user-friendly selection tool.

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





Technical performance

		Voltage	V	400	400
Power supply		Phase		Three phase	Three phase
		Frequency	Hz	50	50
	Size			20	30
ECOi-W AQUA EVO H - heat pump				P-AQAVE0020HA	P-AQAVE0030HA
Cooling capacity ¹⁾	Nominal (Min - Max)	kW		20,0 (9,33 - 28,0)	29,0 (13,9 - 35,9)
Input power ¹⁾	Nominal (Min - Max)	kW		4,15 (2,38 - 6,61)	7,24 (3,51 - 13,0)
EER ¹⁾	Nominal (Min - Max)			4,82 (3,92 - 4,24)	4,01 (3,96 - 2,76)
Cooling capacity ²⁾	Nominal (Min - Max)	kW		21,0 (6,60 - 25,2)	28,0 (9,43 - 31,1)
Input power ²⁾	Nominal (Min - Max)	kW		6,95 (2,52 - 10,3)	10,9 (3,14 - 12,4)
EER ²⁾	Nominal (Min - Max)			3,02 (2,62 - 2,45)	2,57 (3,00 - 2,51)
EER 75%				3,83	3,65
EER 50%				4,53	4,48
EER 25%				3,80	4,79
SEER ³⁾				3,30	3,98
$\eta_{s,c}$ ³⁾				129	156
Nominal water flow (in the evaporator)		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 - heat pump			20	30
Dimension	H x W x L	mm	1615 x 539 x 1477	1615 x 539 x 1477
Operating weight		kg	260	275
Water connections				
Type of connections (evaporator)			Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	1 ¼	1 ¼

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

Accessories and options

Buffer tank placed under unit
Chassis acoustic insulation

Accessories and options

Coils treatments

Accessories supplied loose

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

Accessories supplied loose

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



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.



The range at a glance

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

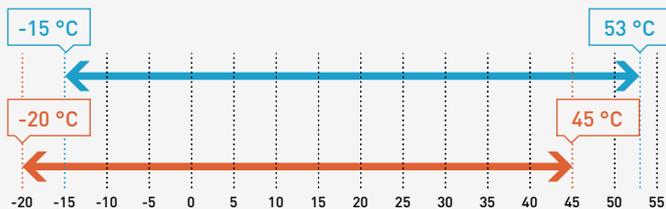
Advantages

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

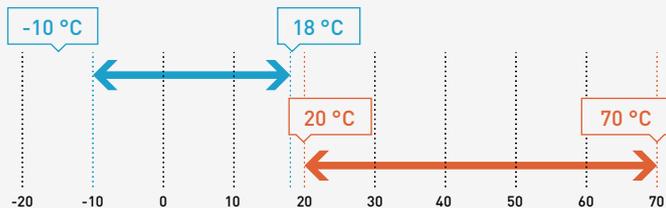
Operating limits

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

Ambient temperature.



Leaving water temperature.



Equipment

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

AC SELECT.

Smart and user-friendly selection tool.

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





Technical performance

Power supply	Voltage	V	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase
Size	Frequency	Hz	50	50	50	50
			50	60	70	80
ECOi-W AQUA-G BLUE 50-80 H EC fan - heat pump			P-AQAG0050HA	P-AQAG0060HA	P-AQAG0070HA	P-AQAG0080HA
Cooling capacity ¹⁾	kW		48,2	56,1	64,9	74,1
Input power ¹⁾	kW		15,0	19,0	21,6	25,0
EER ¹⁾			3,20	3,00	3,00	3,00
SEER ²⁾			4,37	4,30	4,31	4,21
$\eta_{s,c}$ ²⁾	%		171,9	168,9	169,4	165,4
Heating capacity ³⁾	kW		49,2	61,1	73,5	83,6
Input power ³⁾	kW		15,6	18,6	21,7	24,9
COP ³⁾			3,2	3,3	3,4	3,4
SCOP ⁴⁾			3,67	3,75	3,87	3,84
$\eta_{s,h}$ ⁴⁾			143,7	146,8	151,8	150,5
Energy efficiency class (SCOP) ⁴⁾		A+++ to D	A+	A+	A++	A++
SCOP_{MT} ⁴⁾			3,11	3,14	3,26	3,22
$\eta_{s,MT}$ 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 ⁴⁾	2180 / 2680	2180 / 2680	2180 / 2680
	Width	mm	1032	1160	1160	1160
Operating weight		kg	538	603	628	669
Refrigerant and compressors						
Number of refrigerant circuits			1	1	1	1
Refrigerant (R290)		kg	4,50	4,80	5,30	6,80
GWP ⁷⁾		CO ₂ eq.	0,02	0,02	0,02	0,02
Compressors	Number / type		2 / Scroll	2 / Scroll	2 / Scroll	2 / Scroll
Capacity steps		%	50 / 100	40 / 60 / 100	40 / 60 / 100	50 / 100
Water connections						
Type of connections			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded
Inlet/outlet diameter		Inch	1 ¼	2	2	2 ½
Buffer tank (option)						
Volume		l	200	300	300	300

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

3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION

(EU) No 813/2013. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) Tank is external to the unit chassis. 7) Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC).

*w/o: without, w: with.

Accessories and options

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

Accessories and options

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

Accessories supplied loose

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

Accessories supplied loose

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





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

Air cooled heat pumps Inverter.

Cooling capacity: 56,7 to 91,0 kW.

Heating capacity: 61,2 to 101,9 kW.



NEW



The range at a glance

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

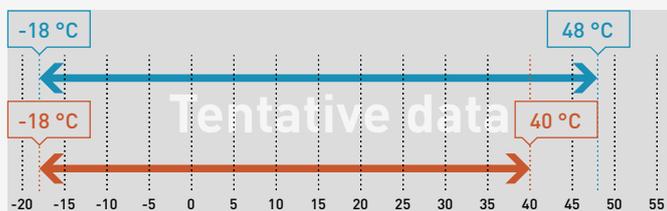
Advantages

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

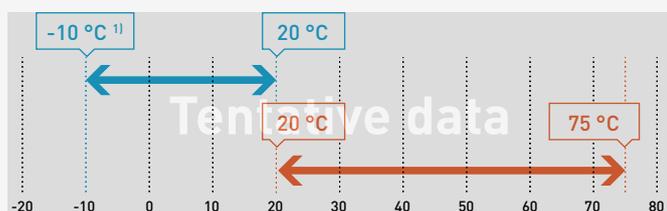
Operating limits

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

Ambient temperature.



Leaving water temperature.



1) With glycol, 5 °C without glycol.

Equipment

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



Technical performance

Power supply	Voltage	V	400	400	400
	Phase		Three phase	Three phase	Three phase
Frequency	Hz		50	50	50
	Size			60	80
ECOi-W AQUA-G EVO 60-110 H - heat pump					
			P-AQAVG0060CA	P-AQAVG0080CA	P-AQAVG0110CA
Cooling capacity ¹⁾	kW		56,7	67,4	91,0
Input power ¹⁾	kW		18,9	22,6	33,9
Total EER ¹⁾			3,00	2,98	2,68
Total EER (A 35 °C, W 23/18 °C)			2,48	3,68	3,29
SEER ²⁾			4,07	4,84	4,77
$\eta_{s,c}$ ²⁾	%		160,0	190,5	187,2
Heating capacity ³⁾	kW		61,2	80,8	101,9
Input power ³⁾	kW		17,6	22,3	29,7
Total COP ³⁾			3,48	3,62	3,43
Heating capacity (A 7 °C, W 30/35 °C)	kW		62,7	83,2	104,8
Input power (A 7 °C, W 30/35 °C)	kW		14,9	18,7	25,4
COP (A 7 °C, W 30/35 °C)			4,21	4,45	4,13
SCOP ⁴⁾			4,32	4,13	4,49
$\eta_{s,h}$ ⁴⁾	%		169,6	162,0	176,5
SCOP ⁵⁾			3,72	3,56	3,87
$\eta_{s,h}$ ⁵⁾	%		145,9	139,4	151,7
SCOP ⁶⁾			3,41	3,25	3,55
$\eta_{s,h}$ ⁶⁾	%		133,3	127,1	138,8
SCOP ⁷⁾			3,00	2,88	3,15
$\eta_{s,h}$ ⁷⁾	%		118,1	112,2	123,1
Energy efficiency class (SCOP) ⁴⁾		A+++ to D	A++	A++	A++
Sound power (STD)	dB(A)		79,0	80,0	81,0
Sound pressure at 10 m (STD) ⁸⁾	dB(A)		47,2	48,0	49,0

Physical features

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

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and following COMMISSION REGULATION (EU) 2016/2281. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013. 5) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: low temperature application. 6) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: intermediate temperature application. 7) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: high temperature application. 8) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

*w/o: without, w: with.

Accessories and options	Accessories and options	Accessories and options
Dual pressure safety valve with changeover device	Pump acoustic box (super low noise version)	Water tank (for sizes 80-110)
Epoxy or blygold treatment	Power factor corrector capacitor (for sizes 80-110)	Hydro connection pipes
Chiller protection grids	Variable pump	Energy meter
Anti-vibration rubber mount / spring dampers	Water pressure switch	Flow meter
Compressor jacket (super low noise version)	Shut off valve	BACnet MSTP or BACnet IP

Accessories supplied loose	Accessories supplied loose
Water filter	Separator refrigerant/water
Kit remote control	Manifold 3" for modular configuration standard (60 cm distance)
Kit 4G modem	Manifold 3" for modular configuration ultra-compact (5 cm distance)
1-year pre-paid Cloud access	Manifold 4" for modular configuration standard (60 cm distance)
3-year pre-paid Cloud access	Manifold 4" for modular configuration ultra-compact (5 cm distance)
Flow switch	DHW kit including a water temperature probe, a 230 V motorised 3 way valve



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)

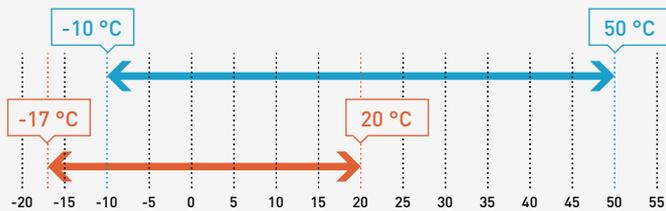
Advantages

- 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

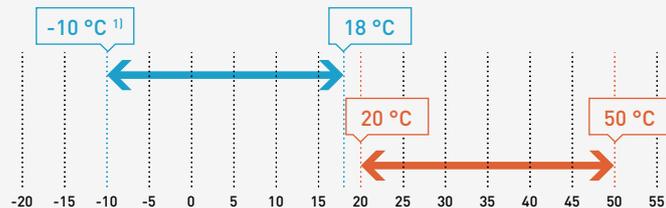
Operating limits

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)

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

Physical features

ECOi-W AQUA 20-40 C/H - chiller / heat pump		20	25	30	35	40
Dimension	Height (STD / HPF)	mm	1983 / 2025	1983 / 2025	1983 / 2025	1983 / 2025
	Width w/o / w water tank	mm	1000 / 1507	1000 / 1507	1000 / 1507	1000 / 1507
	Length	mm	1000	1000	1000	1000
Operating weight without / with water tank - 1 pump	kg	285 / 450	295 / 460	325 / 490	335 / 500	335 / 500
Water connections						
Type of connections (evaporator)			Male gas threaded BSPP ISO 228			
Inlet/outlet diameter	Inch		1 1/2	1 1/2	1 1/2	1 1/2
ECOi-W AQUA 25-40 E - condensing unit						
Dimension	HxWxL	mm	—	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000
Operating weight	kg		—	260	270	280
Refrigerant connections						
Liquid / suction line	Inch		— / —	5/8 / 1 1/8	5/8 / 1 1/8	5/8 / 1 1/8

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 8) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN 14511-2013 standard.

*w/o: without, w: with.

Accessories and options

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

Accessories and options

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

Accessories and options

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

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

Accessories supplied loose

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

Accessories supplied loose

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



ECOi-W AQUA-Z EVO 40-50 H - R32

Air cooled heat pumps Inverter.

Cooling capacity: 41 to 48 kW.

Heating capacity: 42 to 49 kW.

R32
REFRIGERANT



The range at a glance

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

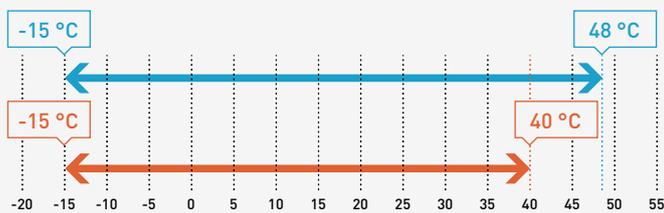
Advantages

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

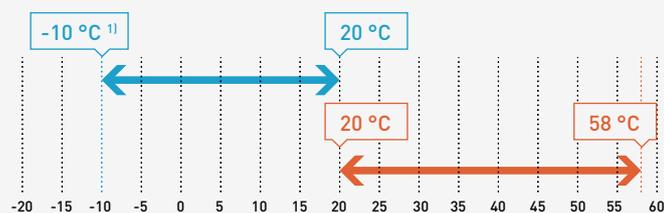
Operating limits

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

Ambient temperature.



Leaving water temperature.



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

Equipment

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

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Technical performance

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

Physical features

		40	50
ECOi-W AQUA-Z EVO 40-50 H EC fan - heat pump			
Dimension	Height	mm	1732
	Length w/o / w water tank	mm	2209 / 2913 ⁶⁾
	Width	mm	1100
Operating weight	kg	348	368
Refrigerant and compressors			
Number of refrigerant circuits		1	1
Refrigerant (R32)	kg	5	6
GWP ⁷⁾	CO ₂ eq.	675	675
Compressors	Number / type	1 / Scroll Inverter	1 / Scroll Inverter
Capacity steps	%	0-100	0-100
Water connections			
Type of connections		Male gas threaded	Male gas threaded
Inlet/outlet diameter	Inch	1 ¼	1 ¼
Buffer tank (option)			
Volume	l	200	200

1) According to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825 and following COMMISSION REGULATION (EU) 2016/2281. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14825 and following COMMISSION REGULATION (EU) No 813/2013: low temperature application. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 6) Tank is external to the unit chassis. 7) Based on the Sixth Assessment Report (AR6) adopted by the Intergovernmental Panel on Climate Change (IPCC).

*w/o: without, w: with.

Accessories and options

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

Accessories and options

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

Accessories supplied loose

P-364735 Kit remote control

Accessories supplied loose

P-3721027 Kit DHW



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



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)

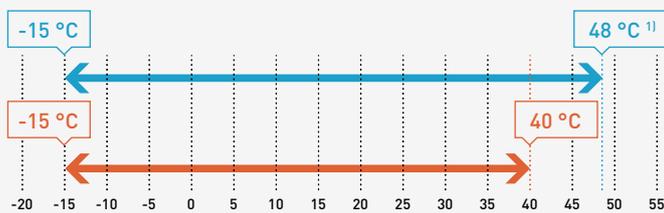
Advantages

- 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

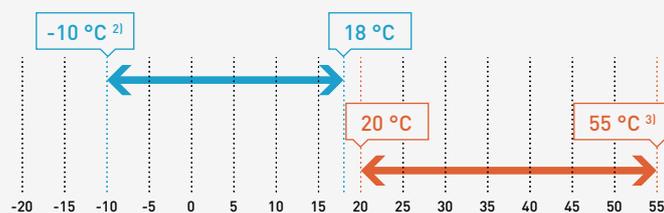
Operating limits

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.

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

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Technical performance

	Voltage	V	400	400	400	400	400	400	400	400	400	400
Power supply	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)	m ³ /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⁾	kW		51,1	57	69	77,4	82	99,3	115	125	152	170
Input power ¹⁾	kW		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)	m ³ /h		8,7	10,6	12,2	13,2	14,7	17,9	21,1	23,5	27,2	30,7
Heating capacity ⁶⁾	kW		51,7	59,7	71,8	78,5	86,5	107,6	122,3	137,5	159,1	180,1
Input power ⁶⁾	kW		17,1	19,9	22,9	25,0	28,0	33,6	38,2	42,4	49,8	56,2
COP (STD AC / STD EC) ^{*6)}			3,01/3,27	2,99/3,21	3,13/3,43	3,13/3,19	3,08/3,30	3,20/3,45	3,20/3,42	3,24/3,42	3,19/3,48	3,20/3,40
COP (STD AC / STD EC) ^{*7)}			3,81/4,00	3,80/3,92	3,92/4,21	3,91/4,16	3,92/4,16	3,99/4,19	4,10/4,26	4,04/4,12	4,07/4,31	4,02/4,16
SCOP (STD AC / STD EC) ^{*2)8)}			3,53/3,90	3,54/3,94	3,47/3,71	3,65/3,80	3,60/4,02	3,64/4,10	3,66/4,02	3,72/3,97	3,57/4,04	3,60/3,95
Energy efficiency class (STD AC / STD EC) ^{*2)7)}		A+++ to D	A+ / A+	A+ / A+	A+ / A++	A+ / A++	A+ / A++	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)	m ³ /h		9,3	10,7	12,5	13,9	15,0	18,3	21,5	23,9	27,5	31,7
Sound power (STD AC / S) *	dB(A)		83 / 81	84 / 81	81 / 78	81 / 78	84 / 82	86 / 83	87 / 84	87 / 84	89 / 86	91 / 88
Sound pressure at 10 m (STD AC / S) ^{*4)}	dB(A)		51 / 49	52 / 49	50 / 47	50 / 46	52 / 50	54 / 51	55 / 52	56 / 53	57 / 54	59 / 56

Physical features

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

1) According to EN 14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According to EN 14511-2018: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C DB. 6) According to EN 14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) According to EN 14511-2018: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 8) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013.

*STD AC: standard version with AC fan, STD EC: standard version with high-efficiency EC fan, S: super low noise version with high-efficiency EC fan + compressor sound jackets.

Accessories and options

Anti-vibration rubber mount / spring dampers *

Compressor jackets (standard for S versions)

Desuperheater

Electric heater for the water tank

Fin&Tube Al/Cu with epoxy / Blygold treatment

High efficiency EC fan

High pressure fan (HPF)

Accessories and options

Outdoor coil protection grid

Power factor corrector capacitors

Refrigerant gauges HP/LP

Shut off valves

Soft starter

Variable speed pumps

Water pressure switch *

Accessories and options

Water tank 300 L

Without neutral

Communication protocols: Modbus RTU (Std.), Modbus TCP/IP, BACnet MSTP, BACnet IP

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

Accessories supplied loose

P-375281 SRC - mini BMS controller

P-586595 Cascade controller

P-372061 Remote keyboard panel

Accessories supplied loose

P-372615 Kit 4G modem

SVC-HYD-COMM-CLD1 1-year pre-paid Cloud access

SVC-HYD-COMM-CLD3 3-year pre-paid Cloud access





ECOi-W AQUA-Z DC 150-380 C/H - R32

Air cooled chillers and heat pumps.

Cooling capacity: 151 to 377 kW (single unit). **NEW!** Up to 754 kW (twin units).

Heating capacity: 154 to 384 kW (single unit). **NEW!** Up to 768 kW (twin units).

R32
REFRIGERANT



The range at a glance

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

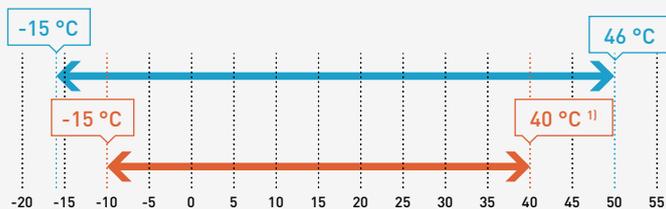
Advantages

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

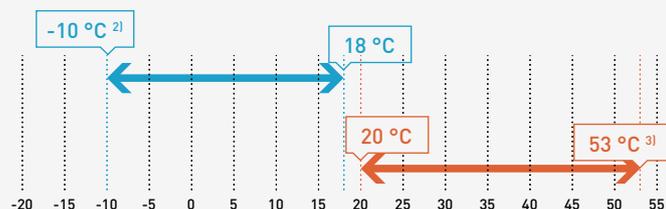
Operating limits

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.

Equipment for single units

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

NEW! Equipment for twin units

In addition to single units equipment:

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



Technical performance – Single units

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

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





Technical performance – NEW! Twin units

Power supply	Voltage	V	400	400	400	400	400	400	400	400		
	Phase		Three phase									
	Frequency	Hz	50	50	50	50	50	50	50	50		
Size			420 (210+210)	460 (230+230)	520 (260+260)	580 (290+290)	640 (320+320)	700 (350+350)	760 (380+380)			
ECOi-W AQUA-Z DC 420-760 C - chiller	P-AQADZ****CA	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC	STD AC/EC		
Cooling capacity ¹⁾	kW	424,0/428,0	458,0/458,0	520,0/520,0	614,0/614,0	652,0/650,0	692,0/694,0	754,0/754,0				
Input power ¹⁾	kW	138,2/133	150,2/145,4	180/175,6	191,8/185	208,4/200	224/216,2	253,8/245,6				
EER ¹⁾		3,07/3,22	3,05/3,15	2,89/2,96	3,20/3,32	3,13/3,25	3,09/3,21	3,0/3,1				
SEER ²⁾		4,62/5,20	4,48/4,90	4,40/4,79	4,63/5,13	4,33/5,12	4,43/4,79	4,35/4,8				
$\eta_{s,c}$ ²⁾	%	181,8/204,8	176,3/192,9	173,1/188,4	182,0/202,2	170,0/188,8	174,2/188,5	171,0/188,8				
Cooling capacity (A 35 °C, W 23/18 °C)	kW	538/542	588/590	662/679	778/780	830/824	884/888	966/968				
Input power (A 35 °C, W 23/18 °C)	kW	149/143	166/160	196/194	206/199	224/218	246/238	278/272				
Water flow	m ³ /h	72,9/73,6	78,8/78,8	89,4/89,4	105,6/105,6	112,1/111,8	119/119,4	129,7/129,7				
Sound power (STD) ⁵⁾	dB(A)	95,5/95,3	96/95,9	96,4/96,3	97,3/97,1	98,3/98,2	99,2/99,1	99,4/99,3				
Sound pressure (STD)	dB(A)	63,4/63,2	63,9/63,8	64,3/64,2	65,1/64,9	66,1/66	67/66,9	67,2/67,1				
Sound power (S) ⁵⁾	dB(A)	-/91,4	-/91,6	-/91,8	-/92,6	-/93,7	-/94,1	-/94,3				
Sound pressure (S) ⁵⁾	dB(A)	-/59,3	-/59,5	-/59,7	-/60,4	-/61,5	-/61,9	-/62,1				
Size			420 (210+210)	440 (220+220)	460 (230+230)	520 (260+260)	540 (270+270)	580 (290+290)	600 (300+300)	640 (320+320)	700 (350+350)	760 (380+380)
ECOi-W AQUA-Z DC 420-7600 H - heat pump	P-AQADZ****HA	STD AC/EC	STDEC	STD AC/EC	STD AC/EC	STDEC	STD AC/EC	STDEC	STD AC/EC	STD AC/EC	STD AC/EC	
Cooling capacity ¹⁾	kW	408,0/408,0	416	448,0/448,0	502,0/502,0	530	582,2/578,6	590	615,4/617,8	660,0/662,0	728,0/728,6	
Input power ¹⁾	kW	144,2/139,8	134,6	153,4/148,8	185,9/181,2	166,1	202,5/193,3	186,1	215/206,7	228,4/219,9	263,5/256,3	
Total EER ¹⁾		2,83/2,92	3,09	2,92/3,01	2,7/2,77	3,19	2,87/2,99	3,17	2,86/3,00	2,89/3,01	2,76/2,84	
Total EER (A 35 °C, W 23/18 °C)		3,22/3,37	3,63	3,45/3,60	3,12/3,18	3,83	3,32/3,46	3,72	3,31/3,52	3,32/3,52	3,16/3,30	
SEER ²⁾		4,39/4,82	5,03	4,34/4,71	4,21/4,55	5,01	4,34/4,83	5,01	4,33/4,89	4,40/4,79	4,34/4,65	
$\eta_{s,c}$ ²⁾	%	172,5/189,6	198	170,6/185,5	165,5/179,1	197,5	170,4/190,1	197,3	170/172,4	172,9/188,5	170,5/182,9	
Water flow	m ³ /h	70,2/70,2	71,6	77,1/77,1	86,3/86,3	91,2	100,1/99,5	101,5	105,8/106,9	113,5/113,9	125,2/125,3	
Heating capacity ³⁾	kW	402,0/402,0	438	482,0/482,0	513,8/517,0	576	571,2/569,6	624	602,6/612,2	674,0/680,0	768,0/769,0	
Input power ³⁾	kW	137,0/131,8	134,0	150,5/144,0	195,2/170,0	176,6	195,0/186,4	189,2	204,4/200,2	222,0/214,0	256,0/244,8	
Total COP ³⁾		2,93/3,05	3,27	3,20/3,35	2,93/3,04	3,26	2,93/3,05	3,30	2,92/3,16	3,04/3,18	3,00/3,14	
Total COP (A 7 °C, W 30/35 °C)		3,43/3,59	4,01	3,86/4,04	3,56/3,68	4,00	3,47/3,61	3,86	3,45/3,86	3,69/3,82	3,54/3,66	
SCOP ⁴⁾		3,44/3,90	3,86	3,64/3,99	3,52/3,85	3,82	3,51/3,91	3,92	3,50/3,85	3,50/3,87	3,66/3,95	
$\eta_{s,h}$ ⁴⁾	%	134,7/152,8	151,3	142,5/156,4	137,9/151	149,7	137,4/153,2	153,7	137/151,2	136,9/151,9	143,4/155,1	
Water flow	m ³ /h	69,1/69,1	75,3	82,9/82,9	88,4/88,9	99,1	98,2/98	107,3	103,6/108,9	115,9/117	132,1/132,3	
Sound power (STD)	dB(A)	95,5/95,3	95,3	96/95,9	96,4/96,3	96,8	97,3/97,1	97,1	98,3/98,2	99,2/99,1	99,4/99,3	
Sound pressure (STD) ⁵⁾	dB(A)	63,4/63,2	63,2	63,9/63,8	64,3/64,2	64,7	65,1/64,9	64,9	66,1/66	67/66,9	67,2/67,1	
Sound power (S)	dB(A)	-/91,4	91,4	-/91,6	-/91,8	92,5	-/92,6	92,6	-/93,7	-/94,1	-/94,3	
Sound pressure (S) ⁵⁾	dB(A)	-/59,3	59,3	-/59,5	-/59,7	60,4	-/60,4	60,4	-/61,5	-/61,9	-/62,1	

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

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

**Physical features – Single units**

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

Physical features NEW! Twin units

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

Accessories and options

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

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

Accessories and options

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

Accessories supplied loose

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

Accessories supplied loose

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

ECOi-W AQV C/H/E - R410A

Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 83,3 to 136,6 kW.

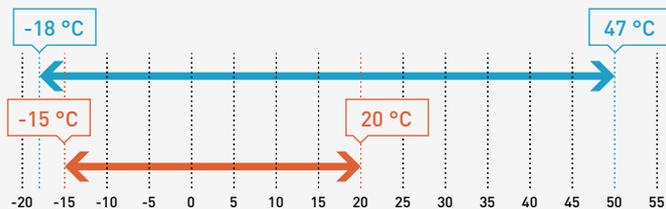
Heating capacity: 91,8 to 146,9 kW.



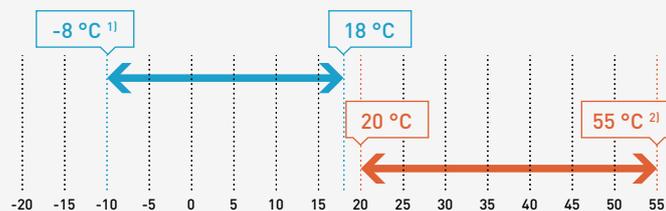
Operating limits

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

Ambient temperature (chiller and heat pump).



Leaving water temperature (chiller and heat pump).



1) With glycol, 5 °C without glycol.

2) Leaving water temperature maximum 55 °C (external air temperature minimum 6 °C) to be confirm with AC SELECT selection software.

ECOi-W AQV 85-140 C/H - chiller / heat pump

Cooling	Outdoor air temperature	S	°C	From -18 to 44
		HT	°C	From -18 to 50 (85-115)
				From -18 to 47 (125-140)
Heating	Outdoor air temperature	S	°C	From -4 to 20
		Polar Version	°C	From -15 to 20
External static pressure		STD / HPF	Pa	0 / <120

ECOi-W AQV 85-140 E - condensing unit

Evaporating limit			°C	From 1 to 15
		STD	°C	From 0 to 48
Outdoor air temperature		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

	Voltage	V	400	400	400	400	400	400
Power supply	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 to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 3) According to EN 14825. 4) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 5) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Accessories and options

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

Accessories and options

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

Accessories supplied loose

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

Accessories supplied loose

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





Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	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 to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape.



Technical performance

	Voltage	V	400	400	400	400	400	400
Power supply	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	HxWxL	mm	2185 x 1095 x 2555	2185 x 1095 x 3155	2185 x 1095 x 3155			
Operating weight (C type)	STD / HT / S	kg	1058 / 1058 / 1088	1072 / 1072 / 1102	1111 / 1111 / 1141	1143 / 1143 / 1173	1183 / 1183 / 1213	1262 / 1262 / 1292
Operating weight (H type)	STD / HT / S	kg	1090 / 1090 / 1120	1105 / 1105 / 1135	1149 / 1149 / 1179	1180 / 1180 / 1210	1227 / 1227 / 1257	1301 / 1301 / 1331
Shipping weight (E type)	STD / S	kg	971 / 1001	983 / 1013	1013 / 1043	1043 / 1073	1066 / 1096	1142 / 1172
Water connections (85-140 C/H types)								
Type of connections (evaporator)			Male gas threaded					
Inlet/outlet diameter			Inch 2 1/2					
Condenser (85-140 E type)								
Connection type			To be brazed					
Inlet diameter			Inch 5/8	Inch 5/8	Inch 5/8	Inch 5/8	Inch 7/8	Inch 7/8
Outlet diameter			Inch 1 3/8					

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



ECOi-W VL H/E - R410A

Air cooled heat pumps and condensing units.

Cooling capacity: 176,2 to 307 kW.

Heating capacity: 200 to 337,4 kW.



Operating limits

To be confirmed with AC SELECT:

<https://acselect.panasonic.eu/>

ECOi-W VL 604-904 H - heat pump			704	804	904
Cooling	Water outlet temperature	Water	°C	From 6 to 15	
		Water with glycol	°C	From 0 to 15	
		Water with glycol (Brine version)	°C	From -8 to 15	
	ΔT	K	From 3 to 8		
	Outdoor air temperature	STD	°C	-5 to 47	0 to 46
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
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			
	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⁾
Outdoor air temperature	HT	°C	-18 to 49 ¹⁾	-18 to 48 ¹⁾	-18 to 49 ²⁾
	°C				
ECOi-W VL 604-904 E - condensing unit			1004	1104	1204
Evaporating temperature	°C	1 to 15			
	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⁾
Outdoor air temperature	HT	°C	-18 to 48 ²⁾	-18 to 47 ²⁾	-18 to 47 ²⁾
	°C				

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

The range at a glance

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

Advantages

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

Equipment

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

Accessories and options

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



Technical performance

Power supply	Voltage	V	400	400	400	400	400	400
	Phase		Three phase					
	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 to EN 14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According to EN 14825. 3) According to EN 14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN 14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

Accessories supplied loose

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

Accessories supplied loose

P-365581	Flow switch
P-473465	Pressure switch
P-348619	Water filter





Technical performance

	Voltage	V	400	400	400	400	400	400
Power supply	Phase		Three phase					
	Frequency	Hz	50	50	50	50	50	50
	Size		704	804	904	1004	1104	1204
ECOi-W VL 704-1204 H HT - heat pump								
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
ECOi-W VL 704-1204 E STD / HPF - condensing unit			P-VLE0704EA	P-VLE0804EA	P-VLE0904EA	P-VLE1004EA	P-VLE1104EA	P-VLE1204EA
Cooling capacity ⁸⁾	kW		199,0	224,0	258,0	283,0	315,0	347,0
Input power ⁸⁾	kW		68,7	74,7	86,6	90,6	106	120
Sound power ⁶⁾	dB(A)		93	93	94	94	95	95
Sound pressure at 10 m ⁷⁾	dB(A)		61	61	62	62	63	63
ECOi-W VL 704-1204 E L - condensing unit			704	804	904	1004	1104	1204
Cooling capacity ⁸⁾	kW		194,0	218,0	251,0	272,5	301,0	330,0
Input power ⁸⁾	kW		69,6	76,6	87,8	92,8	109	126
Sound power ⁶⁾	dB(A)		87	87	88	88	89	89
Sound pressure at 10 m ⁷⁾	dB(A)		55	55	56	56	57	57
ECOi-W VL 704-1204 E S - condensing unit			704	804	904	1004	1104	1204
Cooling capacity ⁸⁾	kW		188,5	211,0	244,0	264,5	292,0	319,0
Input power ⁸⁾	kW		72,0	79,5	90,5	95,5	112	131
Sound power ⁶⁾	dB(A)		83	83	84	84	85	85
Sound pressure at 10 m ⁷⁾	dB(A)		51	51	52	52	53	53
ECOi-W VL 704-1204 E HT - condensing unit			704	804	904	1004	1104	1204
Cooling capacity ⁸⁾	kW		201,0	226,5	261,0	286,5	318,0	353,0
Input power ⁸⁾	kW		68,9	74,9	87,1	91,0	105	119
Sound power ⁶⁾	dB(A)		99	99	100	100	100	100
Sound pressure at 10 m ⁷⁾	dB(A)		67	67	68	68	68	68

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

**Physical features**

ECOi-W VL 704 - 1204 H/E - heat pump / condensing unit			704	804	904	1004	1104	1204
Dimension	HxWxL	mm	2300 x 1100 x 4300					
Operating weight - heat pump	STD / L	kg	1675	1820	1980	2125	2215	2225
	S	kg	1710	1855	2015	2165	2255	2265
	HT	kg	1705	1850	2020	2165	2255	2265
Shipping weight - condensing unit	STD / L	kg	1490	1615	1700	1825	1910	1920
	S	kg	1525	1650	1735	1865	1950	1960
	HT	kg	1520	1645	1740	1865	1950	1960
ECOi-W VL 704-1204 H STD / HPF - heat pump			704	804	904	1004	1104	1204
Water connections								
Type of connections (evaporator)			Male gas threaded					
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		7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8
Outlet diameter	Inch		1 5/8	1 5/8	2 1/8	2 1/8	2 1/8	2 1/8

ECOi-W AQUA EVO 400-800 C - R410A

Air cooled chillers.

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



Operating limits

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

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

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

The range at a glance

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

Advantages

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

Equipment

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

AC SELECT.

Smart and user-friendly selection tool.

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





Technical performance

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

Physical features

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

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

Accessories and options

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

Accessories 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 and options

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

Accessories supplied loose

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



ECOi-W SW-N EVO 380-1260 C - R513A

Air cooled chillers.

Cooling capacity: 366 to 1240,5 kW.



Operating limits

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

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

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 supplied loose

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

The range at a glance

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

Advantages

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

Equipment

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

Accessories and options

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-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

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

Physical features

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

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN 14511-2013 standard. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281.

3) According to EN 14825. 4) This value can change for BC version or other special applications. 5) Sound levels are at fully loaded conditions. Sound power values refer to ISO standard 3744, 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.



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.

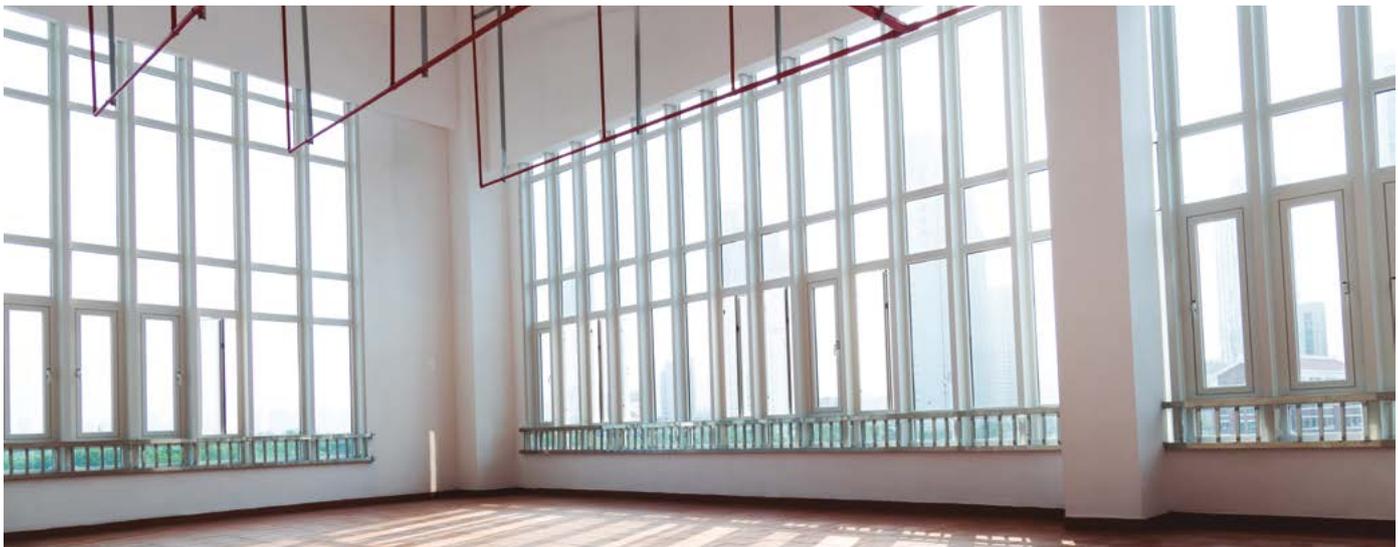
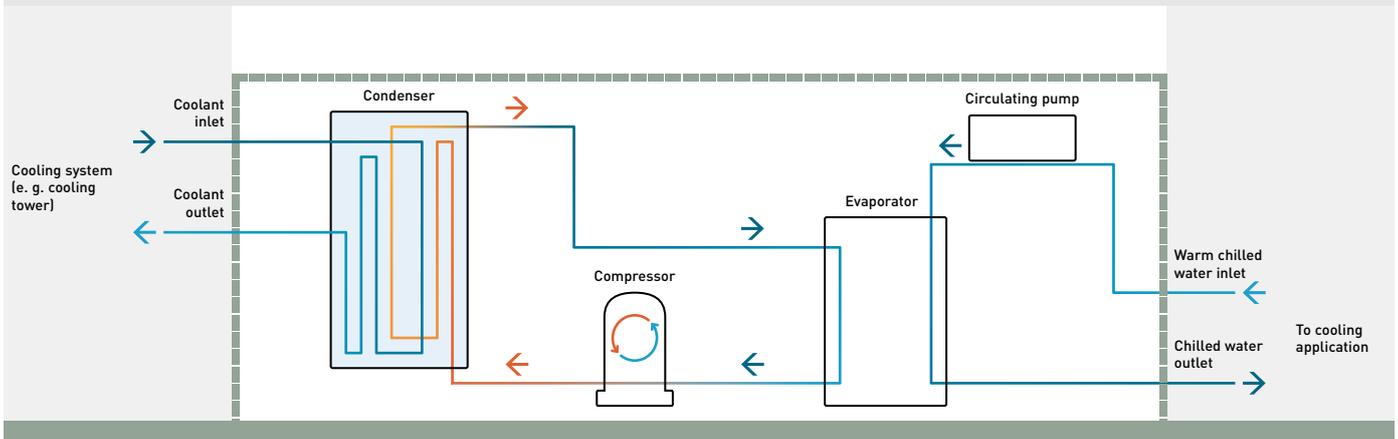


Water cooled chillers ECOi-W use water as the cooling medium to extract heat from the cooling circuit by cooling and condensing the refrigerant.

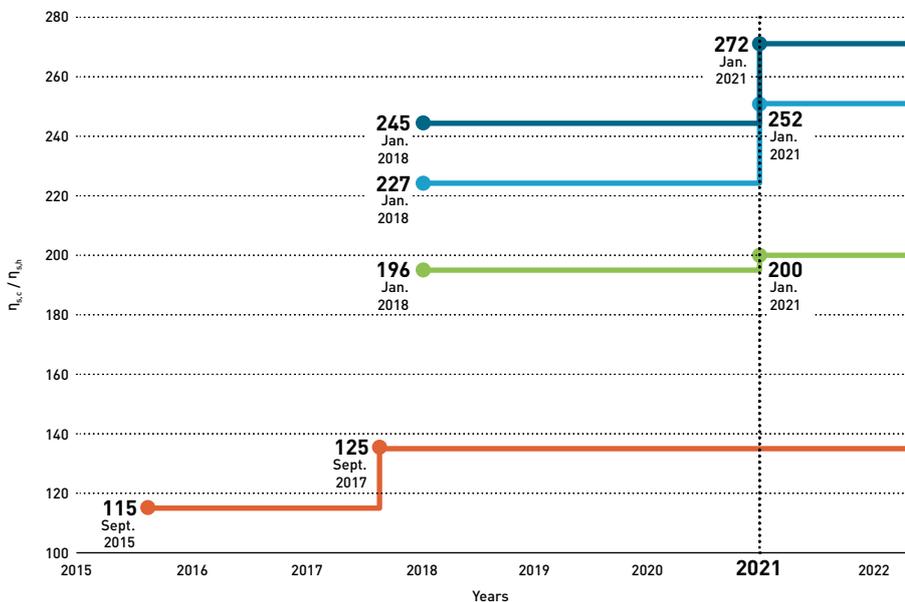
Advantages:

- 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 η_{cc} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.
- >400 kW and ≤1500 kW. Minimum η_{cc} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.
- >1500 kW. Minimum η_{cc} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

Water to water heat pumps ²⁾

- ≤400 kW. Minimum η_{sh} to be Ecodesign compliant. COMMISSION REGULATION (EU) No 813/2013.
- >400 kW and ≤1500 kW. Minimum η_{sh} to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.
- >1500 kW. Minimum η_{sh} 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 [T_{design} -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 LxHxW (mm)	
ECOi-W WQ C	20	21,2	5,58	65	821 x 1350 x 455	
	25	26,2	5,60	67	821 x 1350 x 455	
	30	31,1	5,45	67	821 x 1350 x 455	
	35	34,8	5,50	68	821 x 1350 x 455	
	40	39,2	5,35	68	821 x 1350 x 455	
	45	46,6	5,83	70	821 x 1350 x 455	
	P. 512	50	50,9	6,13	70	1210 x 1500 x 850
		60	61,1	6,38	70	1210 x 1500 x 850
		75	77,3	5,95	72	1210 x 1500 x 850
		90	91,1	6,70	73	1210 x 1500 x 850
120		118,4	5,90	78	1210 x 1500 x 850	
150		147,1	6,13	81	1210 x 1500 x 850	
170		170	6,08	81	1210 x 1500 x 850	
190		192,7	6,20	81	1210 x 1500 x 850	
P. 514		524	154,3	5,55	81	2250 x 1845 x 850
		604	181,8	6,28	82	2250 x 1845 x 850
	704	208,9	6,10	85	2250 x 1845 x 850	
	804	232,6	5,75	87	2250 x 1845 x 850	
	904	265,8	6,10	89	2250 x 1845 x 850	
	1004	295,6	6,10	90	2250 x 1845 x 850	
	1104	338	6,20	90	2250 x 1845 x 850	
	1204	379,2	6,25	90	2250 x 1845 x 850	
	1404	421,1	6,43	92	2250 x 1845 x 850	
	1604	459,8	6,47	94	2250 x 1845 x 850	
ECOi-W WSW-N EVO C	440	418,6	6,38	95	4250 x 1650 x 1350	
	490	471,6	6,38	95	4250 x 1650 x 1350	
	570	539,3	6,52	95	4210 x 1650 x 1350	
	630	601,9	6,42	95	4210 x 1650 x 1350	
	700	664,4	6,38	95	4180 x 1650 x 1350	
	770	734,6	6,38	95	4180 x 1650 x 1350	
	P. 516	860	825,0	6,41	98	4510 x 1710 x 1520
		920	874,1	6,41	98	4510 x 1710 x 1520
		990	936,6	6,41	98	4600 x 1710 x 1520
		1070	1019,1	6,42	98	4650 x 1710 x 1520
1130		1071,8	6,53	98	4650 x 1710 x 1520	
1220		1159,3	6,51	98	4650 x 1710 x 1520	
1280		1226,1	6,44	98	4650 x 1710 x 1520	
1400		1334,6	6,45	98	5350 x 1710 x 1520	
1550		1457,9	6,42	98	5350 x 1710 x 1520	



Quick selection guide - Water cooled heat pumps

Page	Size	Cooling and heating capacity (kW)	SEER / SCOP	Sound power (dB(A))	Dimension LxHxW (mm)	
ECOi-W WQ H	20		5,13 / 5,17	65	821 x 1350 x 455	
	25		5,00 / 5,45	67	821 x 1350 x 455	
	30		4,88 / 5,33	67	821 x 1350 x 455	
	35		5,10 / 5,05	68	821 x 1350 x 455	
	40		5,00 / 4,83	68	821 x 1350 x 455	
	45		5,48 / 5,28	70	821 x 1350 x 455	
	50		4,48 / 5,70	70	1210 x 1500 x 850	
	60		4,83 / 5,88	70	1210 x 1500 x 850	
	75		4,70 / 5,70	72	1210 x 1500 x 850	
	90		4,88 / 5,78	73	1210 x 1500 x 850	
P. 512	120		4,93 / 5,75	78	1210 x 1500 x 850	
	150		4,98 / 5,63	81	1210 x 1500 x 850	
	170		5,65 / 5,95	81	1210 x 1500 x 850	
	190		5,10 / 5,63	81	1210 x 1500 x 850	
	524		4,65 / 5,40	81	2250 x 1845 x 850	
	604		4,93 / 5,20	82	2250 x 1845 x 850	
	704		4,93 / 5,38	85	2250 x 1845 x 850	
	804		4,68 / 5,35	87	2250 x 1845 x 850	
	904		5,15 / 5,73	89	2250 x 1845 x 850	
	1004		5,10 / 5,85	90	2250 x 1845 x 850	
P. 514	1104		5,28 / 5,83	90	2250 x 1845 x 850	
	1204		5,30 / 5,85	90	2250 x 1845 x 850	
	1404		6,43 / —	92	2250 x 1845 x 850	
	1604		6,47 / —	94	2250 x 1845 x 850	
	ECOi-W WSW-N EVO H	440		6,53 / 4,46	95	4590 x 1650 x 1450
		490		6,38 / 4,52	95	4590 x 1650 x 1450
		570		6,40 / 4,4	95	4630 x 1650 x 1450
		630		6,38 / 4,31	95	4630 x 1650 x 1450
		700		6,45 / 4,47	95	4320 x 1650 x 1450
		770		6,60 / 4,37	95	4560 x 1650 x 1450
860			6,40 / 4,39	98	5110 x 1680 x 1520	
920			6,50 / 4,44	98	5110 x 1680 x 1520	
990			6,40 / 4,49	98	5100 x 1680 x 1520	
1070			6,40 / 4,45	98	5100 x 1680 x 1520	
P. 516	1130		6,50 / 4,45	98	5000 x 1680 x 1520	
	1220		6,48 / 4,41	98	5000 x 1680 x 1520	
	1280		6,48 / 4,37	98	5000 x 1680 x 1520	
	1400		6,50 / 4,45	98	5300 x 1710 x 1580	
	1550		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 LxWxH (mm)	
ECOi-W WQ R	20	18,3	65	821 x 1350 x 455	
	25	22,7	67	821 x 1350 x 455	
	30	27,1	67	821 x 1350 x 455	
	35	30,0	68	821 x 1350 x 455	
	40	34,2	68	821 x 1350 x 455	
	45	43,1	70	821 x 1350 x 455	
	P. 512	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
		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	
P. 514		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	
	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	
	P. 516	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
		1070	886,2	98	5100 x 1680 x 1520
1130		947,7	98	5000 x 1680 x 1520	
1220		1015,0	98	5000 x 1680 x 1520	
1280		1075,9	98	5000 x 1680 x 1520	
1400		1181,4	98	5300 x 1710 x 1580	
1550		1277,8	98	5300 x 1710 x 1580	





ECOi-W WQ 20-190 C/H/R - R410A

Water cooled chillers, heat pumps and condenserless units.

Cooling capacity: 21,2 to 192,7 kW.

Heating capacity: 23,7 to 212,3 kW.



The range at a glance

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

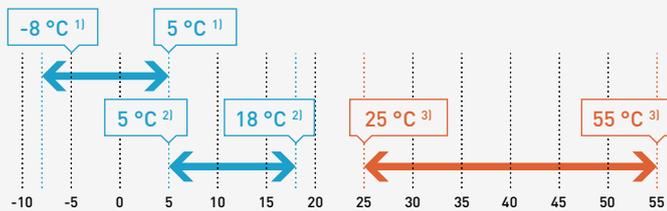
Advantages

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

Operating limits

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

Leaving water temperature.



1) With glycol + EEV.

2) Without glycol + EEV.

3) Only C/H types 20-190.

Note: maximum % glycol (ethylenic or propylenic): 40%.

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 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

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

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-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

		Voltage	V	400	400	400	400	400	400	400	400	400	400	400	400	400
Power supply	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	50,1	59,1	76,3	88,9	115,0	145,0	166,0	186,0	
Input power ¹⁾	kW	4,61	5,71	6,90	7,68	8,69	10,20	11,80	13,70	17,20	20,90	26,70	33,10	38,00	43,20	
EER ¹⁾		4,52	4,56	4,37	4,44	4,41	4,46	4,23	4,31	4,42	4,25	4,31	4,36	4,37	4,30	
SEER ²⁾		5,13	5,00	4,88	5,10	5,00	5,48	4,48	4,83	4,70	4,88	4,93	4,98	5,65	5,10	
$\eta_{s,c}$ ²⁾		202	197	192	201	197	216	185	192	176	190	194	196	223	201	
Heating capacity ⁶⁾	kW	23,8	29,0	33,9	38,6	43,1	51,2	58,6	65,8	87,5	103,0	134,0	167,0	193,0	215,0	
Input power ⁶⁾	kW	6,26	7,81	9,32	10,90	12,10	14,20	15,50	17,90	22,00	26,30	33,70	41,60	48,50	54,10	
COP ⁶⁾		3,80	3,72	3,64	3,54	3,57	3,61	3,79	3,67	3,97	3,93	3,97	4,01	3,97	3,98	
COP ⁷⁾		5,66	5,62	5,58	5,60	5,52	5,24	5,32	5,12	5,43	5,23	5,29	5,38	5,33	5,33	
SCOP ⁸⁾⁹⁾		5,17	5,45	5,33	5,05	4,83	5,28	5,70	5,88	5,70	5,78	5,75	5,63	5,95	5,63	
Energy efficiency class ⁸⁾⁹⁾		A+++ to D	A+++													
$\eta_{s,h}$ 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+++													
$\eta_{s,h}$ 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	1500	1500	1500	1500	1500	1500	1500	1500	1500
	Width	mm	455	455	455	455	455	850	850	850	850	850	850	850	850	850
	Length	mm	821	821	821	821	821	1210	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®														
Inlet/outlet diameter	Inch	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
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	1500	1500	1500	1500	1500	1500	1500	1500	
	Width	mm	455	455	455	455	455	850	850	850	850	850	850	850	850	
	Length	mm	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®														
Inlet/outlet diameter	Inch	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2	
Remote condenser refrigerant connections																
Connection type		To be brazed														
Inlet diameter	Inch	5/8	5/8	5/8	5/8	5/8	5/8	5/8	5/8	7/8	7/8	7/8	7/8	1 1/8	1 1/8	
Outlet diameter	Inch	5/8	7/8	7/8	7/8	7/8	7/8	7/8	7/8	1 1/8	1 1/8	1 3/8	1 5/8	1 5/8	1 5/8	

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



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)

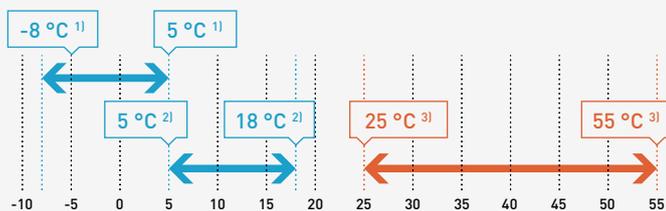
Advantages

- 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 propylenic): 40%.

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

Equipment

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

Accessories and options

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

Accessories supplied loose

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

AC SELECT.

Smart and user-friendly selection tool.

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





Technical performance

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

Physical features

ECOi-W WQ 524-1604 C/H/R - chiller / heat pump / condenserless unit			524	604	704	804	904	1004	1104	1204	1404	1604	
Dimension	Height	mm	1845 ¹²⁾ / 1880 ¹³⁾										
	Width	mm	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 885 ¹²⁾¹⁴⁾ - 1005 ¹³⁾¹⁴⁾	850 ¹²⁾ / 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

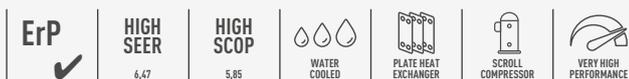
Connection type		Victaulic®									
Inlet/outlet diameter	Inch	2 1/2	2 1/2	2 1/2	2 1/2	4	4	4	4	4	4

ECOi-W WQ 524-1604 R - condenserless unit	524	604	704	804	904	1004	1104	1204	1404	1604
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Remote condenser refrigerant connections

Connection type		To be brazed									
Inlet diameter	Inch	7/8	7/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8	1 1/8
Outlet diameter	Inch	1 1/8	1 1/8	1 3/8	1 3/8	1 5/8	1 5/8	1 5/8	1 5/8	1 5/8	1 5/8

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



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

Water cooled chillers, heat pumps and condenserless units.

Cooling capacity: 410 to 1460 kW.

Heating capacity: 470 to 1650 kW.



Operating limits

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

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

Accessories supplied loose

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

The range at a glance

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

Advantages

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

Equipment

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

Accessories and options

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

Accessories supplied loose

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

AC SELECT.

Smart and user-friendly selection tool.

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

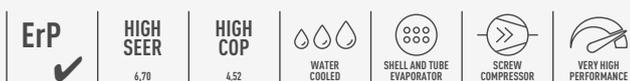




Technical performance

Power supply		Voltage	V							400						
		Phase	Three phase													
		Frequency	Hz							50						
Size			440	490	570	630	700	770								
ECOi-W WSW-N EVO 440-770 C - chiller	P-	WSWVN0440CA	WSWVN0490CA	WSWVN0570CA	WSWVN0630CA	WSWVN0700CA	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 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 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	WSWVN0490HA	WSWVN0570HA	WSWVN0630HA	WSWVN0700HA	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	5,73	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	WSWVN0490RA	WSWVN0570RA	WSWVN0630RA	WSWVN0700RA	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⁾	kW	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⁾	kW	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.





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®								
Inlet/outlet diameter		Inch	6	6	6	6	8	8			
Connection type	Condenser		Female gas threaded								
Inlet/outlet diameter		Inch	4	4	5	5	5	5			
ECOi-W WSW-N EVO 860-1550 C - chiller		860	920	990	1070	1130	1220	1280	1400	1550	
Dimension	Height	mm	1710	1710	1710	1710	1710	1710	1710	1710	
	Height S	mm	1780	1780	1780	1780	1780	1780	1780	1780	
	Width	mm	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®								
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10	
Connection type	Condenser		Victaulic®								
Inlet/outlet diameter	Condenser	Inch	4 / 4	4 / 4	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®								
Inlet/outlet diameter		Inch	6	6	6	6	8	8			
Connection type	Condenser		Victaulic®								
Inlet/outlet diameter		Inch	4	4	5	5	5	5			
ECOi-W WSW-N EVO 860-1550 H - heat pump		860	920	990	1070	1130	1220	1280	1400	1550	
Dimension	Height	mm	1680	1680	1680	1680	1680	1680	1710	1710	
	Height S	mm	1780	1780	1780	1780	1780	1780	1780	1780	
	Width	mm	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	6844	7991	8071	
	S	kg	6205	6229	6506	6932	7155	7194	7232	8378	8458
Water connections											
Connection type	Evaporator		Victaulic®								
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10	
Connection type	Condenser		Victaulic®								
Inlet/outlet diameter		Inch	4 / 4	4 / 4	4 / 4	4 / 5	5 / 5	5 / 5	5 / 5	5 / 5	

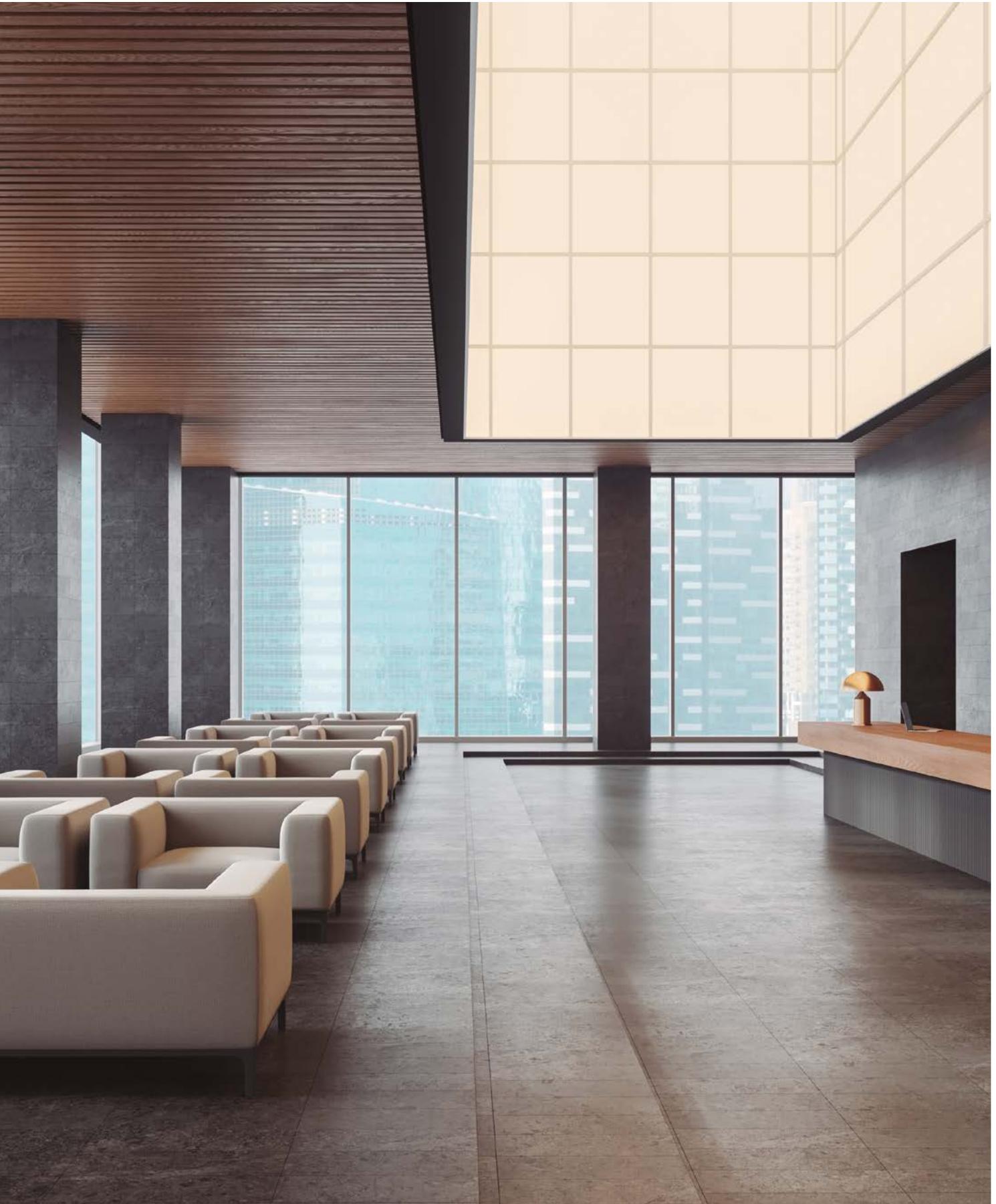
**Physical features**

ECOi-W WSW-N EVO 440-770 R - condenserless unit		440	490	570	630	700	770			
Dimension	Height	mm	1650	1650	1650	1650	1650			
	Height S	mm	1750	1750	1750	1750	1750			
	Width	mm	1350	1350	1350	1350	1350			
	Length	mm	3620	3620	4210	4210	4180			
Operating weight	STD	kg	2302	2312	2456	2476	2992			
	S	kg	2496	2506	2650	2670	3146			
Water connections (evaporator)										
Connection type			Victaulic®	Victaulic®	Victaulic®	Victaulic®	Victaulic®			
Inlet/outlet diameter		Inch	6	6	6	6	8			
Remote condenser refrigerant connections										
Connection type			To be brazed							
Inlet diameter circuit 1		Inch	1 5/8	1 5/8	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			
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
	Height S	mm	1770	1770	1770	1770	1770	1770	1770	1770
	Width	mm	1520	1520	1520	1520	1520	1520	1520	1520
	Length	mm	4400	4400	4600	4650	4650	4650	4650	5350
	Length S	mm	4650	4650	4650	4650	4650	4650	4650	5400
Operating weight	STD	kg	4804	4814	4998	5071	5131	5170	5190	5596
	S	kg	5191	5201	5385	5458	5518	5557	5577	5983
Water connections (evaporator)										
Connection type			Victaulic®							
Inlet/outlet diameter		Inch	8	8	10	10	10	10	10	10
Remote condenser refrigerant connections										
Connection type			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
Outlet diameter circuit 1		Inch	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
Outlet diameter circuit 2		Inch	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.

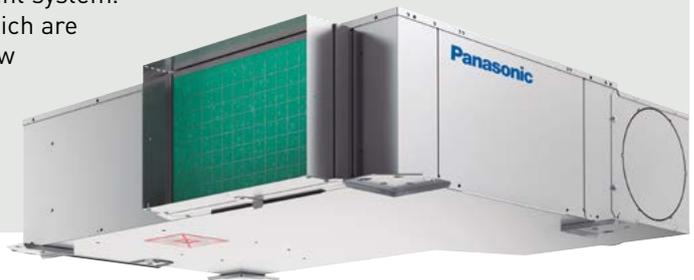


What is a water loop system with water source heat pumps?

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

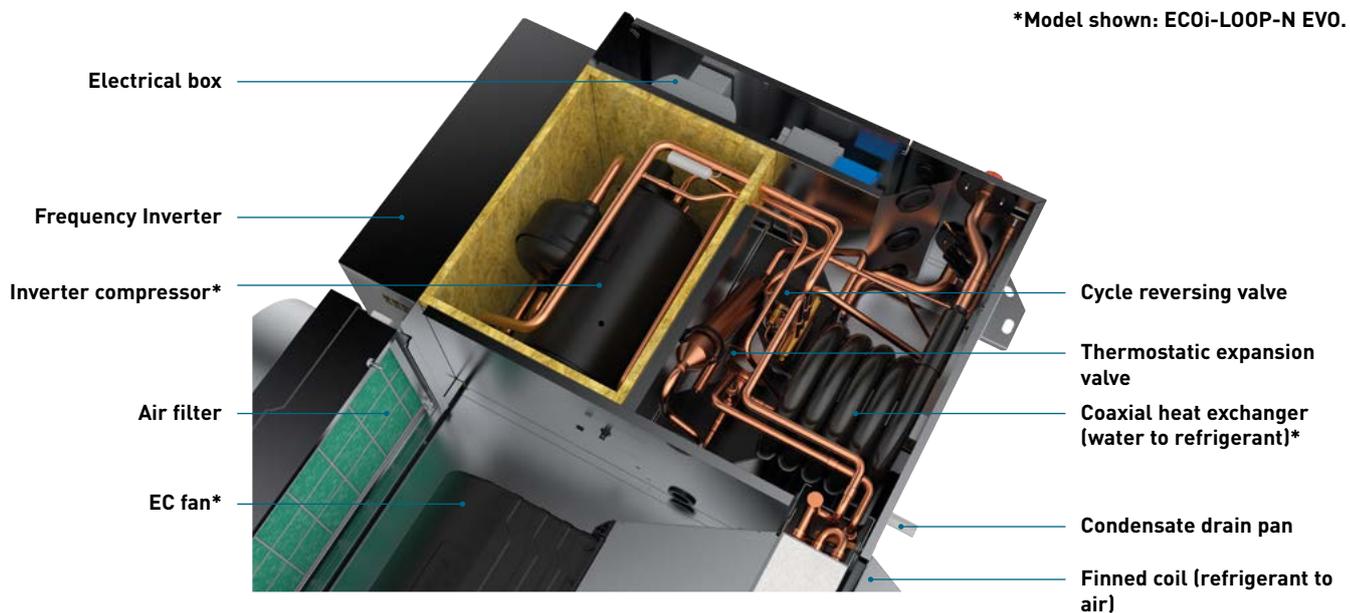
The recovery of condensation heat units in cooling can be used for units in heating and vice-versa, thus providing a balanced and highly efficient system.

These indoor units are called water source heat pumps which are equipped with a compressor and 2 heat exchangers to allow energy transfer between the water loop and air within the space.



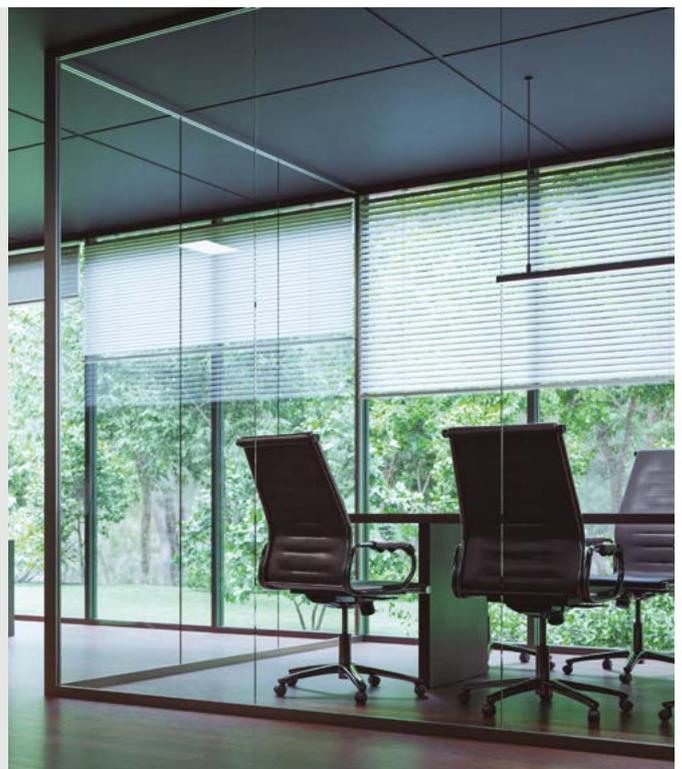
High-performance technology

*Model shown: ECOi-LOOP-N EVO.



Key features for ECOi-LOOP.

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



Quick selection guide - Water source heat pumps

Page	Size	Cooling and heating capacity (kW)	NR sound levels (at MS)	Nominal air flow ¹⁾ (m ³ /h)	Pressure (Pa)	Fan	Dimension LxWxH (mm)
P. 524	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⁾
	30	2,9 3,7	34	525	0-140	EC	900 x 530 x 250 ²⁾
P. 526	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⁾
	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⁾
P. 528		2,9 3,8	25,8 ³⁾	525	0-140	EC	900 x 636 x 250 ²⁾

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

Commercial Smart Edge.

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

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

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



COMPATIBLE WITH ENTIRE HVAC RANGE

SIMPLIFIED COMMISSIONING

OPTIMISED PLANT MANAGEMENT

ADVANCED ANALYTICS

PS P-SMART EDGE

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

PS P-SMART NEXUS

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

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

Page	Size	Cooling and heating capacity (kW)	NR sound levels (at MS)	Nominal air flow ¹⁾ (m ³ /h)	Pressure (Pa)	Fan	Dimension LxWxH (mm)		
P. 530	ECOi-LOOP HRW H · R407C		19	5,3 5,8	37	1250	>50	AC	900 x 600 x 439
	ECOi-LOOP HRWE H · R407C		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		
	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			
P. 532	ECOi-LOOP FS H · R407C		12	2,7 3,2	40	510	0	AC/EC	1138 x 251 x 821 ²⁾
P. 534	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⁾			

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



ECOi-LOOP 15-30 C/H - R410A

Water source heat pumps cooling only and reversible.

Cooling capacity: 1,5 to 2,9 kW.

Heating capacity: 1,9 to 3,7 kW.



Optional controller.
RCS remote control.



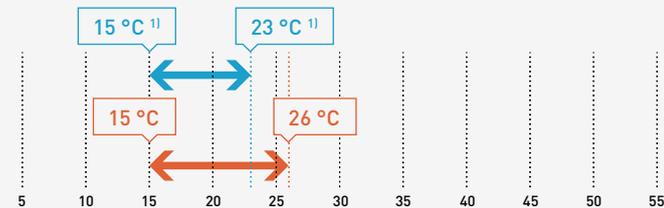
Optional controller.
SRC - mini BMS controller.

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

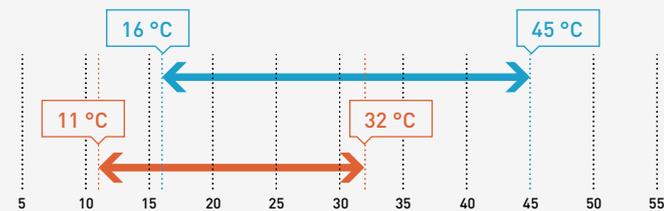


Operating limits

Air inlet temperature.



Water inlet temperature.



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

The range at a glance

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

Advantages

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

Equipment

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

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Technical performance

ECOi-LOOP 15-30 C - cooling only		P-LPE015CA	P-LPE020CA	P-LPE030CA
ECOi-LOOP 15-30 H - reversible		P-LPE015HA	P-LPE020HA	P-LPE030HA
Total cooling capacity ¹⁾	W	1507	2151	2902
Sensible cooling capacity ¹⁾	W	1371	1733	2355
EER		4,51	5,05	4,25
Heating capacity ²⁾	W	1934	2510	3680
COP		5,49	5,70	4,97
Ventilation				
Number of fans			1	
Nominal air flow	m ³ /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
	Phase		Single phase	Single phase
	Frequency	Hz	50 ±10%	50 ±10%
Input power ³⁾	Cooling	W	365	471
	Heating	W	389	491
Electric heating coil ⁴⁾	Number / capacity	- / W	1 / 600+600	1 / 800+800
	Input power	W	1200	1600
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
Sound power - discharge	Lo / Med / Hi	dB(A)	45,6 / 49,1 / 53	49,1 / 53,6 / 58,3
Sound pressure ⁵⁾	Lo / Med / Hi	dB(A)	27,1 / 30 / 33,5	30 / 34,1 / 38,4
NR ⁵⁾	Lo / Med / Hi		22,4 / 25,7 / 29,4	25,8 / 30,1 / 34,4
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
Sound power - discharge	Lo / Med / Hi	dB(A)	32,2 / 35,2 / 38,5	34,7 / 38,5 / 42,5
Sound pressure ⁵⁾	Lo / Med / Hi	dB(A)	23,2 / 25 / 27,3	24,8 / 27,7 / 31
NR ⁵⁾	Lo / Med / Hi		18,8 / 20,4 / 22,7	20,1 / 23 / 26,4
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 supplied loose

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

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-372061 Kit remote keyboard panel





ECOi-LOOP-N 70-135 H · R513A

Water source heat pumps reversible.

Cooling capacity: 7,0 to 13,3 kW.

Heating capacity: 8,1 to 14,6 kW.



Optional controller.
RCS remote control.



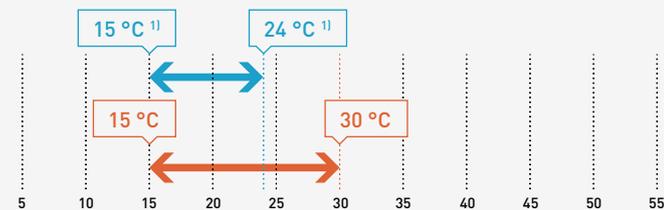
Optional controller.
SRC - mini BMS controller.

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

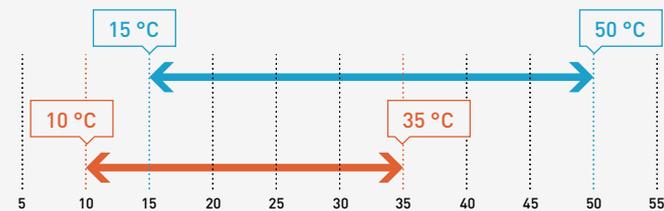


Operating limits

Air inlet temperature.



Water inlet temperature.



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

The range at a glance

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

Advantages

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

Equipment

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

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Technical performance

ECOi-LOOP-N 70-135 H - reversible		P-LPN070HA	P-LPN085HA	P-LPN100HA	P-LPN110HA	P-LPN120HA	P-LPN135HA	
Total cooling capacity ¹⁾	W	7011	8407	10290	11183	12105	13301	
Sensible cooling capacity ¹⁾	W	5960	7146	8541	9282	10047	11040	
Total absorbed power ²⁾	W	1776	2275	2743	3234	3161	3784	
EER Compressor		4,53	4,21	4,36	4,0	4,46	4,1	
EER according to EN 14511		3,95	3,7	3,75	3,46	3,83	3,52	
Total heating capacity ³⁾	W	8069	9808	11307	12514	13834	14639	
Total absorbed power ²⁾	W	1761	2256	2590	3073	3081	3467	
COP Compressor		5,27	4,96	5,12	4,75	5,25	5,0	
COP according to EN 14511		4,58	4,35	4,37	4,07	4,49	4,22	
Ventilation								
EC voltage	V	3,80	5,50	7,80	8,80	7,60	8,60	
Air flow	Min (LS)	m ³ /h	1123	1407	1837	2001	2157	2390
	Med (MS)	m ³ /h	1425	1786	2331	2539	2730	3034
	Max (nominal) (HS)	m ³ /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	
	Phase		Three phase					
	Frequency	Hz	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





ECOi-LOOP-N EVO C/H - R513A

Water source heat pumps cooling only and reversible.

Cooling capacity: 1,7 to 2,9 kW.

Heating capacity: 2,0 to 3,8 kW.



Optional controller.
RCS remote control.



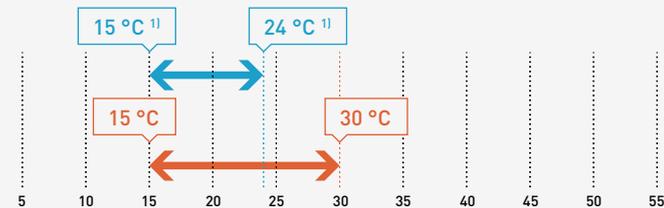
Optional controller.
SRC - mini BMS controller.

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

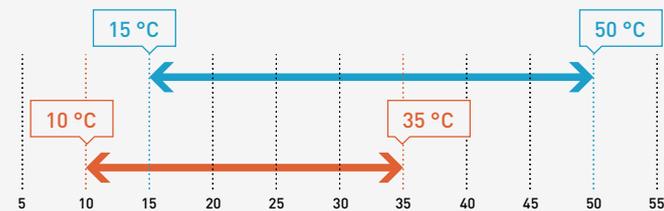


Operating limits

Air inlet temperature.



Water inlet temperature.



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

The range at a glance

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

Advantages

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

Equipment

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



Technical performance

ECOi-LOOP-N EVO C - cooling only			P-LPVN030CA
ECOi-LOOP-N EVO H - reversible			P-LPVN030HA
Total cooling capacity ¹⁾	Min - Max ²⁾	W	1687 - 2948
Sensible cooling capacity ¹⁾	Min - Max ²⁾	W	1363 - 2337
EER	Min - Max ²⁾		4,25 - 3,06
Heating capacity ³⁾	Min - Max ²⁾	W	2004 - 3769
COP	Min - Max ²⁾		4,53 - 3,45
Ventilation			
Number of fans			1
Nominal air flow (at low and high speeds)	Min - Max ²⁾	m ³ /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





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

Water source heat pumps reversible.

Cooling capacity: 5,3 to 30,0 kW.

Heating capacity: 5,8 to 38,1 kW.



Optional controller.
RCS remote control.



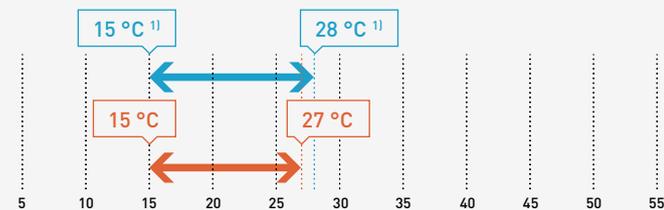
Optional controller.
SRC - mini BMS controller.

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

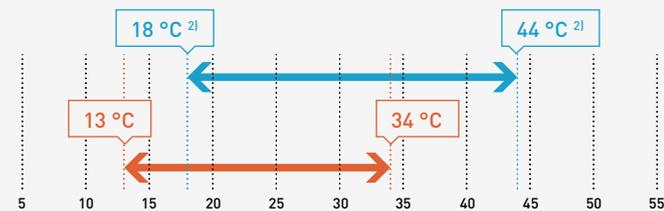


Operating limits

Air inlet temperature.



Water inlet temperature.



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

The range at a glance

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

Advantages

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

Equipment

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

*HE versions only available for reversible units.

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Technical performance

ECOi-LOOP HRW H - reversible	P-LPHM***HA***1)	019	027	—	030	—	036	—	042	—	048	060	—	072	—	096	—	120	
ECOi-LOOP HRWE H - reversible	P-LPHEM***HA***1)	—	—	027	—	030	—	036	—	042	—	060	—	072	—	096	—	—	
Total cooling capacity ²⁾	W	5278	7419	7320	8691	8710	10138	11060	11366	12500	12965	14344	16700	17174	20600	21743	24500	29951	
Sensible cooling capacity ²⁾	W	4257	5824	5600	6315	6676	7278	9070	8849	9542	10051	10988	13900	13536	17700	17986	19500	24413	
EER		4,20	3,72	4,00	3,77	4,15	3,77	4,31	3,44	4,00	4,03	3,23	4,44	3,26	4,74	3,84	4,61	4,21	
Heating capacity ³⁾	W	5826	8342	9252	9759	9960	11036	12200	14422	14450	14904	16147	18800	21500	22600	26637	28500	38109	
COP		4,40	3,69	4,21	3,50	4,30	3,38	4,28	3,84	4,36	4,25	3,33	4,20	3,15	4,23	3,54	4,46	4,25	
Ventilation																			
Number of fans		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Nominal air flow	m ³ /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	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	1
Maximum water pressure	bar	16	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 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
Condensate outlet - external (Ø)	mm	19	19	19	19	19	19	19	19	19	19	19	19	19	22	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	1	1
Compressor type		Rotary	Scroll	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															
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



ECOi-LOOP FS H - R407C

Water source heat pumps reversible.

Cooling capacity: 2,7 kW.

Heating capacity: 3,2 kW.



Optional controller.
RCS remote control.



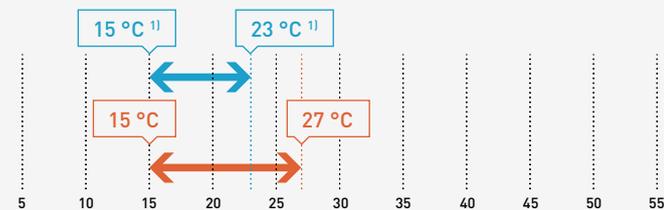
Optional controller.
SRC - mini BMS controller.

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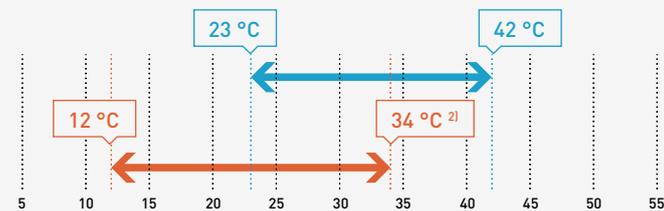


Operating limits

Air inlet temperature.



Water inlet temperature.



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

The range at a glance

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

Advantages

- Low sound levels: acoustic insulation between ventilation and compressor compartments
- Design and elaborate finish cabinet enabling harmonious integration (RAL9010)
- Low energy consumption EC fan (option)
- Highly customisable. Many air routing 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

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Technical performance

ECOi-LOOP FS H - reversible			P-LPFSM12HA
Total cooling capacity ¹⁾		W	2743
Sensible cooling capacity ¹⁾		W	2340
EER			3,25
Heating capacity ²⁾		W	3156
COP			3,49
Ventilation			
Number of fans			1
Air flow	Lo / Med / Hi	m ³ /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)	LxWxH	mm	1138 x 251 x 720 min / 750 max (821 with feet)
Low height with cabinet (VCL)	LxWxH	mm	1323 x 251 x 580 min / 610 max (683 with feet)
Standard without cabinet (VN)	LxWxH	mm	1043,5 (1086 with feet) x 229 x 667,5 min / 697,5 max (769,5 with feet)
Low height without cabinet (VNL)	LxWxH	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 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 and options

General remote alarm contact

Low noise

Many electric, hydraulic and aeraulic configurations

Thermal overload

Accessories supplied loose

P-372734 Kit front air intake cabinet

P-372642 Kit front air intake cabinet (low height)





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.



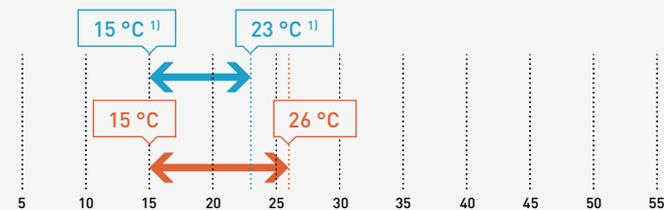
Optional controller.
SRC - mini BMS controller.

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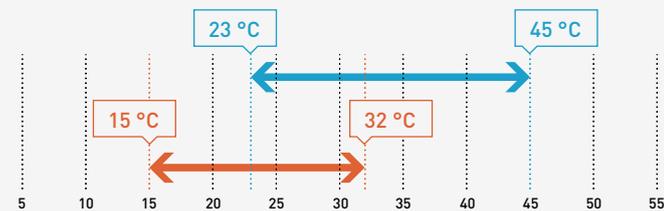


Operating limits

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 routing 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 Isofreute 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

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Technical performance

ECOi-LOOP-N FS H - reversible			P-LPFSN07HA	P-LPFSN09HA
Total cooling capacity ¹⁾	W		1690	2040
Sensible cooling capacity ¹⁾	W		1410	1600
Input power (with EC / AC fan) ²⁾	W		345 / 355	480 / 487
EER according to EN 14511 (with EC / AC fan)			4,9 / 4,75	4,25 / 4,19
Heating capacity ³⁾	W		1790	2630
Input power (with EC / AC fan) ²⁾	W		395 / 405	610 / 617
COP according to EN 14511 (with EC / AC fan)			4,6 / 4,41	4,31 / 4,26
Ventilation				
Air flow	Min	m ³ /h	250	340
	Nominal	m ³ /h	340	400
	Max	m ³ /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)



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

