

# ECOi-W





# Air cooled chillers, heat pumps and condensing units

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## Air cooled chillers, heat pumps and condensing units

Energy efficiency, high performance and comfort!

Our 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.

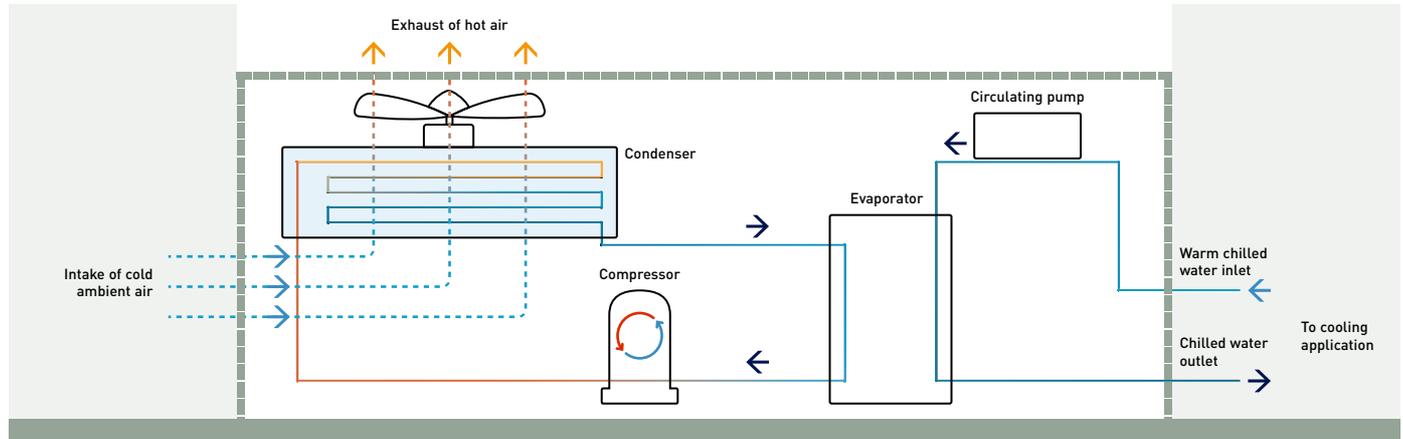


An air cooled chiller uses ambient air to cool and condense the hot refrigerant in the condenser.

**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**



R290 R32 R410A

**Scroll compressors.**

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



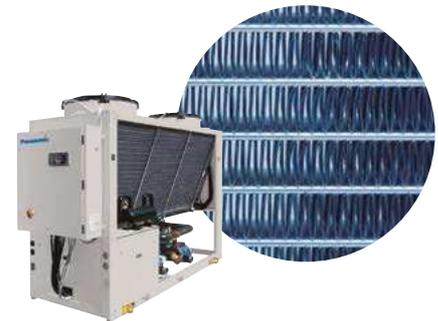
R513A

**Screw compressors.**

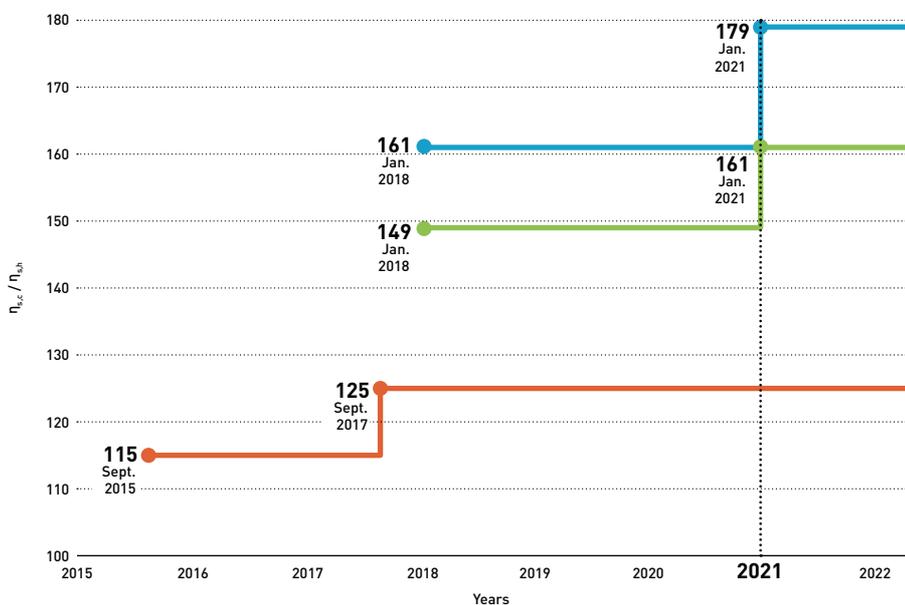
Screw compressors can be operated continuously and are therefore suitable for applications where a constant and consistent cooling load is required. Due to their high energy efficiency, our products use these compressors in combination with high-efficiency refrigerants.

**Microchannel coils**

Significant reduction on refrigerant charge and operating weight.



**Ecodesign**



**Air to water comfort cooling only <sup>1)</sup>**

≤400 kW.

Minimum η<sub>e,c</sub> to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

>400 kW.

Minimum η<sub>e,c</sub> to be Ecodesign compliant. COMMISSION REGULATION (EU) 2016/2281.

**Air to water heat pumps <sup>2)</sup>**

≤400 kW.

Minimum η<sub>e,h</sub> to be Ecodesign compliant. COMMISSION REGULATION (EU) No813/2013.

>400 kW.

Minimum η<sub>e,h</sub> 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 (T<sub>design</sub> -10 °C) as stated in COMMISSION REGULATION (EU) No 813/2013.

# ECOi-W AQUA-G BLUE R290. A revolutionary solution

## Air to water reversible heat pumps.

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



The future of efficient commercial air to water heat pumps.



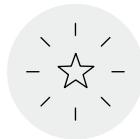
50 kW

60 kW

70 - 80 kW



Natural refrigerant R290 with GWP 3



Reliable quality



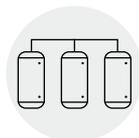
Scroll compressors

HIGH SEER  
Max. 4,4<sup>1)</sup> HIGH SCOP  
Max. 3,9<sup>2)</sup>

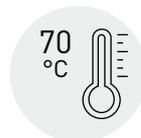
High seasonal efficiency



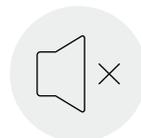
High energy efficiency class



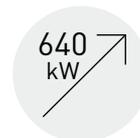
DHW management



Maximum 70 °C leaving water temperature



Quiet operation



Boost the capacity up to 640 kW

1) Size 50. According EN14825 and Following COMMISSION REGULATION (EU) 2016/2281.2) Size 70. According EN14825 and Following COMMISSION REGULATION (EU) No 813/2013. 3) (Scale A+++ to D). According EN14825 and Following COMMISSION REGULATION (EU) No 813/2013.



### Air cooled heat pumps R290.

#### Care about the environment and get greater efficiency.

ECOi-W AQUA-G BLUE is born from a perfect combination of new green technology and our existing ECOi-W product range already known for its performance and reliability.

It operates with the natural R290 refrigerant that offers greater efficiency while having almost no impact on the environment with one of the lowest **GWP (Global Warming Potential): only 3!**

Make the choice to reach incredible efficiencies, extend the operating limits, and contribute to environmental preservation.

## Quick selection guide - Air cooled chillers

Page	Size	Cooling capacity	SEER	Water flow (m³/h)	Sound power (dB(A))	Dimensions L x H x W (mm)
P. 30	<b>ECOi-W AQUA C · R410A</b>					
	20	19,2	4,78	3,3	75	1000 x 1983 x 1000
	25	24,3	4,38	4,2	75	1000 x 1983 x 1000
	30	27,1	4,43	4,7	75	1000 x 1983 x 1000
	35	36,7	4,43	6,3	76	1000 x 1983 x 1000
P. 32	40	39,0	4,48	6,7	76	1000 x 1983 x 1000
	45	45,3	4,40	7,8	80	2180 x 1986 x 1160
	55	52,0	4,53	8,9	80	2180 x 1986 x 1160
	65	66,1	4,53	11,4	80	2180 x 1986 x 1160
	75	73,1	4,68	12,6	80	2180 x 1986 x 1160
	90	90,9	4,45	15,6	83	2180 x 2286 x 1160
	105	104,0	4,50	17,9	83	2180 x 2286 x 1160
P. 34	125	123,0	4,55	21,2	83	2180 x 2286 x 1160
	140	132,0	4,40	22,7	85	2856 x 2295 x 2210
	150	146,0	4,45	25,1	85	2856 x 2295 x 2210
	170	164,0	4,38	28,2	87	2856 x 2321 x 2210
	190	181,0	4,40	31,1	88	2856 x 2321 x 2210
	210	208,0	4,25	35,8	88	2856 x 2321 x 2210
P. 36	<b>ECOi-W AQUA-Z C · R32</b>					
	50	51,6	4,60	9,2	83	2180x x 1986 x 1160
	60	57,6	4,59	10,6	84	2180x x 1986 x 1160
	70	69,7	4,61	12,2	81	2180x x 1986 x 1160
	75	78,2	4,72	13,2	81	2180x x 1986 x 1160
	85	82,8	4,45	14,7	84	2180x x 2286 x 1160
	100	100,0	4,88	17,9	86	2180x x 2286 x 1160
	115	116,0	4,59	21,1	87	2180x x 2286 x 1160
P. 38	130	126,0	4,43	23,5	87	2180x x 2286 x 1160
	150	154,0	4,70	27,2	89	2180 x 2286 x 1160
	170	173,0	4,68	30,7	91	2180 x 2286 x 1160

\* Dimensions without water tank.



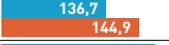
Page	Size	Cooling capacity	SEER	Water flow (m³/h)	Sound power (dB(A))	Dimensions L x H x W (mm)	
<b>ECOi-W Aqv C · R410A</b>   <b>P. 40</b>	85	83,5	4,55	14,3	84	2555 x 2185 x 1095	
	95	93,6	4,80	16,1	84	2555 x 2185 x 1095	
	105	103,0	4,78	17,6	84	2555 x 2185 x 1095	
	115	110,1	4,80	19,0	84	2555 x 2185 x 1095	
	125	121,9	4,73	21,0	88	3155 x 2185 x 1095	
	140	136,6	4,53	23,5	88	3155 x 2185 x 1095	
<b>ECOi-W AQUA EVO C · R410A</b>   <b>P. 48</b>	140	144	4,45	24,8	90	4000 x 2500 x 1100	
	170	169	4,28	29,1	90	4000 x 2500 x 1100	
	230	231	4,25	39,6	92	3500 x 2500 x 2150	
	260	263	4,25	45,2	93	3500 x 2500 x 2150	
	280	284	4,23	48,8	93	3500 x 2500 x 2150	
	300	310	4,18	53,2	94	4550 x 2500 x 2150	
	330	331	4,20	56,9	95	4550 x 2500 x 2150	
	360	362	4,10	62,1	95	4550 x 2500 x 2150	
	400	398,8	4,48	68,6	92	4580 x 2500 x 2175	
	450	446,1	4,43	76,8	93	5620 x 2500 x 2175	
	490	487,7	4,50	84,0	93	6680 x 2500 x 2175	
	530	533,9	4,38	91,9	94	6680 x 2500 x 2175	
 <b>P. 52</b>	600	597,1	4,58	103	94	7760 x 2500 x 2175	
	670	667,3	4,65	115	94	7760 x 2500 x 2175	
	750	748,3	4,48	129	95	8900 x 2500 x 2175	
	800	797,9	4,50	138	95	8900 x 2500 x 2175	
	<b>ECOi-W SW-N EVO C · R513A</b>   <b>P. 56</b>	380	365,7	4,53	62,8	97	4660 x 2510 x 2192
		440	443,0	4,66	76,1	98	5712 x 2510 x 2192
		510	500,2	4,65	85,9	100	5712 x 2510 x 2192
		590	565,8	4,80	97,2	100	6764 x 2510 x 2192
		660	643,5	4,66	111	100	7816 x 2510 x 2192
		730	704,3	4,56	121	101	7816 x 2510 x 2192
810		778,1	4,62	134	101	8868 x 2510 x 2192	
900		896,9	4,56	154	102	9920 x 2510 x 2192	
980		983,5	4,60	169	102	10972 x 2510 x 2192	
1060		1047,4	4,87	180	103	12024 x 2510 x 2192	
1160	1154,0	4,86	198	103	13076 x 2510 x 2192		
1260	1240,5	4,85	213	103	13076 x 2510 x 2192		

\* Dimensions without water tank.

# Quick selection guide - Air cooled heat pumps

Page	Size	Cooling and heating capacity	SEER / SCOP	Water flow (m³/h)	Sound power (dB(A))	Dimensions L x H x W (mm)				
P. 26	20	Cooling: 21 kW	3,30 / 3,75	3,64	74	1477 x 1615 x 539				
		Heating: 20,4 kW								
P. 28	30	Cooling: 28 kW	3,98 / 3,68	5,92	75	1477 x 1615 x 539				
		Heating: 26,1 kW								
P. 28	50	Cooling: 48,2	4,40 / 3,70	8,46	83	2215 x 1730 x 1032				
		Heating: 49,2								
		Cooling: 56,1					4,30 / 3,70	10,51	84	2180 x 2011 x 1160
		Heating: 61,1								
P. 28	70	Cooling: 64,9	4,30 / 3,90	12,64	85	2180 x 2030 x 1160				
		Heating: 73,5								
P. 28	80	Cooling: 74,1	4,20 / 3,80	14,38	85	2180 x 2030 x 1160				
		Heating: 83,6								
P. 30	20	Cooling: 18,7	4,68 / 3,50	3,4	75	1000 x 1983 x 1000				
		Heating: 19,5								
		Cooling: 23,7					4,31 / 3,38	4,7	75	1000 x 1983 x 1000
		Heating: 26,9								
		P. 30					30	Cooling: 26,4	4,28 / 3,45	5,2
Heating: 29,7										
P. 32	35	Cooling: 35,8	4,25 / 3,50	6,5	76	1000 x 1983 x 1000				
		Heating: 37,3								
	P. 32	40	Cooling: 38,1	4,33 / 3,50	7,2	76	1000 x 1983 x 1000			
			Heating: 41,6							
	P. 32	45	Cooling: 44,3	4,20 / 3,38	8,4	80	2180 x 1986 x 1160			
			Heating: 48,5							
	P. 32	55	Cooling: 50,9	4,41 / 3,38	10,2	80	2180 x 1986 x 1160			
			Heating: 58,2							
	P. 32	65	Cooling: 64,1	4,51 / 3,55	11,7	80	2180 x 1986 x 1160			
			Heating: 67,3							
P. 32	75	Cooling: 71,0	4,63 / 3,53	13,2	80	2180 x 1986 x 1160				
		Heating: 76,0								
P. 32	90	Cooling: 88,7	4,40 / 3,40	15,3	83	2180 x 2286 x 1160				
		Heating: 88,2								
P. 34	105	Cooling: 101,0	4,44 / 3,43	17,6	83	2180 x 2286 x 1160				
		Heating: 101,0								
P. 34	125	Cooling: 119,0	4,49 / 3,43	20,7	83	2180 x 2286 x 1160				
		Heating: 119,0								
P. 34	140	Cooling: 128	4,39 / 3,30	24,8	85	2856 x 2295 x 2210				
		Heating: 144								
P. 34	150	Cooling: 142	4,36 / 3,33	26,5	85	2856 x 2295 x 2210				
		Heating: 154								
P. 34	170	Cooling: 164	4,31 / 3,30	29,6	87	2856 x 2321 x 2210				
		Heating: 170								
P. 34	190	Cooling: 178	4,23 / 3,28	33,9	88	2856 x 2321 x 2210				
		Heating: 195								
P. 34	210	Cooling: 208	4,28 / 3,23	37,9	88	2856 x 2321 x 2210				
		Heating: 218								
P. 36	50	Cooling: 51,1	4,46 / 3,63	9,3	83	2180 x 1986 x 1160				
		Heating: 56,0								
P. 36	60	Cooling: 57,0	4,42 / 3,51	10,7	84	2180 x 1986 x 1160				
		Heating: 63,0								
P. 36	70	Cooling: 69,0	4,51 / 3,49	12,5	81	2180 x 1986 x 1160				
		Heating: 75,1								
P. 36	75	Cooling: 77,4	4,61 / 3,56	13,9	81	2180 x 1986 x 1160				
		Heating: 83,6								
P. 36	85	Cooling: 82,0	4,33 / 3,76	15,0	84	2180 x 2286 x 1160				
		Heating: 90,7								
P. 36	100	Cooling: 99,3	4,77 / 3,56	18,3	86	2180 x 2286 x 1160				
		Heating: 110,0								
P. 36	115	Cooling: 115,0	4,44 / 3,77	21,5	87	2180 x 2286 x 1160				
		Heating: 125,0								
P. 36	130	Cooling: 125,0	4,23 / 3,81	23,9	87	2180 x 2286 x 1160				
		Heating: 139,0								

\* Dimensions without water tank.

Page	Size	Cooling and heating capacity	SEER / SCOP	Water flow (m³/h)	Sound power (dB(A))	Dimensions L x H x W (mm)	
<b>ECOi-W AQUA-Z H · R32</b>   <b>P. 38</b>	150		4,59 / 3,78	27,5	89	3789 x 2285 x 1151	
	170		4,49 / 3,70	31,7	91	3789 x 2285 x 1151	
<b>ECOi-W AQV H · R410A</b>  <b>P. 40</b>	85		4,25 / 3,61	17,2	84	2555 x 2185 x 1095	
	95		4,68 / 3,64	17,8	84	2555 x 2185 x 1095	
	105		4,63 / 3,78	19,3	84	2555 x 2185 x 1095	
	115		4,17 / 3,77	20,6	84	2555 x 2185 x 1095	
	125		4,33 / 3,47	23,3	88	3155 x 2185 x 1095	
	140		4,28 / 3,54	25,5	88	3155 x 2185 x 1095	
<b>ECOi-W VL H · R410A</b>  <b>P. 44</b>	704		3,63 / 3,41	34,7	93	4300 x 2300 x 1100	
	804		3,55 / 3,42	38,6	93	4300 x 2300 x 1100	
	904		3,35 / 3,28	43,6	94	4300 x 2300 x 1100	
	1004		3,50 / 3,39	47,0	94	4300 x 2300 x 1100	
	1104		3,53 / 3,30	52,3	95	4300 x 2300 x 1100	
	1204		3,43 / 3,19	58,4	95	4300 x 2300 x 1100	
<b>ECOi-W AQUA EVO H · R410A</b>  <b>P. 48</b>	140		3,80 / 3,39	25,1	90	4000 x 2500 x 1100	
	170		3,95 / 3,42	28,7	90	4000 x 2500 x 1100	
	230		4,13 / 3,46	39,7	92	3500 x 2500 x 2150	
	260		4,05 / 3,48	45,5	93	3500 x 2500 x 2150	
	280		4,10 / 3,44	48,5	93	3500 x 2500 x 2150	
	300		3,83 / 3,51	53,0	94	4550 x 2500 x 2150	
	330		3,80 / 3,44	56,8	95	4550 x 2500 x 2150	
	360		3,93 / 3,48	62,7	95	4550 x 2500 x 2150	
	<b>P. 52</b> 	400		4,65 / 3,62	70,1	92	5620 x 2500 x 2175
		450		4,53 / 3,62	78,3	93	5620 x 2500 x 2175
490			4,70 / 3,53	85,5	93	6680 x 2500 x 2175	
530			4,55 / 3,53	92,3	94	6680 x 2500 x 2175	
580			4,33 / —	102,0	94	7760 x 2500 x 2175	
620			4,35 / —	109,0	95	8800 x 2500 x 2175	
670			4,30 / —	118,0	95	8800 x 2500 x 2175	
750			4,30 / —	131,0	95	9950 x 2500 x 2175	
800		4,35 / —	140,0	95	9950 x 2500 x 2175		

\* Dimensions without water tank.

# Quick selection guide - Air cooled condensing units

Page	Size	Cooling capacity	EER	Sound power [dB(A)]	Dimensions L x H x W (mm)
<b>P. 30</b> 	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
<b>P. 32</b> 	45	57,4	2,94	80	2180 x 1986 x 1160
	55	64,5	2,89	80	2180 x 1986 x 1160
	65	72,4	2,97	80	2180 x 1986 x 1160
	75	79,3	2,91	80	2180 x 1986 x 1160
	90	104,0	2,65	83	2180 x 2286 x 1160
	105	120,0	2,79	83	2180 x 2286 x 1160
	125	136,0	2,66	83	2180 x 2286 x 1160
	<b>ECOi-W AQV E · R410A</b>	85	92,1	3,36	84
<b>P. 40</b> 	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

\* Dimensions without water tank.



Page	Size	Cooling capacity	EER	Sound power (dB(A))	Dimensions L x H x W (mm)
<b>P. 44</b>	<b>ECOi-W VL E · R410A</b>				
	704	199	2,90	93	4300 x 2300 x 1100
	804	224	3,00	93	4300 x 2300 x 1100
	904	258	2,98	94	4300 x 2300 x 1100
	1004	283	3,12	94	4300 x 2300 x 1100
	1104	315	2,98	95	4300 x 2300 x 1100
	1204	347	2,90	95	4300 x 2300 x 1100
<b>P. 48</b>	<b>ECOi-W AQUA EVO E · R410A</b>				
	140	165	3,61	90	4000 x 2500 x 1100
	170	193,4	3,48	90	4000 x 2500 x 1100
	230	250,3	3,36	92	3500 x 2500 x 2150
	260	288,4	3,42	93	3500 x 2500 x 2150
	280	312,7	3,42	93	3500 x 2500 x 2150
	300	337,2	3,39	94	4550 x 2500 x 2150
	330	361,2	3,45	95	4550 x 2500 x 2150
	360	394,5	3,37	95	4550 x 2500 x 2150



\* Dimensions without water tank.



# ECOi-W AQUA EVO H · R410A

Air cooled heat pumps Inverter.

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

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



## The range at a glance

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

## Advantages

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

## Equipment

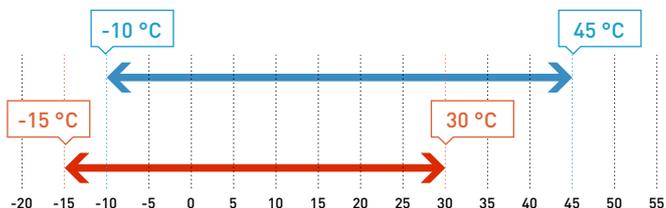
- Inverter driven compressor
- Plate evaporator (AISI 316)
- A single inverter driven 3-phase scroll compressor equipped with variable frequency brushless motor (20-120 Hz)
- 1 refrigerant circuit
- Bi-flow electronic expansion valve
- Multistage centrifugal pump as standard
- Bluefin coil
- Operating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

## Operating limits

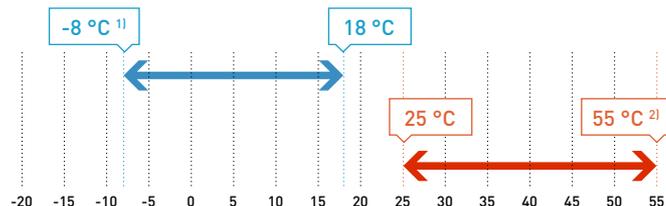
To be confirmed with AC SELECT:

<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 the new air conditioning selection program: <https://acselect.panasonic.eu/>





## Technical performance

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

## Physical features

ECOi-W AQUA EVO H			20	30
Dimension	HxWxL	mm	1615 x 539 x 1477	1615 x 539 x 1477
Operating weight		kg	260	275
<b>Water connections</b>				
Type of water connections (evaporator)			Male gas threaded	Male gas threaded
Water inlet/outlet diameter		Inch	1 ¼	1 ¼

1) According EN14511-2013: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C. 2) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) According to EN14825 standard. 4) According EN14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According EN14511-2013: 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 EN14825 standard - low temperature application [35 °C]. 8) According to EN14825 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  
Coils treatments

### Accessories and options

In/out valve kit  
Remote ON / OFF  
Water flow switch





# 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

## Advantages

- A super eco-friendly unit - employs natural refrigerant R290 with GWP 3
- 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

## Equipment

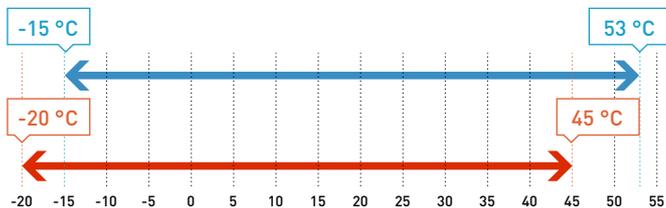
- Fan speed control. All units are equipped with EC fan technology
- Variable speed pump - option. A variable speed pump can be added to the unit for even greater energy savings
- Controller. This new high standard control system provides excellent pressure control, as well as global and optimised unit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

## Operating limits

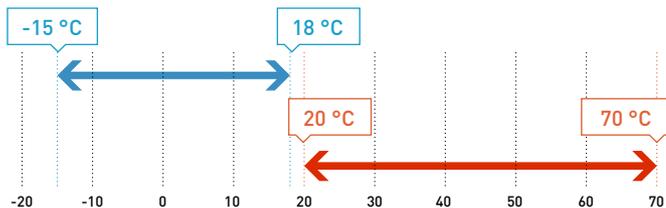
To be confirmed with AC SELECT:

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

Ambient temperature.



Leaving water temperature.



## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





## Technical performance

Size			50	60	70	80
Power supply	Voltage	V	400	400	400	400
	Phase		Three phase	Three phase	Three phase	Three phase
	Frequency	Hz	50	50	50	50
<b>ECOi-W AQUA-G BLUE 50-80 H EC fan - heat pump</b>			<b>P-AQAG0050HA</b>	<b>P-AQAG0060HA</b>	<b>P-AQAG0070HA</b>	<b>P-AQAG0080HA</b>
Cooling capacity <sup>1)</sup>	kW		48,2	56,1	64,9	74,1
Input power <sup>1)</sup>	kW		15,0	19,0	21,6	25,0
EER <sup>1)</sup>			3,20	3,00	3,00	3,00
<b>SEER <sup>2)</sup></b>			<b>4,40</b>	<b>4,30</b>	<b>4,30</b>	<b>4,20</b>
$\eta_{s,c}$ <sup>2)</sup>	%		<b>171,9</b>	<b>168,9</b>	<b>169,4</b>	<b>165,4</b>
Heating capacity <sup>3)</sup>	kW		49,2	61,1	73,5	83,6
Input power <sup>3)</sup>	kW		15,6	18,6	21,7	24,9
COP <sup>3)</sup>			3,2	3,3	3,4	3,4
<b>SCOP <sup>4)</sup></b>			<b>3,70</b>	<b>3,70</b>	<b>3,90</b>	<b>3,80</b>
$\eta_{s,h}$ <sup>4)</sup>			<b>143,7</b>	<b>146,8</b>	<b>151,8</b>	<b>150,5</b>
<b>Energy efficiency class (SCOP) <sup>4)</sup></b>			<b>A+</b>	<b>A+</b>	<b>A++</b>	<b>A++</b>
<b>SCOP<sub>MT</sub> <sup>4)</sup></b>			<b>3,10</b>	<b>3,10</b>	<b>3,30</b>	<b>3,20</b>
$\eta_{s,MT}$ <sup>4)</sup>			<b>121,4</b>	<b>122,7</b>	<b>127,3</b>	<b>126,0</b>
<b>Energy efficiency class (SCOP<sub>MT</sub>) <sup>4)</sup></b>			<b>A+</b>	<b>A+</b>	<b>A++</b>	<b>A++</b>
Sound power	Standard	dB(A)	82,7	84,1	85,1	85,8
Sound pressure at 10 m <sup>5)</sup>	Standard	dB(A)	56,1	54,7	57,1	57,8

## Physical features

<b>ECOi-W AQUA-G BLUE 50-80 H EC fan - heat pump</b>			<b>50</b>	<b>60</b>	<b>70</b>	<b>80</b>	
Dimension	Height	mm	1730	2011	2030	2030	
	Length w/o / w water tank		2215 / 2215 <sup>6)</sup>	2180 / 2680	2180 / 2680	2180 / 2680	
	Width		1032	1160	1160	1160	
<b>Refrigerant and compressors</b>							
Number of refrigerant circuits			1	1	1	1	
Refrigerant (R290)			kg	4,50	4,80	5,30	6,80
GWP			CO <sub>2</sub> eq.	3 (100 years)	3 (100 years)	3 (100 years)	3 (100 years)
Compressors			Number / type	2 / Scroll	2 / Scroll	2 / Scroll	2 / Scroll
Capacity steps			%	50 / 100	40 / 60 / 100	40 / 60 / 100	50 / 100
<b>Water connections</b>							
Type of water connections			Male gas threaded	Male gas threaded	Male gas threaded	Male gas threaded	
Water inlet/outlet diameter			Inch	1 ¼	2	2	2 ½
<b>Buffer tank (option)</b>							
Volume			l	200	300	300	300

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825 and following COMMISSION REGULATION (EU) 2016/2281. 3) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According to EN14825 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. Its width must be added.

### Accessories and options

Anti-vibration rubber mount / spring dampers  
 Refrigerant gauges HP/LP  
 Shut off valves  
 Sofstarter  
 Energy meter for input power

### Accessories and options

Electrical heater for the water tank  
 Variable or fixed speed pumps  
 Water tank 200 l (size 50)  
 Water tank 300 l (sizes 60-70-80)





# 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 (cooling only), 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

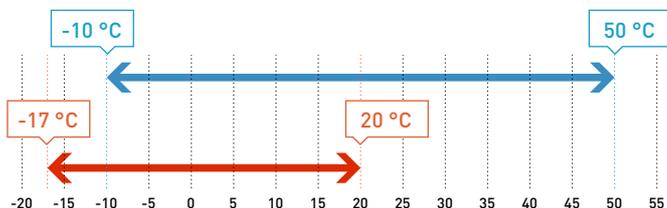
- Very high performance
- Low noise units
- Wide operating limits
- Easy maintenance: great accessibility to the internal components
- Low footprint
- Smart defrost technology: 1 defrost every 130 minutes for a constant LWT even at very low OAT (H type)
- Optimised for partial load operation
- 100% factory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

## Operating limits

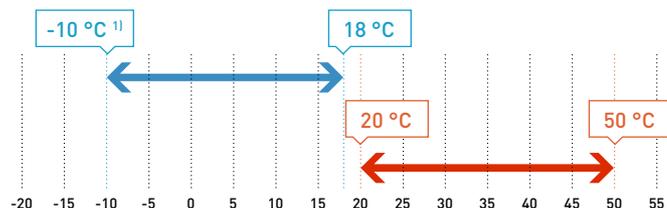
To be confirmed with AC SELECT:

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

Ambient temperature (cooling only, heat pump and condensing unit).



Leaving water temperature (cooling only 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 the new air conditioning selection program: <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
<b>Size</b>			<b>20</b>	<b>25</b>	<b>30</b>	<b>35</b>	<b>40</b>
<b>ECOi-W AQUA 20-40 C - cooling only</b>			<b>P-AQAE0020CA</b>	<b>P-AQAE0025CA</b>	<b>P-AQAE0030CA</b>	<b>P-AQAE0035CA</b>	<b>P-AQAE0040CA</b>
Cooling capacity <sup>1)</sup>	kW	19,2	24,3	27,1	36,7	39,0	
Input power <sup>1)</sup>	kW	5,9	7,7	9,3	12,2	13,0	
EER <sup>1)</sup>		3,25	3,17	2,9	3,01	3,0	
<b>SEER <sup>2)3)</sup></b>		<b>4,78</b>	<b>4,38</b>	<b>4,43</b>	<b>4,43</b>	<b>4,48</b>	
<b>η<sub>s,c</sub> <sup>2)3)</sup></b>		<b>188</b>	<b>172</b>	<b>174</b>	<b>174</b>	<b>176</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /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] <sup>4)</sup>	dB(A)	42,8	43,8	43,8	44,8	44,8	
<b>ECOi-W AQUA 20-40 H - heat pump</b>			<b>P-AQAE0020HA</b>	<b>P-AQAE0025HA</b>	<b>P-AQAE0030HA</b>	<b>P-AQAE0035HA</b>	<b>P-AQAE0040HA</b>
Cooling capacity <sup>1)</sup>	kW	18,7	23,7	26,4	35,8	38,1	
Input power <sup>1)</sup>	kW	5,9	7,7	9,4	12,3	13,1	
EER <sup>1)</sup>		3,15	3,07	2,81	2,92	2,92	
<b>SEER <sup>2)</sup></b>		<b>4,68</b>	<b>4,31</b>	<b>4,28</b>	<b>4,25</b>	<b>4,33</b>	
<b>η<sub>s,c</sub> <sup>2)</sup></b>		<b>184</b>	<b>169</b>	<b>168</b>	<b>167</b>	<b>170</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	3,3	4,3	4,6	6,2	6,4	
Heating capacity <sup>5)</sup>	kW	19,5	26,9	29,7	37,3	41,6	
Input power <sup>5)</sup>	kW	6,1	9,3	9,9	13,2	13,5	
COP <sup>5)</sup>		3,19	2,90	2,99	2,82	3,08	
COP <sup>6)</sup>		4,17	4,10	4,10	4,11	3,86	
<b>SCOP <sup>2)7)</sup></b>		<b>3,50</b>	<b>3,38</b>	<b>3,45</b>	<b>3,50</b>	<b>3,50</b>	
<b>Energy efficiency class <sup>2)7)</sup></b>		<b>A+</b>	<b>A+</b>	<b>A+</b>	<b>A+</b>	<b>A+</b>	
<b>η<sub>s,h</sub> <sup>2)7)</sup></b>		<b>137</b>	<b>132</b>	<b>135</b>	<b>137</b>	<b>137</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /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] <sup>4)</sup>	dB(A)	42,8	43,8	43,8	44,8	44,8	
<b>ECOi-W AQUA 25-40 E - condensing unit</b>		—	<b>P-AQAE0025EA</b>	<b>P-AQAE0030EA</b>	<b>P-AQAE0035EA</b>	<b>P-AQAE0040EA</b>	
Cooling capacity <sup>8)</sup>	kW	—	32,4	33,7	43,1	44,8	
Input power <sup>8)</sup>	kW	—	10,0	10,7	14,9	15,0	
EER <sup>8)</sup>		—	3,24	3,15	2,90	2,99	
Sound power	dB(A)	—	75	75	76	76	

## Physical features

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

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According EN14511-2013: 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 EN14511-2013 standard.  
\* w/o: without, w: with.

### Accessories and options

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

### Accessories and options

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

### Accessories and options

SRC - mini BMS controller
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.





# ECOi-W AQUA 45-125 C/H/E · R410A

Air cooled chillers, heat pumps and condensing units.

Cooling capacity: 46,8 to 129,8 kW.

Heating capacity: 48,5 to 119,1 kW.



## The range at a glance

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

## Advantages

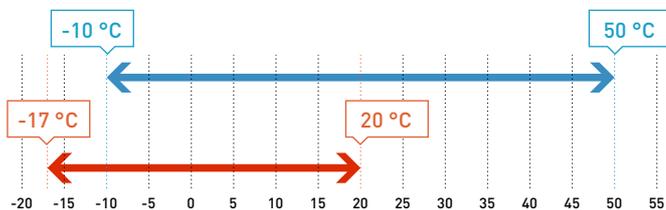
- Very high performance
- Low noise units
- Wide operating limits
- Easy maintenance: great accessibility to the internal components
- Low footprint
- Smart defrost technology: 1 defrost every 130 minutes for a constant LWT even at very low OAT (H type)
- Optimised for partial load operation
- 100% factory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

## Operating limits

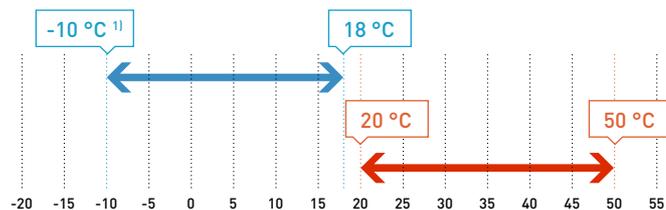
To be confirmed with AC SELECT:

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

Ambient temperature (cooling only, heat pump and condensing unit).



Leaving water temperature (cooling only and heat pump).



1) With glycol, 5 °C without glycol.

## Equipment

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

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400
	Phase		Three phase						
	Frequency		50	50	50	50	50	50	50
<b>Size</b>			<b>45</b>	<b>55</b>	<b>65</b>	<b>75</b>	<b>90</b>	<b>105</b>	<b>125</b>
<b>ECOi-W AQUA 45-125 C - cooling only</b>			<b>P-AQAE0045CA</b>	<b>P-AQAE0055CA</b>	<b>P-AQAE0065CA</b>	<b>P-AQAE0075CA</b>	<b>P-AQAE0090CA</b>	<b>P-AQAE0105CA</b>	<b>P-AQAE0125CA</b>
Cooling capacity <sup>1)</sup>	kW		45,3	52,0	66,1	73,1	90,9	104,0	123,0
Input power <sup>1)</sup>	kW		15,4	17,6	21,7	24,0	30,7	34,9	40,6
EER <sup>1)</sup>			2,95	2,96	3,05	3,05	2,96	2,98	3,03
<b>SEER <sup>2)3)</sup></b>			<b>4,40</b>	<b>4,53</b>	<b>4,53</b>	<b>4,68</b>	<b>4,45</b>	<b>4,50</b>	<b>4,55</b>
$\eta_{s,c}$ <sup>2)3)</sup>			<b>173</b>	<b>178</b>	<b>178</b>	<b>184</b>	<b>175</b>	<b>177</b>	<b>179</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		7,8	8,9	11,4	12,6	15,6	17,9	21,2
Sound power (STD fan)	dB(A)		81	81	81	81	84	84	84
Sound pressure at 10 m (STD fan) <sup>4)</sup>	dB(A)		48,8	48,8	48,8	48,8	51,8	51,8	51,8
<b>ECOi-W AQUA 45-125 H - heat pump</b>			<b>P-AQAE0045HA</b>	<b>P-AQAE0055HA</b>	<b>P-AQAE0065HA</b>	<b>P-AQAE0075HA</b>	<b>P-AQAE0090HA</b>	<b>P-AQAE0105HA</b>	<b>P-AQAE0125HA</b>
Cooling capacity <sup>1)</sup>	kW		44,3	50,9	64,1	71,0	88,7	101,0	119,0
Input power <sup>1)</sup>	kW		15,9	18,0	21,8	24,0	30,6	34,8	40,4
EER <sup>1)</sup>			2,78	2,83	2,94	2,95	2,90	2,90	2,96
<b>SEER <sup>2)</sup></b>			<b>4,20</b>	<b>4,41</b>	<b>4,51</b>	<b>4,63</b>	<b>4,40</b>	<b>4,44</b>	<b>4,49</b>
$\eta_{s,c}$ <sup>2)</sup>			<b>165</b>	<b>174</b>	<b>177</b>	<b>182</b>	<b>173</b>	<b>175</b>	<b>177</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		8,0	9,2	11,3	12,3	15,7	18,2	20,9
Heating capacity <sup>5)</sup>	kW		48,5	58,2	67,3	76,0	88,2	101,0	119,0
Input power <sup>5)</sup>	kW		17,3	20,4	22,5	24,3	33,8	38,4	45,5
COP <sup>5)</sup>			2,80	2,86	2,99	3,12	2,61	2,63	2,62
COP <sup>6)</sup>			3,89	3,83	3,80	3,82	3,80	3,80	3,82
<b>SCOP <sup>2)7)</sup></b>			<b>3,38</b>	<b>3,38</b>	<b>3,55</b>	<b>3,53</b>	<b>3,40</b>	<b>3,43</b>	<b>3,43</b>
<b>Energy efficiency class <sup>2)7)</sup></b>			<b>A+</b>	<b>A+</b>	<b>A+</b>	<b>A+</b>	—	—	—
$\eta_{s,h}$ <sup>2)7)</sup>			<b>132</b>	<b>132</b>	<b>139</b>	<b>138</b>	<b>133</b>	<b>134</b>	<b>134</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		8,4	10,2	11,7	13,2	15,3	17,6	20,7
Sound power (STD fan)	dB(A)		81	81	81	81	84	84	84
Sound pressure at 10 m (STD fan) <sup>4)</sup>	dB(A)		48,8	48,8	48,8	48,8	51,8	51,8	51,8
<b>ECOi-W AQUA 45-125 E - condensing unit</b>			<b>P-AQAE0045EA</b>	<b>P-AQAE0055EA</b>	<b>P-AQAE0065EA</b>	<b>P-AQAE0075EA</b>	<b>P-AQAE0090EA</b>	<b>P-AQAE0105EA</b>	<b>P-AQAE0125EA</b>
Cooling capacity <sup>8)</sup>	kW		57,4	64,5	72,4	79,3	104,0	120,0	136,0
Input power <sup>8)</sup>	kW		19,5	22,3	24,4	27,2	39,3	43,0	51,3
EER <sup>8)</sup>			2,94	2,89	2,97	2,91	2,65	2,79	2,66
Sound power	dB(A)		80	80	80	80	83	83	83

Physical features

<b>ECOi-W AQUA 45-125 C/H - cooling only / heat pump</b>		<b>45</b>	<b>55</b>	<b>65</b>	<b>75</b>	<b>90</b>	<b>105</b>	<b>125</b>	
Dimension	Height (STD / HPF)	mm	1986 / 2025	1986 / 2025	1986 / 2026	1986 / 2026	2286 / 2379	2286 / 2379	2286 / 2379
	Width	mm	1160	1160	1160	1160	1160	1160	1160
	Length w/o / w water tank	mm	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680	2180 / 2680
Operating weight w/o / w water tank - 1 pump		kg	545 / 1010	545 / 1010	615 / 1080	615 / 1080	795 / 1260	905 / 1370	925 / 1390
<b>Water connections</b>									
Type of water connections (evaporator)			Male gas threaded BSPP ISO 228						
Water inlet/outlet diameter		Inch	2	2	2	2	2½	2½	2½
<b>ECOi-W AQUA 45-125 E - condensing unit</b>			<b>45</b>	<b>55</b>	<b>65</b>	<b>75</b>	<b>90</b>	<b>105</b>	<b>125</b>
Operating weight		kg	490	490	560	560	740	850	870
Dimension H x W x D		mm	1986 x 1160 x 2180	2286 x 1160 x 2180	2286 x 1160 x 2180	2286 x 1160 x 2180			
<b>Refrigerant connections</b>									
Liquid line		Inch	¾	¾	¾	¾	¾	¾	¾
Suction line		Inch	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½	1 ½

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According EN14511-2013: 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 EN14511-2013 standard. \* w/o: without, w: with.

Accessories and options

- Anti-vibration rubber mount / spring dampers
- BACnet IP or BACnet MSTP
- Desuperheater
- Fan speed control
- Finned coil blygold treatment (upon request) or epoxy
- Electrical heater high or low power (H type only)

Accessories and options

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

Accessories and options

- Shut off valves
- Soft starter
- SRC - mini BMS controller
- Variable or fixed\* speed pumps
- Water tank 300 l
- Without neutral (upon request)
- Water pressure switch

\* Not available with ECOi-W AQUA C units due to Ecodesign compliance.





# ECOi-W AQUA 140-210 C/H - R410A

Air cooled chillers and heat pumps.

Cooling capacity: 125,4 to 208,8 kW.

Heating capacity: 143,7 to 217,6 kW.



## The range at a glance

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

## Advantages

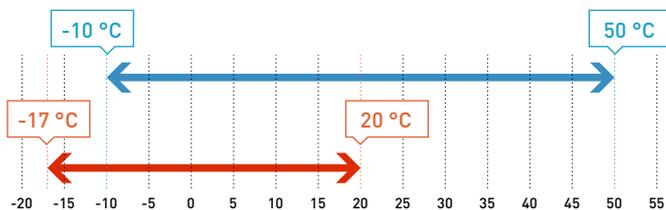
- Very high performances
- Low noise units
- Wide operating limits
- Easy maintenance: great accessibility to the internal components
- Low footprint
- Patented antifrost coil
- Smart defrost technology: 1 defrost every 130 minutes for a constant LWT even at very low OAT (H type)
- Optimised for partial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

## Operating limits

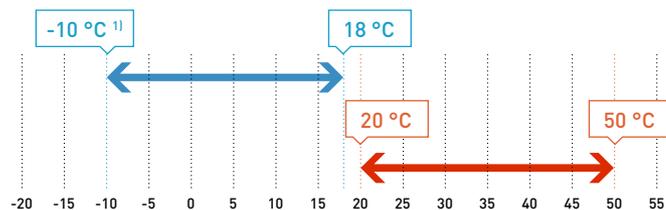
To be confirmed with AC SELECT:

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

Ambient temperature (cooling only, heat pump and condensing unit).



Leaving water temperature (cooling only and heat pump).



1) With glycol, 5 °C without glycol.

## Equipment

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

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





## Technical performance

	Voltage	V	400	400	400	400	400
Power supply	Phase		Three phase				
	Frequency	Hz	50	50	50	50	50
	<b>Size</b>		<b>140</b>	<b>150</b>	<b>170</b>	<b>190</b>	<b>210</b>
<b>ECOi-W AQUA 140-210 C - cooling only</b>			<b>P-AQAE0140CA</b>	<b>P-AQAE0150CA</b>	<b>P-AQAE0170CA</b>	<b>P-AQAE0190CA</b>	<b>P-AQAE0210CA</b>
Cooling capacity <sup>1)</sup>	kW	132	146	164	181	208	
Input power <sup>1)</sup>	kW	43,1	47,6	54,8	61,1	69,8	
EER <sup>1)</sup>		3,06	3,07	2,99	2,96	2,98	
<b>SEER <sup>2)3)</sup></b>		<b>4,40</b>	<b>4,45</b>	<b>4,38</b>	<b>4,40</b>	<b>4,25</b>	
<b><math>\eta_{s,c}</math> <sup>2)3)</sup></b>		<b>173</b>	<b>175</b>	<b>172</b>	<b>173</b>	<b>167</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	22,7	25,1	28,2	31,1	35,8	
Sound power (STD fan)	dB(A)	85	85	87	88	88	
Sound pressure at 10 m (STD fan) <sup>4)</sup>	dB(A)	53,4	53,4	55,0	56,1	56,1	
<b>ECOi-W AQUA 140-210 H - heat pump</b>			<b>P-AQAE0140HA</b>	<b>P-AQAE0150HA</b>	<b>P-AQAE0170HA</b>	<b>P-AQAE0190HA</b>	<b>P-AQAE 0210HA</b>
Cooling capacity <sup>1)</sup>	kW	128	142	164	178	208	
Input power <sup>1)</sup>	kW	43,2	47,7	54,7	61,3	69,7	
EER <sup>1)</sup>		2,97	2,98	3,00	2,90	2,98	
<b>SEER <sup>2)</sup></b>		<b>4,39</b>	<b>4,36</b>	<b>4,31</b>	<b>4,23</b>	<b>4,28</b>	
<b><math>\eta_{s,c}</math> <sup>2)</sup></b>		<b>173</b>	<b>171</b>	<b>169</b>	<b>166</b>	<b>168</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	21,6	23,7	25,9	30,2	33,7	
Heating capacity <sup>5)</sup>	kW	144	154	170	195	218	
Input power <sup>5)</sup>	kW	45,8	50,2	55,4	67,5	78,3	
COP <sup>5)</sup>		3,14	3,06	3,07	2,89	2,78	
COP <sup>6)</sup>		3,84	3,82	3,81	3,82	3,82	
<b>SCOP <sup>2)7)</sup></b>		<b>3,30</b>	<b>3,33</b>	<b>3,30</b>	<b>3,28</b>	<b>3,23</b>	
<b><math>\eta_{s,h}</math> <sup>2)7)</sup></b>		<b>129</b>	<b>130</b>	<b>129</b>	<b>128</b>	<b>126</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	24,8	26,5	29,6	33,9	37,9	
Sound power	dB(A)	85	85	87	88	88	
Sound pressure at 10 m (STD fan) <sup>4)</sup>	dB(A)	53,4	53,4	55	56,1	56,1	

## Physical features

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

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) According EN14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013.

\* w/o: without, w: with.

### Accessories and options

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

### Accessories and options

Modbus TCP/IP  
Outdoor coil protection grid  
Nordic pack (H type only)  
Refrigerant gauges HP/LP  
Remote control  
Shut off valves  
Soft starter

### Accessories and options

SRC - mini BMS controller  
Variable or fixed\* speed pumps  
Water tank 300 l  
Without neutral  
Water pressure switch

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





# ECOi-W AQUA-Z 50-130 C/H · R32

Air cooled chillers and heat pumps.

Cooling capacity: 51,6 to 126 kW.

Heating capacity: 56,0 to 139,0 kW.



## The range at a glance

- 2 versions: C (cooling only) and H (heat pump)
- 8 sizes
- SEER up to 4,88 (STD AC) / 5,31 (STD EC)
- SCOP up to 3,81 (STD AC) / 4,19 (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

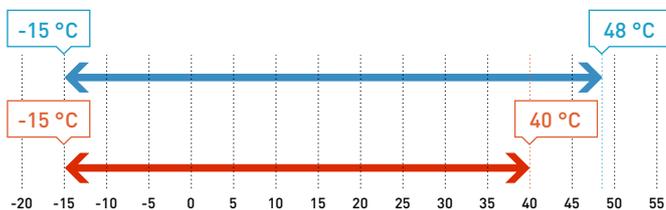
- Sustainable units: R32 refrigerant (GWP= 675)
- Very high efficiency
- Wide operating limits
- Low footprint: only 2,53 m<sup>2</sup>
- Reduced sound levels: S version (super low noise) with EC fan and compressor sound jackets
- New advanced control system
- Easy maintenance: great accessibility to the internal components
- Cascade controller available for multi-system operation
- SG ready
- 100% factory tested

## Operating limits

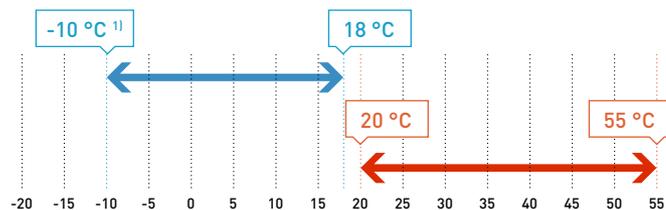
To be confirmed with AC SELECT:

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

Ambient temperature.



Leaving water temperature.



1) 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
- 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

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





Technical performance

	Voltage	V	400	400	400	400	400	400	400	400
Power supply	Phase		Three phase	Three phase						
	Frequency	Hz	50	50	50	50	50	50	50	50
Size			<b>50</b>	<b>60</b>	<b>70</b>	<b>75</b>	<b>85</b>	<b>100</b>	<b>115</b>	<b>130</b>
<b>ECOi-W AQUA-Z 50-130 C - cooling only</b>	<b>P-</b>	<b>AQAZ0050CA</b>	<b>AQAZ0060CA</b>	<b>AQAZ0070CA</b>	<b>AQAZ0075CA</b>	<b>AQAZ0085CA</b>	<b>AQAZ0100CA</b>	<b>AQAZ0115CA</b>	<b>AQAZ0130CA</b>	
Cooling capacity <sup>1)</sup>	kW	51,6	57,6	69,7	78,2	82,8	100	116	126	
Input power <sup>1)</sup>	kW	16,5	19,6	22,4	24	26,8	31,4	37,4	42,3	
EER (STD AC / STD EC) <sup>*1)</sup>		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	
<b>SEER (STD AC / STD EC) <sup>*2)3)</sup></b>		<b>4,60 / 5,05</b>	<b>4,59 / 5,02</b>	<b>4,61 / 5,31</b>	<b>4,72 / 5,29</b>	<b>4,45 / 4,96</b>	<b>4,88 / 5,19</b>	<b>4,59 / 5,01</b>	<b>4,43 / 4,71</b>	
<b>η<sub>s,c</sub> (STD AC / STD EC) <sup>*2)3)</sup></b>		<b>180,9 / 198,9</b>	<b>180,5 / 197,8</b>	<b>181,3 / 209,6</b>	<b>185,6 / 208,7</b>	<b>175,0 / 195,6</b>	<b>192,3 / 204,9</b>	<b>180,5 / 197,3</b>	<b>174,2 / 185,6</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	9,2	10,6	12,2	13,2	14,7	17,9	21,1	23,5	
Sound power (STD AC / S)*	dB(A)	83 / 81	84 / 81	81 / 78	81 / 78	84 / 82	86 / 83	87 / 84	87 / 84	
Sound pressure at 10 m (STD AC / S) <sup>*4)</sup>	dB(A)	51 / 49	52 / 49	50 / 47	49 / 46	52 / 50	54 / 51	55 / 52	55 / 53	
<b>ECOi-W AQUA-Z 50-130 H - heat pump</b>		<b>AQAZ0050HA</b>	<b>AQAZ0060HA</b>	<b>AQAZ0070HA</b>	<b>AQAZ0075HA</b>	<b>AQAZ0085HA</b>	<b>AQAZ0100HA</b>	<b>AQAZ0115HA</b>	<b>AQAZ0130HA</b>	
Cooling capacity <sup>1)</sup>	kW	51,1	57	69	77,4	82	99,3	115	125	
Input power <sup>1)</sup>	kW	16,7	19,8	22,6	24,3	27,1	31,8	37,7	42,7	
EER (STD AC / STD EC) <sup>*1)</sup>		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	
EER (STD AC / STD EC) <sup>*5)</sup>		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	
<b>SEER (STD AC / STD EC) <sup>*2)</sup></b>		<b>4,46 / 4,83</b>	<b>4,42 / 4,50</b>	<b>4,51 / 5,04</b>	<b>4,61 / 4,99</b>	<b>4,33 / 4,80</b>	<b>4,77 / 4,93</b>	<b>4,44 / 4,82</b>	<b>4,23 / 4,51</b>	
<b>ns<sub>c</sub> (STD AC / STD EC) <sup>*2)8)</sup></b>		<b>175,2 / 190,2</b>	<b>173,6 / 176,9</b>	<b>177,5 / 198,8</b>	<b>181,5 / 196,7</b>	<b>170,3 / 188,9</b>	<b>187,7 / 194,1</b>	<b>174,6 / 190,0</b>	<b>166 / 177,2</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	8,7	10,6	12,2	13,2	14,7	17,9	21,1	23,5	
Heating capacity <sup>6)</sup>	kW	56,0	63,0	75,1	83,6	90,7	110,0	125,0	139,0	
Input power <sup>6)</sup>	kW	16,8	19,3	23,4	25,9	27,7	32,8	37,2	41,1	
COP (STD AC / STD EC) <sup>*6)</sup>		3,33 / 3,48	3,26 / 3,37	3,21 / 3,40	3,23 / 3,40	3,27 / 3,44	3,35 / 3,49	3,36 / 3,48	3,38 / 3,50	
COP (STD AC / STD EC) <sup>*7)</sup>		4,08 / 4,29	3,98 / 4,16	3,88 / 4,16	3,89 / 4,15	4,03 / 4,34	4,04 / 4,24	4,15 / 4,33	4,08 / 4,25	
<b>SCOP (STD AC / STD EC) <sup>*2)8)</sup></b>		<b>3,63 / 3,81</b>	<b>3,51 / 3,67</b>	<b>3,49 / 4,04</b>	<b>3,56 / 3,87</b>	<b>3,76 / 4,19</b>	<b>3,56 / 3,72</b>	<b>3,77 / 4,13</b>	<b>3,81 / 4,12</b>	
<b>Energy efficiency class (STD AC / STD EC) <sup>*2)7)</sup></b>		<b>A+ / A+</b>	<b>A+ / A+</b>	<b>A+ / A++</b>	<b>A+ / A++</b>	<b>A+ / A++</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	
<b>ns<sub>h</sub> (STD AC / STD EC) <sup>*2)7)</sup></b>		<b>142,4 / 149,4</b>	<b>137,7 / 143,5</b>	<b>136,5 / 158,5</b>	<b>139,3 / 154,8</b>	<b>147,4 / 164,7</b>	<b>139,1 / 145,7</b>	<b>147,7 / 162,3</b>	<b>149,5 / 161,9</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h	9,3	10,7	12,5	13,9	15,0	18,3	21,5	23,9	
Sound power (STD AC / S)*	dB(A)	83 / 81	84 / 81	81 / 78	81 / 78	84 / 82	86 / 83	87 / 84	87 / 84	
Sound pressure at 10 m (STD AC / S) <sup>*4)</sup>	dB(A)	51 / 49	52 / 49	50 / 47	50 / 46	52 / 50	54 / 51	55 / 52	56 / 53	

Physical features

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

1) According EN14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN14511-2018: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C DB. 6) According EN14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) According EN14511-2018: 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

- Additional external switch (cooling/heating) (H type only)
- Anti-vibration rubber mount / spring dampers
- Compressor jackets (standard for S versions)
- Contact for external general alarm
- Desuperheater
- Electrical heater for the water tank (H type only)
- Energy meter for Input power

Accessories and options

- High efficiency EC fan
- High pressure fan (HPF)
- Outdoor coil protection grid
- Power factor corrector capacitors
- Refrigerant gauges HP/LP
- Remote control kit
- Shut off valves
- Sofstarter

Accessories and options

- SRC - mini BMS controller
- Super low noise (S): EC fan + compressor jackets
- Variable or fixed speed pumps
- Water pressure switch
- Water tank 300 l
- Without neutral





# ECOi-W AQUA-Z 150-170 C/H · R32

Air cooled chillers and heat pumps.

Cooling capacity: 154 to 173 kW.

Heating capacity: 163 to 187 kW.



## The range at a glance

- 2 versions: C (cooling only), H (heat pump)
- 2 sizes
- SEER up to 4,70 (STD AC) / 5,22 (STD EC)
- SCOP up to 3,78 (STD AC) / 4,08 (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

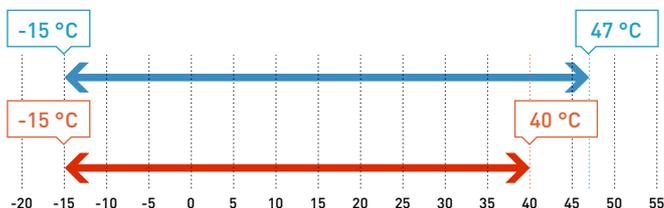
- Sustainable units: R32 refrigerant (GWP = 675)
- Very high efficiency
- Wide operating limits
- Low footprint: one of the smallest footprint on the market with an average ratio of 37 kW/m<sup>2</sup>.
- Reduced sound levels: S version (super low noise) with EC fan and compressor sound jackets
- New 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

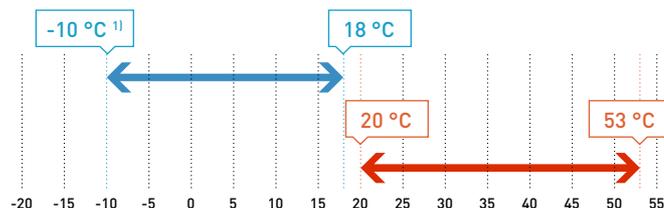
To be confirmed with AC SELECT:

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

Ambient temperature.



Leaving water temperature.



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

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





## Technical performance

Power supply	Voltage	V	400	400
	Phase		Three phase	Three phase
	Frequency	Hz	50	50
<b>Size</b>			<b>150</b>	<b>170</b>
<b>ECOi-W AQUA-Z 150-170 C - cooling only</b>	<b>P-</b>		<b>P-AQAZ0150CA</b>	<b>P-AQAZ0170CA</b>
Cooling capacity <sup>1)</sup>	kW		154	173
Input power <sup>1)</sup>	kW		47,4	55,7
EER (STD AC / STD EC) <sup>*1)</sup>			3,25 / 3,38	3,11 / 3,20
<b>SEER (STD AC / STD EC) <sup>*2)3)</sup></b>			<b>4,70 / 5,22</b>	<b>4,68 / 5,16</b>
<b>η<sub>s,c</sub> (STD AC / STD EC) <sup>*2)3)</sup></b>			<b>184,8 / 205,6</b>	<b>184,2 / 203,2</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		27,2	30,7
Sound power [STD AC / S]*	dB(A)		89 / 86	91 / 88
Sound pressure at 10 m [STD AC / S] <sup>*4)</sup>	dB(A)		57 / 54	59 / 56
<b>ECOi-W AQUA-Z 150-170 H - heat pump</b>			<b>AQAZ0150HA</b>	<b>AQAZ0170HA</b>
Cooling capacity <sup>1)</sup>			152	170
Input power <sup>1)</sup>			47,9	57,1
EER (STD AC / STD EC) <sup>*1)</sup>			3,17 / 3,30	2,98 / 3,07
EER (STD AC / STD EC) <sup>*5)</sup>			3,63 / 3,76	3,39 / 3,56
<b>SEER (STD AC / STD EC) <sup>*2)</sup></b>			<b>4,59 / 5,04</b>	<b>4,49 / 4,92</b>
<b>ns,c (STD AC / STD EC) <sup>*2)</sup></b>			<b>180,5 / 198,7</b>	<b>176,6 / 193,8</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		27,2	30,7
Heating capacity <sup>6)</sup>	kW		163	187
Input power <sup>6)</sup>	kW		48,4	55,4
COP (STD AC / STD EC) <sup>*6)</sup>			3,37 / 3,52	3,38 / 3,50
COP (STD AC / STD EC) <sup>*7)</sup>			4,15 / 4,36	4,10 / 4,29
<b>SCOP (STD AC / STD EC) <sup>*2)8)</sup></b>			<b>3,78 / 4,08</b>	<b>3,70 / 4,03</b>
<b>Energy efficiency class (STD AC / STD EC) <sup>*2)7)</sup></b>			<b>- / -</b>	<b>- / -</b>
<b>ns,h (STD AC / STD EC) <sup>*2)7)</sup></b>			<b>148,3 / 160,2</b>	<b>145,1 / 158,3</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		27,5	31,7
Sound power [STD AC / S]*	dB(A)		89 / 86	91 / 88
Sound pressure at 10 m [STD AC / S] <sup>*4)</sup>	dB(A)		57 / 54	59 / 56

## Physical features

<b>ECOi-W AQUA-Z 150-170 C/H - cooling only / heat pump</b>			<b>150</b>	<b>170</b>
Dimension	Height [STD / EC/HPF]	mm	2285 / 2333	2285 / 2333
	Width	mm	1151	1151
	Length without water tank	mm	3789	3789
Operating weight without water tank - 1 pump		kg	1265	1279
<b>Water connections</b>				
Type of water connections (evaporator)			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Water inlet/outlet diameter	Inch		2 1/2	2 1/2

1) According EN14511-2018: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 4) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 5) According EN14511-2018: chilled water inlet/outlet temperature: 23/18 °C, outdoor ambient temperature 35 °C DB. 6) According EN14511-2018: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 7) According EN14511-2018: 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

Additional external switch (cooling/heating) (H type only)
Anti-vibration rubber mount / spring dampers
Compressor jackets (standard for S versions)
Contact for external general alarm
Desuperheater
Electrical heater for the water tank (H type only)

### Accessories and options

Energy meter for Input power
High efficiency EC fan
High pressure fan (HPF)
Outdoor coil protection grid
Power factor corrector capacitors
Refrigerant gauges HP/LP
Remote control kit

### Accessories and options

Shut off valves
Sofstarter
SRC - mini BMS controller
Super low noise (S): EC fan + compressor jackets
Variable or fixed speed pumps
Water pressure switch
Water tank 300 l





# 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.



## The range at a glance

- 3 versions: C (cooling only), H (heat pump) and E (condensing unit)
- 6 sizes
- 3 configurations: STD (standard), HT (high temperature fan) 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)

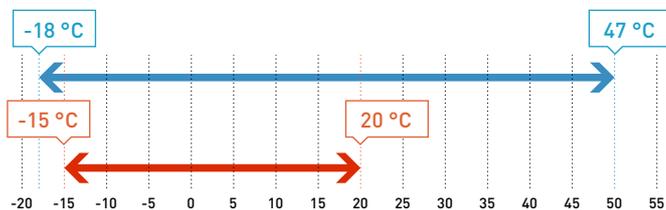
## Advantages

- 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

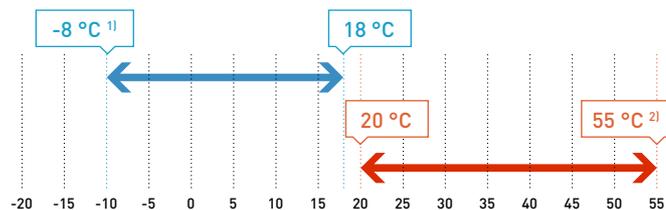
## Operating limits

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

Ambient temperature (cooling only and heat pump).



Leaving water temperature (cooling only 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 - cooling only / 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

Outdoor air temperature	Evaporating limit	°C	From 1 to 15
	STD	°C	From 0 to 48
	S	°C	From -18 to 45
	HT	°C	From 0 to 50

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

1) According EN14511-2013: 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 EN14825. 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
- BMS interface
- Coils treatments
- Desuperheater and total heat recovery
- 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
- Soft starter
- Unit protection grilles
- Water differential pressure
- Water filter
- Water pressure switch





## Technical performance

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

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According EN14511-2013: 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
<b>Size</b>			<b>85</b>	<b>95</b>	<b>105</b>	<b>115</b>	<b>125</b>	<b>140</b>
<b>ECOi-W AQV 85-140 E STD / HSE / HPF - condensing unit</b>			<b>P-AQVE0085EA</b>	<b>P-AQVE0095EA</b>	<b>P-AQVE0105EA</b>	<b>P-AQVE0115EA</b>	<b>P-AQVE0125EA</b>	<b>P-AQVE0140EA</b>
Cooling capacity <sup>1)</sup>	kW		92,1	103,2	113,2	121,8	134,7	151,0
Input power <sup>1)</sup>	kW		27,4	31,4	34,1	37,0	41,7	46,8
Sound power <sup>2)</sup>	dB(A)		84	84	84	84	88	88
Sound pressure at 10 m <sup>3)</sup>	dB(A)		53	53	53	53	57	57
<b>ECOi-W AQV 85-140 E STD / HSE S - condensing unit</b>			<b>85</b>	<b>95</b>	<b>105</b>	<b>115</b>	<b>125</b>	<b>140</b>
Cooling capacity <sup>1)</sup>	kW		89	99,5	108,7	116,6	131,6	147,2
Input power <sup>1)</sup>	kW		28,6	33,1	36,1	39,3	41,9	47,3
Sound power <sup>2)</sup>	dB(A)		82	82	82	82	86	86
Sound pressure at 10 m <sup>3)</sup>	dB(A)		51	51	51	51	55	55
<b>ECOi-W AQV 85-140 E HT - condensing unit</b>			<b>85</b>	<b>95</b>	<b>105</b>	<b>115</b>	<b>125</b>	<b>140</b>
Cooling capacity <sup>1)</sup>	kW		95	106,8	117,7	127	137,2	153,8
Input power <sup>1)</sup>	kW		28,5	32,1	34,4	36,9	41,8	46,7
Sound power <sup>2)</sup>	dB(A)		95	95	95	95	95	95
Sound pressure at 10 m <sup>3)</sup>	dB(A)		64	64	64	64	64	64

### Physical features

<b>ECOi-W AQV 85-140 C/H/E - cooling only / heat pump / condensing unit</b>			<b>85</b>	<b>95</b>	<b>105</b>	<b>115</b>	<b>125</b>	<b>140</b>
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 / 1088	1072 / 1102	1111 / 1141	1143 / 1173	1183 / 1213	1262 / 1292
Operating weight (H type)	STD / HT / S	kg	1090 / 1120	1105 / 1135	1149 / 1179	1180 / 1210	1227 / 1257	1301 / 1331
Shipping weight (E type)	STD / S	kg	971 / 1001	983 / 1013	1013 / 1043	1043 / 1073	1066 / 1096	1142 / 1172
<b>Water connections (85-140 C/H types)</b>								
Type of water connections (evaporator)			Male gas threaded					
Water inlet/outlet diameter		Inch	2 ½	2 ½	2 ½	2 ½	2 ½	2 ½
<b>Condenser (85-140 E type)</b>								
Connection type			To be brazed					
Inlet diameter	Inch		5/8	5/8	5/8	5/8	7/8	7/8
Outlet diameter	Inch		1 3/8	1 3/8	1 3/8	1 3/8	1 3/8	1 3/8

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN14511-2013 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	°C	From 3 to 8	
Outdoor air temperature	STD	°C	-5 to 47	0 to 46	0 to 47
	L	°C	-5 to 45	0 to 44	0 to 45
	S	°C	-18 to 41	-18 to 40	-18 to 41
	HT	°C	-18 to 49	-18 to 48	-18 to 49
	<b>ECOi-W VL 1004-1204 H - heat pump</b>			<b>1004</b>	<b>1104</b>
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	°C	From 3 to 8	
Outdoor air temperature	STD	°C	0 to 46	0 to 45	0 to 45
	L	°C	0 to 44	0 to 42	0 to 42
	S	°C	-18 to 40	-18 to 38	-18 to 38
	HT	°C	-18 to 48	-18 to 47	-18 to 47
	<b>ECOi-W VL 604-1204 H - heat pump</b>				
Heating	Water outlet temperature	Water	°C	From 30 to 50 <sup>1)</sup>	
		Air	°C	From -10 to 20 <sup>1)</sup>	
		L / S	°C	From -4 to 20 <sup>1)</sup>	
External static pressure	STD fans	Pa	0		
	Inverter HPF	Pa	<120		
<b>ECOi-W VL 604-904 E - condensing unit</b>			<b>704</b>	<b>804</b>	<b>904</b>
Evaporating temperature		°C	From 1 to 15		
Outdoor air temperature	STD	°C	-18 to 47 <sup>1)</sup>	-18 to 46 <sup>1)</sup>	-18 to 46 <sup>2)</sup>
	L / S	°C	-18 to 45 <sup>1)</sup>	-18 to 44 <sup>1)</sup>	-18 to 45 <sup>2)</sup>
	HT	°C	-18 to 49 <sup>1)</sup>	-18 to 48 <sup>1)</sup>	-18 to 49 <sup>2)</sup>
<b>ECOi-W VL 604-904 E - condensing unit</b>			<b>1004</b>	<b>1104</b>	<b>1204</b>
Evaporating temperature		°C	1 to 15		
Outdoor air temperature	STD	°C	-18 to 46 <sup>2)</sup>	-18 to 45 <sup>2)</sup>	-18 to 45 <sup>2)</sup>
	L / S	°C	-18 to 44 <sup>2)</sup>	-18 to 42 <sup>2)</sup>	-18 to 42 <sup>2)</sup>
	HT	°C	-18 to 48 <sup>2)</sup>	-18 to 47 <sup>2)</sup>	-18 to 47 <sup>2)</sup>

<sup>1)</sup> Maximum water outlet temperature 50 °C (minimum temperature outdoor air +0 °C) to be confirmed with AC SELECT selection software. <sup>2)</sup> 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
BMS interface
Coils treatments
Compressor jackets (standard on S)
Desuperheater and total heat recovery (TR version)
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
Soft starter
Unit protection grilles
Water filter
Water flow switch



Technical performance

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

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According EN14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 6) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 7) Sound pressures refer to ISO 3744 standard, parallelepiped shape.





## Technical performance

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

1) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 2) According EN14825. 3) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 4) According EN14511-2013: 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**

<b>ECOi-W VL 704 - 1204 H/E - dimensions</b>			<b>704</b>	<b>804</b>	<b>904</b>	<b>1004</b>	<b>1104</b>	<b>1204</b>
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
<b>ECOi-W VL 704-1204 H STD / HPF - heat pump</b>			<b>704</b>	<b>804</b>	<b>904</b>	<b>1004</b>	<b>1104</b>	<b>1204</b>
<b>Water connections</b>								
Type of water connections (evaporator)			Male gas threaded					
Water inlet/outlet diameter		Inch	2 ½	2 ½	3	3	3	3
<b>ECOi-W VL 704-1204 E - condensing unit</b>			<b>704</b>	<b>804</b>	<b>904</b>	<b>1004</b>	<b>1104</b>	<b>1204</b>
<b>Refrigerant connection</b>								
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 140-360 C/H/E · R410A

Air cooled chillers, heat pumps and condensing units.

**Cooling capacity: 144 to 360,7 kW.**

**Heating capacity: 144,9 to 361,4 kW.**



## Operating limits

To be confirmed with AC SELECT:

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

ECOi-W AQUA EVO 140-360 C - cooling only				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol*	°C	From -10 to 5
		Temperature spread	K	From 3 to 7
Maximum operating pressure		bar	6	
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 5 to 48
		L	°C	From 0 to 46
		S	°C	From -14 to 44
		EC-HT	°C	From -18 to 50
External static pressure	Standard fans	Pa	0	
	High pressure fan (HPF)	Pa	<120	
ECOi-W AQUA EVO 140-360 H - heat pump				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol*	°C	From -10 to 5
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature cooling	STD / L / S	°C	5 to 48 / 0 to 46 / -14 to 44
		EC-HT	°C	From -18 to 50
Warm liquid	Liquid outlet temperature	Water	°C	From 20 to 55
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature heating	STD / L / S / EC	°C	From -10 to 20
		Polar version	°C	From -13 to 20
		HT	°C	From -13 to 20
External static pressure	Standard fans	Pa	0	
	High pressure fan (HPF)	Pa	<120	
ECOi-W AQUA EVO 140-360 E - condensing unit				
Evaporating temperature		°C	From 1 to 15	
Outdoor air temperature		STD	°C	From 5 to 48
		L	°C	From -14 to 46
		S	°C	From -14 to 44
		EC-HT	°C	From -18 to 50

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

## The range at a glance

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

## Advantages

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

## Equipment

- 2 refrigerant circuits
- 4 scroll compressors (tandem)
- Electronic expansion valve
- Microchannel coils
- E-coating coil treatment
- Brine version: cooling only for process application LWT -10 °C (C type)
- Polar version: heat pump for extreme conditions (H type)
- Plate heat exchanger evaporator
- Compressor acoustic box
- Compressor jackets (standard as super low noise)
- Fan speed control (standard as super low noise)
- Phase sequence control
- Water differential pressure switch



Technical performance

Power supply <sup>1)</sup>	Voltage	V	400	400	400	400	400	400	400	400
	Phase		Three phase							
	Frequency	Hz	50	50	50	50	50	50	50	50
<b>Model</b>	<b>P-</b>		<b>AQAVE0140CA</b>	<b>AQAVE0170CA</b>	<b>AQAVE0230CA</b>	<b>AQAVE0260CA</b>	<b>AQAVE0280CA</b>	<b>AQAVE0300CA</b>	<b>AQAVE0330CA</b>	<b>AQAVE0360CA</b>
<b>ECOi-W AQUA EVO 140-360 C - cooling only</b>										
Nominal cooling capacity <sup>2)</sup>	kW		144	169	231	263	284	300	331	362
Input power <sup>2)</sup>	kW		44,6	54,2	74,8	84,6	91,3	99,0	104,7	116,8
EER <sup>2)</sup> / EER*			- / 3,2	- / 3,1	3,1 / 3,1	3,1 / 3,2	3,1 / 3,2	3,1 / 3,2	3,2 / 3,2	3,1 / 3,2
<b>SEER <sup>3)4)</sup></b>			<b>4,45</b>	<b>4,28</b>	<b>4,25</b>	<b>4,25</b>	<b>4,23</b>	<b>4,18</b>	<b>4,20</b>	<b>4,10</b>
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>175</b>	<b>168</b>	<b>167</b>	<b>167</b>	<b>166</b>	<b>164</b>	<b>165</b>	<b>161</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		24,8	29,1	39,6	45,2	48,8	53,2	56,9	62,1
Sound power <sup>5)</sup>	dB(A)		90	90	92	93	93	94	95	95
Sound pressure 10 m <sup>6)</sup>	dB(A)		58	58	60	61	61	62	63	63
<b>ECOi-W AQUA EVO 140-360 C L - cooling only</b>										
Nominal cooling capacity <sup>2)</sup>	kW		140	163	224	256	276	301	322	351
Input power <sup>2)</sup>	kW		44,3	54,7	74,4	84,5	92,0	99,7	104,9	117,8
EER <sup>2)</sup> / EER*			- / 3,2	- / 3	3 / 3,02	3,0 / 3,1	3,0 / 3,0	3,0 / 3,1	3,1 / 3,1	3 / 3,03
<b>SEER <sup>3)4)</sup></b>			<b>4,33</b>	<b>4,20</b>	<b>4,28</b>	<b>4,28</b>	<b>4,25</b>	<b>4,25</b>	<b>4,25</b>	<b>4,10</b>
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>170</b>	<b>165</b>	<b>168</b>	<b>168</b>	<b>167</b>	<b>167</b>	<b>167</b>	<b>161</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		24,1	28,1	38,4	43,9	47,4	51,7	55,3	60,2
Sound power <sup>5)</sup>	dB(A)		85	85	87	88	88	89	90	90
Sound pressure 10 m <sup>6)</sup>	dB(A)		53	53	55	56	56	57	58	58
<b>ECOi-W AQUA EVO 140-360 C S - cooling only</b>										
Nominal cooling capacity <sup>2)</sup>	kW		133	153	210	242	259	283	305	329
Input power <sup>2)</sup>	kW		48,0	57,1	79,2	88,6	97,4	105,6	109,7	123,7
EER <sup>2)</sup> / EER*			- / 2,8	- / 2,7	2,7 / 2,7	2,7 / 2,8	2,7 / 2,7	2,7 / 2,7	2,8 / 2,8	2,7 / 2,7
<b>SEER <sup>3)4)</sup></b>			<b>4,15</b>	<b>4,13</b>	<b>4,1</b>	<b>4,15</b>	<b>4,1</b>	<b>4,1</b>	<b>4,1</b>	<b>4,1</b>
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>163</b>	<b>162</b>	<b>161</b>	<b>163</b>	<b>161</b>	<b>161</b>	<b>161</b>	<b>161</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		22,8	26,3	36,1	41,5	44,6	48,6	52,4	56,6
Sound power <sup>5)</sup>	dB(A)		79	79	82	83	83	85	86	86
Sound pressure 10 m <sup>6)</sup>	dB(A)		47	47	50	51	51	53	54	54
<b>ECOi-W AQUA EVO 140-360 C HT - cooling only</b>										
Nominal cooling capacity <sup>2)</sup>	kW		145	170	232	265	286	312	333	364
Input power <sup>2)</sup>	kW		47,0	56,4	77,6	87,9	94,7	103,7	109,9	121,7
EER <sup>2)</sup>			3,09	3,02	2,99	3,01	3,02	3,01	3,03	2,99
<b>SEER <sup>3)4)</sup></b>			<b>4,45</b>	<b>4,28</b>	<b>4,63</b>	<b>4,65</b>	<b>4,63</b>	<b>4,68</b>	<b>4,65</b>	<b>4,43</b>
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>175</b>	<b>168</b>	<b>182</b>	<b>183</b>	<b>182</b>	<b>184</b>	<b>183</b>	<b>174</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		25,0	29,3	40,0	45,6	49,3	53,7	57,3	62,7
Sound power <sup>5)</sup>	dB(A)		92	92	94	96	96	97	98	98
Sound pressure 10 m <sup>6)</sup>	dB(A)		60	60	62	64	64	65	66	66

1) Voltage 400 V +/- 10%. 2) According EN14511-2013: 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 EN14825. 5) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 6) Sound pressures refer to ISO 3744 standard, parallelepiped shape. 7) According EN14511-2013: nominal cooling capacity refers to 7 °C leaving chilled water temperature and 45 °C leaving warm water temperature.

\* High efficiency units (EC) with inverter fans.

Accessories and options

- Anti-vibration spring dampers
- Automatic circuit breaker
- BMS interface
- Coils treatments
- Desuperheater
- Fan speed control (-14 °C in cooling mode – standard as super low noise version)
- Hydrokit with 1 or 2 pumps with or without buffer tank (350 l 140-170, 500 l 200-360)

Accessories and options

- Mechanical gauges
- Overload protection for compressors
- Power factor corrector capacitors
- Soft starter
- SRC - mini BMS controller
- Unit protection grilles
- Water filter
- Water flow switch



ErP: Sizes 140 and 170 are ErP compliant only with EC fans.



## Technical performance

Power supply <sup>1)</sup>	Voltage	V	400	400	400	400	400	400	400	400
	Phase		Three phase							
	Frequency	Hz	50	50	50	50	50	50	50	50
Model	P-		AQAVE0140HA	AQAVE0170HA	AQAVE0230HA	AQAVE0260HA	AQAVE0280HA	AQAVE0300HA	AQAVE0330HA	AQAVE0360HA
<b>ECOi-W AQUA EVO 140-360 H - heat pump</b>										
Nominal cooling capacity <sup>2)</sup>	kW		137	155	214	244	261	288	307	341
Input power <sup>2)</sup>	kW		45,1	54,6	73,2	83,8	90,7	98,5	103,5	117,0
EER <sup>2)</sup>			3,03	2,83	2,92	2,91	2,88	2,92	2,97	2,91
EER* / EER**			3,08 / 2,86	2,86 / 2,69	2,96 / 2,75	2,95 / 2,73	2,91 / 2,71	2,96 / 2,75	3,02 / 2,78	2,95 / 2,74
SEER / $\eta_{s,c}$ <sup>3)</sup>			<b>3,8 / 149</b>	<b>3,95 / 155</b>	<b>4,13 / 162</b>	<b>4,05 / 159</b>	<b>4,1 / 161</b>	<b>3,83 / 150</b>	<b>3,8 / 149</b>	<b>3,93 / 154</b>
SEER* / SEER** <sup>3)</sup>			<b>3,95</b>	<b>4,08</b>	<b>4,22</b>	<b>4,13</b>	<b>4,2</b>	<b>3,93</b>	<b>3,8</b>	<b>4,05</b>
$\eta_{s,c}$ * / $\eta_{s,c}$ ** <sup>3)</sup>			<b>155</b>	<b>160</b>	<b>166</b>	<b>162</b>	<b>165</b>	<b>154</b>	<b>149</b>	<b>159</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		23,6	26,6	36,8	42,0	45,0	49,5	52,9	58,6
Nominal heating capacity <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	145 / 149	166 / 170	229 / 234	262 / 269	280 / 286	306 / 311	327 / 334	361 / 368
Input power <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	44,9 / 37,2	51,6 / 43,6	70,9 / 58,7	81,7 / 67,8	87,4 / 72,3	94,9 / 77,8	101,9 / 83,7	112,6 / 92,7
COP <sup>4)5)</sup>	40-45 °C / 30-35 °C		3,23 / 4,00	3,21 / 3,90	3,23 / 3,98	3,21 / 3,96	3,20 / 3,95	3,22 / 4,00	3,21 / 3,99	3,21 / 3,97
COP* / COP**			3,28 / 3,05	3,25 / 3,05	3,27 / 3,03	3,26 / 3,01	3,25 / 3,02	3,27 / 3,02	3,26 / 2,99	3,26 / 3,02
SCOP <sup>3)6)</sup>			<b>3,39</b>	<b>3,42</b>	<b>3,46</b>	<b>3,48</b>	<b>3,44</b>	<b>3,51</b>	<b>3,44</b>	<b>3,48</b>
$\eta_{s,h}$ <sup>3)6)</sup>			<b>133</b>	<b>134</b>	<b>135</b>	<b>136</b>	<b>135</b>	<b>137</b>	<b>135</b>	<b>136</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		25,1	28,7	39,7	45,5	48,5	53,0	56,8	62,7
Sound power <sup>7)</sup>	dB(A)		90	90	92	93	93	94	95	95
Sound pressure at 10 m <sup>8)</sup>	dB(A)		58	58	60	61	61	62	63	63
<b>ECOi-W AQUA EVO 140-360 H L - heat pump</b>										
Nominal cooling capacity <sup>2)</sup>	kW		133	149	207	237	253	279	299	330
Input power <sup>2)</sup>	kW		45,2	55,3	73,7	83,7	91,4	99,1	103,1	117,5
EER <sup>2)</sup> / EER*			2,94 / 2,98	2,70 / 2,73	2,81 / 2,85	2,83 / 2,87	2,77 / 2,81	2,82 / 2,86	2,90 / 2,94	2,81 / 2,84
SEER / $\eta_{s,c}$ <sup>3)</sup>			<b>3,8 / 149</b>	<b>3,95 / 155</b>	<b>4,13 / 162</b>	<b>4,05 / 159</b>	<b>4,1 / 161</b>	<b>3,83 / 150</b>	<b>3,8 / 149</b>	<b>3,93 / 154</b>
SEER* / $\eta_{s,c}$ * <sup>3)</sup>			<b>4,58 / 180</b>	<b>4,65 / 183</b>	<b>3,7 / 145</b>	<b>3,65 / 143</b>	<b>3,63 / 142</b>	<b>2,58 / 100</b>	<b>2,65 / 103</b>	<b>4,17 / 164</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		22,9	25,7	35,7	40,8	43,6	48,1	51,5	56,8
Nominal heating capacity <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	141 / 144	162 / 166	224 / 228	256 / 261	272 / 277	299 / 304	321 / 326	354 / 359
Input power <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	43,5 / 35,8	50,3 / 42,2	69,0 / 56,5	79,4 / 65,2	84,8 / 69,8	92,7 / 75,2	99,6 / 81,0	109,9 / 89,8
COP <sup>4)5)</sup>	40-45 °C / 30-35 °C		3,24 / 4,03	3,22 / 3,93	3,24 / 4,03	3,22 / 4,00	3,21 / 3,97	3,23 / 4,04	3,22 / 4,03	3,22 / 4,00
COP* <sup>4)</sup>			3,32	3,30	3,32	3,31	3,29	3,31	3,31	3,30
SCOP <sup>3)6)</sup>			<b>3,39</b>	<b>3,42</b>	<b>3,46</b>	<b>3,48</b>	<b>3,44</b>	<b>3,51</b>	<b>3,44</b>	<b>3,48</b>
$\eta_{s,h}$ <sup>3)6)</sup>			<b>133</b>	<b>134</b>	<b>135</b>	<b>136</b>	<b>135</b>	<b>137</b>	<b>135</b>	<b>136</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		24,5	28,1	38,8	44,3	47,2	52,0	55,7	61,4
Sound power <sup>7)</sup>	dB(A)		85	85	87	88	88	89	90	90
Sound pressure at 10 m <sup>8)</sup>	dB(A)		53	53	55	56	56	57	58	58
<b>ECOi-W AQUA EVO 140-360 H S - heat pump</b>										
Nominal cooling capacity <sup>2)</sup>	kW		126	140	194	224	239	263	284	311
Input power <sup>2)</sup>	kW		47,2	57,7	77,6	88,2	96,6	104,5	108,2	124,2
EER <sup>2)</sup> / EER*			2,67 / 2,71	2,43 / 2,45	2,51 / 2,54	2,54 / 2,58	2,47 / 2,50	2,52 / 2,55	2,62 / 2,66	2,50 / 2,53
SEER / $\eta_{s,c}$ <sup>3)</sup>			<b>3,8 / 149</b>	<b>3,95 / 155</b>	<b>4,13 / 162</b>	<b>4,05 / 159</b>	<b>3,60 / 141</b>	<b>3,83 / 150</b>	<b>3,8 / 149</b>	<b>3,93 / 154</b>
SEER* / $\eta_{s,c}$ * <sup>3)</sup>			<b>4,58 / 180</b>	<b>4,65 / 183</b>	<b>3,7 / 145</b>	<b>3,65 / 143</b>	<b>3,63 / 142</b>	<b>2,58 / 100</b>	<b>2,65 / 103</b>	<b>4,17 / 164</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		21,7	24,2	33,5	38,6	41,1	45,3	48,8	53,5
Nominal heating capacity <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	139 / 141	160 / 163	220 / 223	251 / 255	267 / 271	295 / 298	315 / 320	349 / 353
Input power <sup>4)5)</sup>	40-45 °C / 30-35 °C	kW	42,4 / 34,9	48,9 / 41,1	67,2 / 55,1	77,2 / 63,5	82,4 / 67,8	90,4 / 73,5	96,9 / 78,9	107,4 / 87,6
COP <sup>4)5)</sup>	40-45 °C / 30-35 °C		3,27 / 4,05	3,26 / 3,96	3,27 / 4,05	3,25 / 4,02	3,24 / 4,00	3,26 / 4,06	3,25 / 4,05	3,25 / 4,03
SCOP <sup>3)6)</sup>			<b>3,39</b>	<b>3,42</b>	<b>3,46</b>	<b>3,48</b>	<b>3,44</b>	<b>3,51</b>	<b>3,44</b>	<b>3,48</b>
$\eta_{s,h}$ <sup>3)6)</sup>			<b>133</b>	<b>134</b>	<b>135</b>	<b>136</b>	<b>135</b>	<b>137</b>	<b>135</b>	<b>136</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		24,0	27,7	38,1	43,5	46,3	51,2	54,7	60,5
Sound power <sup>7)</sup>	dB(A)		79	79	82	83	83	85	86	86
Sound pressure at 10 m <sup>8)</sup>	dB(A)		47	47	50	51	51	53	54	54
<b>ECOi-W AQUA EVO 140-360 H HT - heat pump</b>										
Nominal cooling capacity <sup>2)</sup>	kW		138	156	216	246	263	290	310	343
Input power <sup>2)</sup>	kW		47,2	56,7	77,0	88,4	95,1	103,7	109,9	123,1
EER <sup>2)</sup>			2,92	2,75	2,80	2,78	2,77	2,80	2,82	2,79
SEER / $\eta_{s,c}$ <sup>3)</sup>			<b>3,68 / 144</b>	<b>3,78 / 148</b>	<b>3,8 / 149</b>	<b>3,73 / 146</b>	<b>3,78 / 148</b>	<b>4,28 / 168</b>	<b>3,95 / 155</b>	<b>4,08 / 160</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		23,7	26,9	37,1	42,3	45,4	50,0	53,3	59,1
Nominal heating capacity <sup>4)</sup>	kW		147	169	232	266	284	310	332	367
Input power <sup>4)</sup>	kW		47,6	54,5	75,7	87,2	92,7	101,2	109,0	119,8
COP <sup>4)</sup>			3,09 / 3,79	3,09 / 3,73	3,07 / 3,76	3,05 / 3,73	3,06 / 3,73	3,06 / 3,76	3,04 / 3,73	3,06 / 3,74
SCOP <sup>3)6)</sup>			<b>3,55</b>	<b>3,58</b>	<b>3,56</b>	<b>3,57</b>	<b>3,53</b>	<b>3,61</b>	<b>3,55</b>	<b>3,58</b>
$\eta_{s,h}$ <sup>3)6)</sup>			<b>139</b>	<b>140</b>	<b>139</b>	<b>140</b>	<b>138</b>	<b>141</b>	<b>139</b>	<b>140</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		25,5	29,2	40,3	46,1	49,2	53,8	57,5	63,6
Sound power <sup>7)</sup>	dB(A)		92	92	94	96	96	97	98	98
Sound pressure at 10 m <sup>8)</sup>	dB(A)		60	60	62	64	64	65	66	66

1) Voltage 400 V +/- 10%. 2) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) According EN14825. 4) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According EN14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) ErP compliant: following COMMISSION REGULATION (EU) No 813/2013. 7) Sound levels are at fully loaded conditions. Sound power values refers to ISO 3744 standard. 8) Sound pressures refer to ISO 3744 standard, parallelepiped shape.

\* High efficiency units (EC) with inverter fans. \*\* H type units with high static pressure fans.



## Technical performance

Power supply	Voltage	V	400	400	400	400	400	400	400	400
	Phase		Three phase							
	Frequency	Hz	50	50	50	50	50	50	50	50
Model	P-		AQAVE0140EA	AQAVE0170EA	AQAVE0230EA	AQAVE0260EA	AQAVE0280EA	AQAVE0300EA	AQAVE0330EA	AQAVE0360EA
<b>ECOi-W AQUA EVO 140-360 E - condensing unit</b>			<b>140</b>	<b>170</b>	<b>230</b>	<b>260</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>360</b>
Nominal cooling capacity <sup>1)</sup>	kW		165	193	250	288	313	337	361	395
Input power <sup>1)</sup>	kW		45,7	55,6	74,6	84,4	91,6	99,4	105	117
Sound power <sup>2)</sup>	dB(A)		90	90	92	93	93	94	95	95
Sound pressure at 10 m <sup>3)</sup>	dB(A)		58	58	60	61	61	62	63	63
<b>ECOi-W AQUA EVO 140-360 E L - condensing unit</b>			<b>140</b>	<b>170</b>	<b>230</b>	<b>260</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>360</b>
Nominal cooling capacity <sup>1)</sup>	kW		159	186	242	279	302	326	351	381
Input power <sup>1)</sup>	kW		46,1	56,4	75,4	84,8	92,6	100	105	118
Sound power <sup>2)</sup>	dB(A)		85	85	87	88	88	89	90	90
Sound pressure at 10 m <sup>3)</sup>	dB(A)		53	53	55	56	56	57	58	58
<b>ECOi-W AQUA EVO 140-360 E S - condensing unit</b>			<b>140</b>	<b>170</b>	<b>230</b>	<b>260</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>360</b>
Nominal cooling capacity <sup>1)</sup>	kW		149	172	225	262	281	305	330	356
Input power <sup>1)</sup>	kW		48,5	59,5	80,1	89,6	98,4	107	111	126
Sound power <sup>2)</sup>	dB(A)		79	79	82	83	83	85	86	86
Sound pressure at 10 m <sup>3)</sup>	dB(A)		47	47	50	51	51	53	54	54
<b>ECOi-W AQUA EVO 140-360 E HT - condensing unit</b>			<b>140</b>	<b>170</b>	<b>230</b>	<b>260</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>360</b>
Nominal cooling capacity <sup>1)</sup>	kW		167	196	253	291	316	341	364	398
Input power <sup>1)</sup>	kW		48	57,7	78,2	88,9	95,8	105	111	123
Sound power <sup>2)</sup>	dB(A)		92	92	94	96	96	97	98	98
Sound pressure at 10 m <sup>3)</sup>	dB(A)		60	60	62	64	64	65	66	66

## Physical features

ECOi-W AQUA EVO 140-360 C/H - cooling only / heat pump			140	170	230	260	280	300	330	360
Dimension	HxWxL	mm	2500 x 1100 x 4000	2500 x 1100 x 4000	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 4550	2500 x 2150 x 4550	2500 x 2150 x 4550
Operating weight - cooling only	STD / L	kg	1157	1200	1693	1890	1953	2227	2345	2519
	S	kg	1162	1205	1698	1895	1958	2232	2350	2524
	HT	kg	1187	1230	1743	1950	2013	2297	2425	2599
	TR	kg	1342	1386	2109	2379	2442	2834	3018	3182
Operating weight - heat pump	STD / L	kg	1312	1355	2078	2343	2458	2702	2887	3063
	S	kg	1317	1360	2083	2348	2463	2707	2892	3068
	HT	kg	1342	1385	2128	2403	2518	2772	2967	3143
Water connections										
Type of water connections (evaporator)			Male gas threaded							
Water inlet/outlet diameter	Inch		2 1/2	2 1/2	3	3	3	3	3	3
<b>ECOi-W AQUA EVO 140-360 E - condensing unit</b>			<b>140</b>	<b>170</b>	<b>230</b>	<b>260</b>	<b>280</b>	<b>300</b>	<b>330</b>	<b>360</b>
Dimension	HxWxL	mm	2500 x 1100 x 4000	2500 x 1100 x 4000	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 3500	2500 x 2150 x 4550	2500 x 2150 x 4550	2500 x 2150 x 4550
Shipping weight	kg		1107	1150	1542	1726	1788	1946	2061	2235
Refrigerant connection										
Connection type			To be brazed							
Inlet diameter	Inch		1 5/8	1 5/8	1 5/8 - 2 1/8	1 5/8 - 2 1/8	1 5/8 - 2 1/8	2 1/8	2 1/8	2 1/8
Outlet diameter	Inch		7/8	7/8	7/8 - 1 1/8	7/8 - 1 1/8	7/8 - 1 1/8	1 1/8	1 1/8	1 1/8

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



# ECOi-W AQUA EVO 400-800 C/H · R410A

Air cooled chillers and heat pumps.

Cooling capacity: 398,8 to 797,9 kW.

Heating capacity: 404 to 807,3 kW.



## Operating limits

To be confirmed with AC SELECT:

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

ECOi-W AQUA EVO 400-800 C - cooling only				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol*	°C	From -10 to 5
		ΔT	K	From 3 to 7
Maximum operating pressure		bar	6	
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 10 to 48
		S / EC / EC S	°C	From -18 to 48
		HT	°C	From -18 to 52
External static pressure	Standard fans	Pa	0	
	High pressure fan (HPF)	Pa	<120	
ECOi-W AQUA EVO 400-800 H - heat pump				
Chilled liquid	Liquid outlet temperature	Water	°C	From 5 to 18
		Water with glycol	°C	From -3 to 5
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature cooling	STD	°C	From 10 to 46
		S / EC / EC S	°C	From -18 to 46
		HT	°C	From -13 to 35
Warm liquid	Liquid outlet temperature	Water	°C	From 25 to 55
		ΔT	K	From 3 to 7
Outdoor air temperature	Air entering temperature heating	STD	°C	From -10 to 20
		S / EC / EC S	°C	From -10 to 35
		HT	°C	From -13 to 35
External static pressure	Standard fans	Pa	0	
	High pressure fan (HPF)	Pa	<120	

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

## The range at a glance

- 2 versions: C (cooling only) and H (heat pump)
- 8 sizes (C type) / 9 sizes (H type)
- 3 configurations: STD (standard), HT (high temperature fan) 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: Cooling only for process application LWT -10 °C
- Polar version: heat pump for extreme conditions
- Plate evaporator
- Electronic expansion valve
- Modbus RS485 (standard for sizes 400-670)
- Microchannel coils
- E-coating coil treatment as standard
- Compressor acoustic box
- Compressor jackets (standard as super low noise)
- Fan speed control (standard as super low noise)
- Phase sequence control
- Water differential pressure switch

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





## Technical performance

	Voltage	V	400	400	400	400	400	400	400	400	
			Phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase	Three phase
				Frequency	Hz	50	50	50	50	50	50
Power supply <sup>1)</sup>											
<b>Model</b>	<b>P-</b>		<b>AQAVE0400CA</b>	<b>AQAVE0450CA</b>	<b>AQAVE0490CA</b>	<b>AQAVE0530CA</b>	<b>AQAVE0600CA</b>	<b>AQAVE0670CA</b>	<b>AQAVE0750CA</b>	<b>AQAVE0800CA</b>	
<b>ECOi-W AQUA EVO 400-800 C - cooling only</b>			<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>600</b>	<b>670</b>	<b>750</b>	<b>800</b>	
Nominal cooling capacity <sup>2)</sup>	kW		398,8	446,1	487,7	533,9	597,1	667,3	748,3	797,9	
Input power <sup>2)</sup>	kW		128,6	142,8	157,1	172,1	192,1	215,0	241,7	257,4	
EER <sup>2)</sup>			3,10	3,12	3,10	3,10	3,11	3,10	3,10	3,10	
EER EC <sup>2)</sup>			3,18	3,21	3,19	3,18	3,19	3,18	3,17	3,17	
<b>SEER <sup>3)4)</sup></b>			<b>4,48</b>	<b>4,43</b>	<b>4,50</b>	<b>4,38</b>	<b>4,58</b>	<b>4,65</b>	<b>4,48</b>	<b>4,50</b>	
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>176</b>	<b>174*</b>	<b>177*</b>	<b>172*</b>	<b>180</b>	<b>183</b>	<b>176*</b>	<b>177*</b>	
<b>SEER EC <sup>3)4)</sup></b>			<b>4,65</b>	<b>4,58</b>	<b>4,68</b>	<b>4,55</b>	<b>4,78</b>	<b>4,85</b>	<b>4,65</b>	<b>4,68</b>	
<b>hsc EC <sup>3)4)</sup></b>			<b>183</b>	<b>180</b>	<b>184</b>	<b>179</b>	<b>188</b>	<b>191</b>	<b>183</b>	<b>184</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		68,6	76,8	84,0	91,9	103	115	129	138	
Sound power <sup>5)</sup>	dB(A)		92	93	93	94	94	94	95	95	
Sound pressure at 10 m <sup>6)</sup>	dB(A)		60	61	60	61	61	61	62	62	
<b>ECOi-W AQUA EVO 400-800 C S - cooling only</b>			<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>600</b>	<b>670</b>	<b>750</b>	<b>800</b>	
Nominal cooling capacity <sup>2)</sup>	kW		396,0	440,4	480,4	524,8	585,3	651,7	743,4	792,2	
Input power <sup>2)</sup>	kW		127,2	141,4	156,0	171,4	192,0	215,6	238,6	254,6	
EER <sup>2)</sup>			3,11	3,11	3,08	3,06	3,05	3,02	3,12	3,11	
EER EC <sup>2)</sup>			3,20	3,21	3,17	3,15	3,13	3,10	3,20	3,19	
<b>SEER <sup>3)4)</sup></b>			<b>4,50</b>	<b>4,63</b>	<b>4,58</b>	<b>4,78</b>	<b>4,80</b>	<b>4,73</b>	<b>4,73</b>	<b>4,70</b>	
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>177</b>	<b>182</b>	<b>180</b>	<b>188</b>	<b>189</b>	<b>186</b>	<b>186</b>	<b>185</b>	
<b>SEER EC <sup>3)4)</sup></b>			<b>4,68</b>	<b>4,80</b>	<b>4,73</b>	<b>5,05</b>	<b>5,05</b>	<b>4,93</b>	<b>4,93</b>	<b>4,90</b>	
<b>hsc EC <sup>3)4)</sup></b>			<b>184</b>	<b>189</b>	<b>186</b>	<b>199</b>	<b>199</b>	<b>194</b>	<b>194</b>	<b>193</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		68,1	75,8	82,7	90,4	101	112	128	137	
Sound power <sup>5)</sup>	dB(A)		86	87	87	87	88	88	89	89	
Sound pressure at 10 m <sup>6)</sup>	dB(A)		54	54	54	54	55	55	56	56	
<b>ECOi-W AQUA EVO 400-800 C HT - cooling only</b>			<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>600</b>	<b>670</b>	<b>750</b>	<b>800</b>	
Nominal cooling capacity <sup>2)</sup>	kW		411,2	455,8	497,3	543,1	607,2	678,7	768,3	820,5	
Input power <sup>2)</sup>	kW		123,4	138,4	152,2	167,3	186,4	208,9	234,2	249,2	
EER <sup>2)</sup>			3,33	3,29	3,27	3,25	3,26	3,25	3,28	3,29	
<b>SEER <sup>3)4)</sup></b>			<b>4,78</b>	<b>4,83</b>	<b>4,80</b>	<b>4,83</b>	<b>4,85</b>	<b>4,85</b>	<b>4,70</b>	<b>4,63</b>	
<b>η<sub>s,c</sub> <sup>3)4)</sup></b>			<b>188</b>	<b>190</b>	<b>189</b>	<b>190</b>	<b>191</b>	<b>191</b>	<b>185</b>	<b>182</b>	
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		70,8	78,5	85,7	93,6	105	117	132	142	
Sound power <sup>5)</sup>	dB(A)		93	93	94	94	94	95	96	96	
Sound pressure at 10 m <sup>6)</sup>	dB(A)		60	61	60	61	61	61	62	62	

1) Voltage 400 V +/- 10%. 2) According EN14511-2013: 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 EN14825. 5) Sound powers is declared in nominal full load condition (cooling operation), referring to ISO standard 9614, in accordance with Eurovent certification program. 6) Sound pressure refer to ISO Standard 3744, parallelepiped shape in a free field on a reflective surface. 7) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB.

\* Non ErP compliant: following COMMISSION REGULATION (EU) 2016/2281.

## Accessories and options

Anti-vibration spring dampers
Automatic circuit breaker
BMS interface
Coils treatments
Desuperheater
Fan speed control (-14 °C in cooling mode – standard as super low noise version)
Hydrokit with 1 or 2 pumps with or without buffer tank (500 l 400-450, 1000 l 470-670)

## Accessories and options

Mechanical gauges
Overload protection for compressors
Power factor corrector capacitors
Soft starter
SRC - mini BMS controller
Unit protection grilles
Water filter
Water flow switch



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



## Technical performance

Power supply <sup>1)</sup>	Voltage	V	400	400	400	400	400	400	400	400	400
	Phase		Three phase								
	Frequency	Hz	50	50	50	50	50	50	50	50	50
Model	P-		AQAVE0400HA	AQAVE0450HA	AQAVE0490HA	AQAVE0530HA	AQAVE0580HA	AQAVE0620HA	AQAVE0670HA	AQAVE0750HA	AQAVE0800HA
<b>ECOi-W AQUA EVO 400-800 H - heat pump</b>			<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>580</b>	<b>620</b>	<b>670</b>	<b>750</b>	<b>800</b>
Nominal cooling capacity <sup>2)</sup>	kW		373,5	419,2	454,5	489,7	535,7	581,5	625,4	701,4	748,1
Input power <sup>2)</sup>	kW		132,3	147,8	160,9	173,0	190,2	206,1	221,5	247,4	263,8
EER <sup>2)</sup>			2,82	2,84	2,82	2,83	2,82	2,82	2,82	2,84	2,84
EER EC <sup>2)</sup>			2,90	2,91	2,90	2,90	2,90	2,90	2,90	2,91	2,91
<b>SEER <sup>3)</sup></b>			<b>4,65</b>	<b>4,53</b>	<b>4,7</b>	<b>4,55</b>	<b>4,33</b>	<b>4,35</b>	<b>4,3</b>	<b>4,3</b>	<b>4,35</b>
$\eta_{s,c}$ <sup>3)</sup>			<b>183</b>	<b>178</b>	<b>185</b>	<b>179</b>	<b>170*</b>	<b>171*</b>	<b>169*</b>	<b>169*</b>	<b>171*</b>
<b>SEER EC <sup>3)</sup></b>			<b>4,93</b>	<b>4,83</b>	<b>4,97</b>	<b>4,88</b>	<b>4,5</b>	<b>4,5</b>	<b>4,45</b>	<b>4,45</b>	<b>4,48</b>
$\eta_{s,c}$ EC <sup>3)</sup>			<b>194</b>	<b>190</b>	<b>196</b>	<b>192</b>	<b>177*</b>	<b>177*</b>	<b>175*</b>	<b>175*</b>	<b>176*</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		64,3	72,1	78,2	84,3	92,2	100	108	121	129
Nominal heating capacity <sup>4)</sup>	kW		404,0	450,9	492,7	532,1	585,8	627,7	677,8	758,3	807,3
Input power <sup>4)</sup>	kW		125,9	140,8	153,8	166,3	183,0	195,5	212,0	237,0	252,3
COP <sup>4)</sup>			3,21	3,20	3,20	3,20	3,20	3,21	3,20	3,20	3,20
COP <sup>5)</sup>			3,88	3,82	3,85	3,87	3,85	3,88	3,85	3,9	3,87
COP EC <sup>4)</sup>			3,30	3,29	3,29	3,29	3,29	3,31	3,29	3,29	3,29
COP EC <sup>5)</sup>			4,0	3,94	3,98	4,0	3,98	4,01	3,98	4,03	4,0
<b>SCOP <sup>3)</sup></b>			<b>3,46</b>	<b>3,47</b>	<b>3,37</b>	<b>3,38</b>	—	—	—	—	—
$\eta_{s,h}$ <sup>3)</sup>			<b>135</b>	<b>136</b>	<b>132</b>	<b>132</b>	—	—	—	—	—
<b>SCOP EC <sup>3)</sup></b>			<b>3,62</b>	<b>3,62</b>	<b>3,53</b>	<b>3,53</b>	—	—	—	—	—
$\eta_{s,h}$ EC <sup>3)</sup>			<b>142</b>	<b>142</b>	<b>138</b>	<b>138</b>	—	—	—	—	—
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		70,1	78,3	85,5	92,3	102	109	118	131	140
Sound power <sup>6)</sup>	dB(A)		92	93	93	94	94	95	95	95	95
Sound pressure at 10 m <sup>7)</sup>	dB(A)		60	61	60	61	61	62	62	62	62
<b>ECOi-W AQUA EVO 400-800 H S - heat pump</b>			<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>580</b>	<b>620</b>	<b>670</b>	<b>750</b>	<b>800</b>
Nominal cooling capacity <sup>2)</sup>	kW		371,2	417,3	453,4	487,3	531,4	578,6	621,5	701,5	743,2
Input power <sup>2)</sup>	kW		128,1	143,6	156,5	167,6	183,3	199,0	214,1	241,4	256,6
EER <sup>2)</sup>			2,90	2,91	2,90	2,91	2,90	2,91	2,90	2,91	2,90
EER EC <sup>2)</sup>			2,98	2,99	2,98	2,99	2,98	2,99	2,99	2,99	2,98
<b>SEER <sup>3)</sup></b>			<b>5,03</b>	<b>4,53</b>	<b>5,1</b>	<b>5,05</b>	<b>4,6</b>	<b>4,6</b>	<b>4,55</b>	<b>4,55</b>	<b>4,58</b>
$\eta_{s,c}$ <sup>3)</sup>			<b>198</b>	<b>178</b>	<b>201</b>	<b>199</b>	<b>181</b>	<b>181</b>	<b>179</b>	<b>179</b>	<b>180</b>
<b>SEER EC <sup>3)</sup></b>			<b>5,35</b>	<b>5,33</b>	<b>5,45</b>	<b>5,48</b>	<b>4,75</b>	<b>4,73</b>	<b>4,7</b>	<b>4,65</b>	<b>4,65</b>
$\eta_{s,c}$ EC <sup>3)</sup>			<b>211</b>	<b>210</b>	<b>215</b>	<b>216</b>	<b>187</b>	<b>186</b>	<b>185</b>	<b>183</b>	<b>183</b>
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		63,9	71,8	78,0	83,9	91,5	99,6	107	121	128
Nominal heating capacity <sup>4)</sup>	kW		403,6	451,7	490,3	531,2	585,6	627,1	676,7	757,4	805,3
Input power <sup>4)</sup>	kW		124,3	138,2	152,2	165,9	182,9	193,2	209,6	234,0	247,7
COP <sup>4)</sup>			3,25	3,27	3,22	3,20	3,20	3,25	3,23	3,24	3,25
COP <sup>5)</sup>			4,01	3,97	3,97	3,98	3,96	4,01	3,97	4,04	4,01
COP EC <sup>4)</sup>			3,34	3,37	3,32	3,29	3,30	3,34	3,32	3,34	3,35
COP EC <sup>5)</sup>			4,16	4,11	4,11	4,12	4,11	4,16	4,11	4,19	4,15
<b>SCOP <sup>3)</sup></b>			<b>3,76</b>	<b>3,76</b>	<b>3,69</b>	<b>3,68</b>	—	—	—	—	—
$\eta_{s,h}$ <sup>3)</sup>			<b>147</b>	<b>147</b>	<b>145</b>	<b>144</b>	—	—	—	—	—
<b>SCOP EC <sup>3)</sup></b>			<b>3,99</b>	<b>3,98</b>	<b>3,91</b>	<b>3,89</b>	—	—	—	—	—
$\eta_{s,h}$ EC <sup>3)</sup>			<b>157</b>	<b>156</b>	<b>153</b>	<b>153</b>	—	—	—	—	—
Nominal water flow (in the evaporator)	m <sup>3</sup> /h		70,0	78,4	85,1	92,2	102	109	117	132	140
Sound power <sup>6)</sup>	dB(A)		86	87	87	87	88	88	88	89	89
Sound pressure at 10 m <sup>7)</sup>	dB(A)		53	54	54	54	55	55	55	56	56

1) Voltage 400 V +/- 10%. 2) According EN14511-2013: chilled water inlet/outlet temperature: 12/7 °C, outdoor ambient temperature 35 °C DB. 3) According EN14825. 4) According EN14511-2013: warm water inlet/outlet temperature: 40/45 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 5) According EN14511-2013: warm water inlet/outlet temperature: 30/35 °C, outdoor ambient temperature 7 °C DB/6 °C WB. 6) Sound power is declared in nominal full load condition (cooling operation), referring to ISO standard 9614, in accordance with Eurovent certification program. 7) Sound pressure refer to ISO Standard 3744, parallelepiped shape in a free field on a reflective surface. 8) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. \* Non ErP compliant: following COMMISSION REGULATION (EU) 2016/2281.

**Physical features**

<b>ECOi-W AQUA EVO 400-800 C - cooling only</b>		<b>400</b>	<b>450</b>	<b>490</b>	<b>530</b>	<b>600</b>	<b>670</b>	<b>750</b>	<b>800</b>		
Dimension	H x W	mm	2500 x 2175								
	Length STD / EC / HPF / TR	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	
	TR	kg	3409	3763	4198	4498	4832	5100	6264	6365	
<b>Water connections (evaporator and condenser)</b>											
Type of water connections			Victaulic®								
Water inlet/outlet diameter		Inch	4	4	4	4	4	5	6	6	
<b>ECOi-W AQUA EVO 400-800 H - heat pump</b>											
Dimension	H x W	mm	2500 x 2175								
	Length STD / EC / HPF	mm	5620	5620	6680	6680	7760	8800	8800	9950	9950
	Length S / EC S	mm	6680	6680	7760	7760	8800	9850	9850	12050	12050
Operating weight	STD / EC / HPF	kg	3769	3938	4412	4744	5214	5554	5691	6790	6985
	S / EC S	kg	4131	4293	4764	5101	5567	5919	6059	7497	7683
<b>Water connections (evaporator)</b>											
Type of water connections			Victaulic®								
Water inlet/outlet diameter		Inch	4	4	4	4	4	5	5	6	6



# 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 - cooling only			
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	Standard fans	Pa	0
	High pressure fans	Pa	< 120

## Accessories and options

Antifreeze electric heater for hydraulic manifolds
BMS interface
Chiller grilles
Compressor acoustic box
Compressor star delta start
Compressor suction valve
E-coating treatment
Finned tubes (Al/Cu)

## The range at a glance

- 1 version: C (cooling only)
- 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

Flow switch
Hydro kit 1P-SP/1P-HP/2P-SP/2PHP
Mechanical gauges kit (HP and LP manometers)
NetTune (managing a network of up to 6 units)
Power factor corrector capacitors
Anti-vibration spring dampers
Variable pump
Water filter

## AC SELECT.

Smart and user-friendly the new air conditioning selection program: <https://acselect.panasonic.eu/>





Technical performance

Model	P-SWVN****CA	0380	0440	0510	0590	0660	0730	0810	0900	0980	1060	1160	1260
<b>ECOi-W SW-N EVO 380-1260 C STD / HT / HP - cooling only</b>		<b>380</b>	<b>440</b>	<b>510</b>	<b>590</b>	<b>660</b>	<b>730</b>	<b>810</b>	<b>900</b>	<b>980</b>	<b>1060</b>	<b>1160</b>	<b>1260</b>
Nominal cooling capacity <sup>1)</sup>	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 <sup>1)</sup>	kW	123,9	142,9	165,6	181,1	206,2	228,6	253,4	290,2	322,3	332,0	370,4	408,1
EER <sup>1)</sup>		2,95	3,10	3,02	3,12	3,12	3,08	3,07	3,09	3,05	3,15	3,12	3,04
EER <sub>CONDITION B</sub> [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 <sub>CONDITION C</sub> [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 <sub>CONDITION D</sub> [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
<b>SEER <sup>2)3)</sup></b>		<b>4,53</b>	<b>4,66</b>	<b>4,65</b>	<b>4,80</b>	<b>4,66</b>	<b>4,56</b>	<b>4,62</b>	<b>4,56</b>	<b>4,60</b>	<b>4,87</b>	<b>4,86</b>	<b>4,85</b>
<b>η<sub>s,c</sub> <sup>2)3)</sup></b>	<b>%</b>	<b>178</b>	<b>183</b>	<b>183</b>	<b>189</b>	<b>183</b>	<b>179</b>	<b>182</b>	<b>179</b>	<b>181</b>	<b>192</b>	<b>191</b>	<b>191</b>
Number of refrigerant circuits		2	2	2	2	2	2	2	2	2	2	2	2
Total capacity steps <sup>4)</sup>	%	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 <sup>5)</sup>	dB(A)	97	98	100	100	100	101	101	102	102	103	103	103
Sound power <sup>5)**/**</sup>	dB(A)	102	103	104	104	104	105	105	106	106	107	108	108
Sound pressure at 10 m <sup>6)</sup>	dB(A)	65	66	68	68	68	68	68	69	69	70	70	70
Sound pressure at 10 m <sup>6)**/**</sup>	dB(A)	70	71	72	72	72	72	72	73	73	74	75	75
<b>ECOi-W SW-N EVO 380-1260 C S - cooling only</b>		<b>380</b>	<b>440</b>	<b>510</b>	<b>590</b>	<b>660</b>	<b>730</b>	<b>810</b>	<b>900</b>	<b>980</b>	<b>1060</b>	<b>1160</b>	<b>1260</b>
Nominal cooling capacity <sup>1)</sup>	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 <sup>1)</sup>	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 <sup>1)</sup>		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 <sub>CONDITION B</sub> [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 <sub>CONDITION C</sub> [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 <sub>CONDITION D</sub> [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
<b>SEER <sup>2)3)</sup></b>		<b>4,56</b>	<b>4,82</b>	<b>4,79</b>	<b>4,89</b>	<b>4,78</b>	<b>4,73</b>	<b>4,77</b>	<b>4,69</b>	<b>4,82</b>	<b>4,98</b>	<b>5,07</b>	<b>5,03</b>
<b>η<sub>s,c</sub> <sup>2)3)</sup></b>	<b>%</b>	<b>180</b>	<b>190</b>	<b>189</b>	<b>193</b>	<b>188</b>	<b>186</b>	<b>188</b>	<b>185</b>	<b>190</b>	<b>196</b>	<b>200</b>	<b>198</b>
Number of refrigerant circuits		2	2	2	2	2	2	2	2	2	2	2	2
Total capacity steps <sup>4)</sup>	%	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 <sup>5)</sup>	dB(A)	94	94	97	97	97	98	98	99	99	99	100	100
Sound pressure at 10 m <sup>6)</sup>	dB(A)	62	62	65	65	65	65	65	66	66	66	67	67

Physical features

<b>ECOi-W SW-N EVO 380-1260 C - cooling only</b>		<b>380</b>	<b>440</b>	<b>510</b>	<b>590</b>	<b>660</b>	<b>730</b>	<b>810</b>	<b>900</b>	<b>980</b>	<b>1060</b>	<b>1160</b>	<b>1260</b>	
Dimension	Height	mm	2.510	2.510	2.510	2.510	2.510	2.510	2.510	2.510	2.510	2.510	2.510	
	Height S	mm	2.590	2.590	2.590	2.590	2.590	2.590	2.590	2.590	2.590	2.590	2.590	
	Width	mm	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	2.192	
	Length	mm	4.660	5.712	5.712	6.764	7.816	7.816	8.868	9.920	10.972	12024	13.076	13.076
Operating weight	STD / HT / HP	kg	3.896	4.259	4.897	5.241	5.620	6.207	6.531	7.326	7.764	8.491	8.875	9.074
	S	kg	3.981	4.352	4.990	5.323	5.702	6.293	6.617	7.412	7.852	8.579	8.963	9.162

1) Data refers to 7 °C leaving chilled water temperature and 35 °C condenser air temperature, according EN14511-2013 standard. 2) ErP compliant: following COMMISSION REGULATION (EU) 2016/2281. 3) According EN14825. 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.). \*\* HP 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.

