

NEW HEAT PUMP CHILLER 2019 — 2020

THE WORLD OF HEATING AND COOLING IS
CHANGING WITH PANASONIC





DISCOVER A NEW ERA
OF ECOi, THE ECOi-W.
HEAT PUMP CHILLERS



Panasonic introduces a new Heat Pump Chiller series which is named as ECOi-W. This new series provides a wide variety of HVAC system solutions, to meet all of your residential, commercial and industrial needs.

Unrivaled Reliability and Quality.

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

ECOi-W MEETS THE CUSTOMER'S NEEDS, WITH THIS FULLY CUSTOMISABLE HEAT PUMP CHILLER

1 High Energy saving and Comfort

- High SEER/SCOP
- Quiet operation
- Cloud compatible
- Modbus built-in

2 High Flexibility

- From 20kW to 210kW
- Customisable design
- Operating range: -17°C (Heating) to 50°C (Cooling)
- Wide range of Hydraulic options
- Wide range of communication protocols

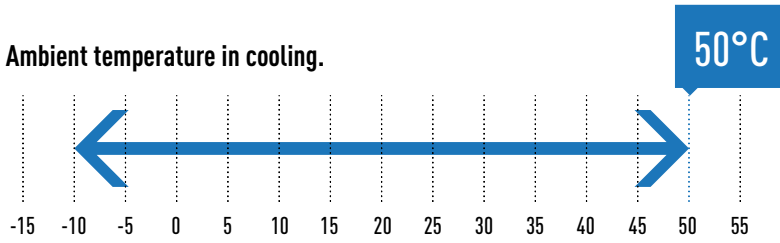
3 High Quality

- Defrost limiting coil design (140 to 210)
- Optimized design for service and maintenance
- Compact footprint

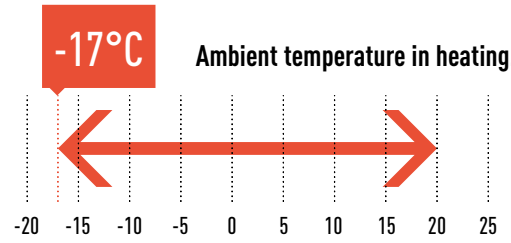
Operating condition

Panasonic ECOi-W provides wide operation range from -17°C in heating to 50°C in cooling.

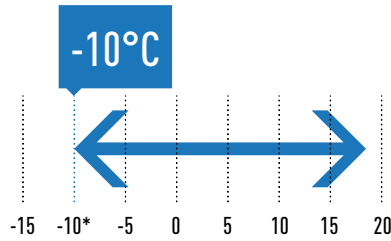
Ambient temperature in cooling.



Ambient temperature in heating.



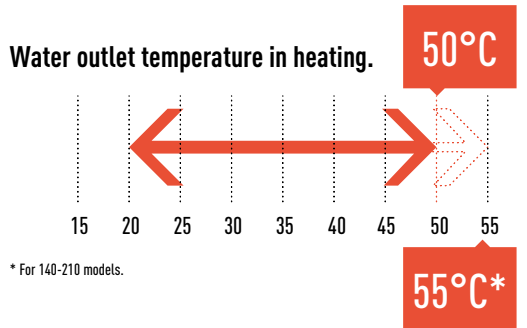
Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).



Water outlet temperature in cooling.
One of the uniqueness which ECOi-W has, is the water outlet temperature up to -10°C in cooling. It can ensure the operation temperature of the process equipment in factories.

* With glycol 45%, 5°C without glycol.

Water outlet temperature in heating.



* For 140-210 models.

ECOi-W the solution for hotels, offices and the industry

Hotels



Offices



Industry



ECOi-W provides the optimal performance in any climatic condition

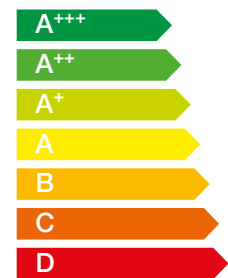


R410A



Energy efficiency class ¹⁾

More efficient



Less efficient

Simple Line-up List

ECOi-W Size	20	25	30	35	40	45	55	65	75	90	105	125	140	150	170	190	210	
Cooling capacities (kW)	19,4	25,3	26,9	35,8	37,4	46,8	53,3	65,8	71,6	91,4	106,2	121,9	125,4	137,6	150,9	175,8	195,4	
Heating capacities (kW)	19,5	26,9	29,7	37,3	41,6	48,5	58,2	67,2	75,9	88,1	101,0	119,1	143,7	153,7	170,1	194,9	217,6	
SEER	3,91	3,87	3,88	3,68	3,91	3,70	3,86	4,04	3,99	3,89	3,88	3,89	3,87	3,87	3,91	3,69	3,68	
SCOP	3,37	3,27	3,27	3,36	3,40	3,23	3,27	3,43	3,40	3,26	3,31	3,35	3,32	3,36	3,31	3,29	3,23	
Energy efficiency class (Scale A+++ to D) ¹⁾	A+	A+	A+	A+	A+	A+	A+	A+										
Dimensions (H x W x D) ²⁾	 1983 x 1000 x 1000	 1983 x 1000 x 1000	 1986 x 2180 x 1160	 1986 x 2180 x 1160	 2286 x 2180 x 1160	 2295 x 2856 x 2210	 2321 x 2856 x 2210											

1) Seasonal space heating energy efficiency class according to scale from A+++ to D, as of 26th September 2019. 2) Without buffer tank.

PANASONIC CERTIFIED QUALITY

Panasonic does not compromise on product quality, safety or durability, in order to provide the ultimate comfort when you need it most.



Class A pump

An efficient pump is equipped as a standard. A wide range of single and double pump, plus pump drive options available.

* Available in 20-40.

Axial AC/EC fan

Microprocessor control automatically adjusts fan speed to High, Medium or Low, corresponding to room sensor.

Also maintains comfortable airflow throughout the room.

SWEP BP Heat Exchanger

Very compact & long durability of SWEP Braze Plate Heat Exchanger.

Unique design for the size 140 - 210 improving frost protection and efficiency.



Model type supplied may vary.

Simple user friendly control

In addition to basic control functions...

- Intelligent logic control for inlet water temperature
- Night setback operation to reduce electrical consumption and noise
- Automatic Test operation at the push of a button

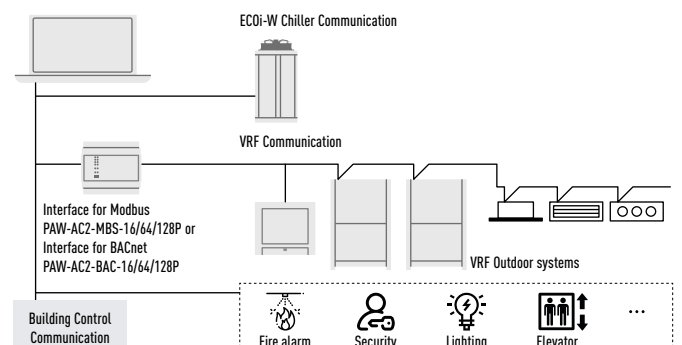


BMS integration

Modbus RTU as standard.

Modbus TCP/IP, BACnet IP and BACnet MSTP as optional availability.

Integrated systems with ECOi-W Chiller, VRF and BMS control can be offered.





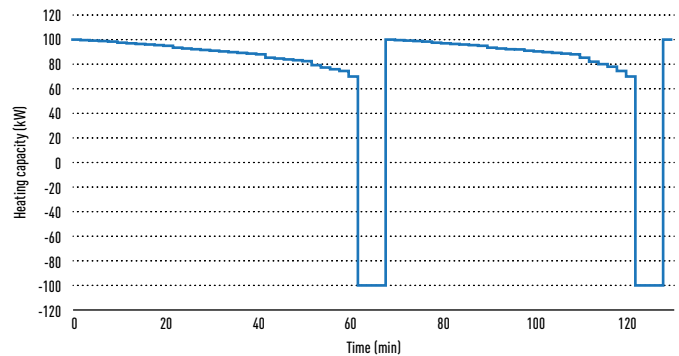
Defrost limiting coil design

- Fin space increased to prevent the coil freezing
- Number of rows increased to maintain the same capacity in standard conditions
- Designed to decrease freezing frequency as soon as External air T° goes below 7°C

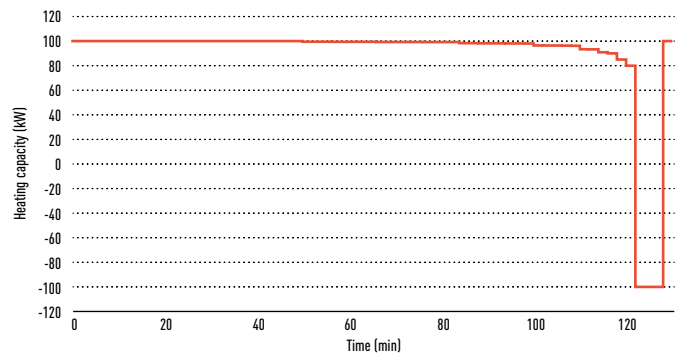


* Available in 140-210.

Standard coil: 2 defrost every 130 min



Special coil design: 1 defrost every 130 min



+22% MORE HEATING
+15% HIGHER COP
SCOP IMPROVED

Victaulic grooved connection

Victaulic Installation-Ready™ couplings assure proper piping installation. Optimized design to reduce installation effects, including noise and vibration attenuation.



Model type supplied may vary.

* Available in 140-210.

Bluefin as standard

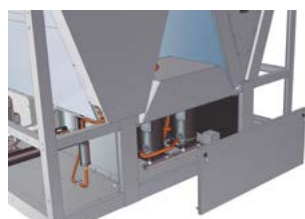
Bluefin anti-corrosion coating prevents salt damage for the longer life time.



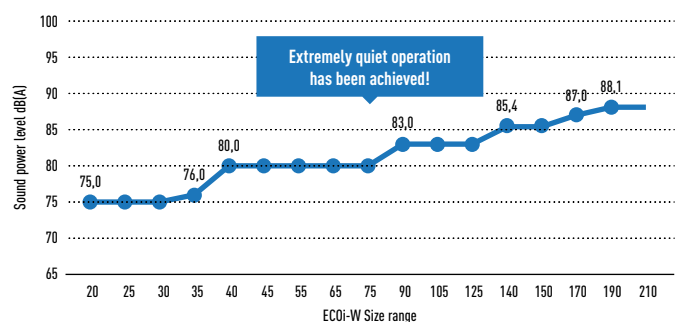
Low noise kit

ECOi-W series is equipped with the compressor phonic insulation box as a standard.

* Standard in 20-40, 140-210. Optional in 45-125.



ECOi-W Quiet operation in full range

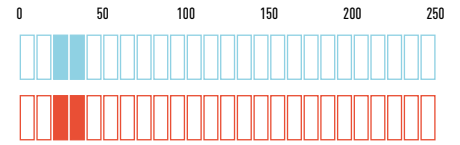
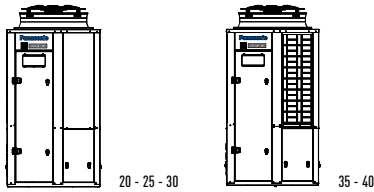


* Performance with standard fans. In the range 45-125, noise performance without low noise option.

PRODUCT RANGE OVERVIEW

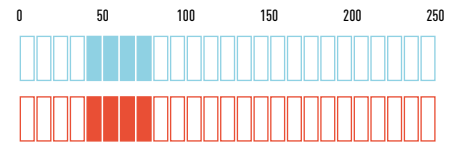
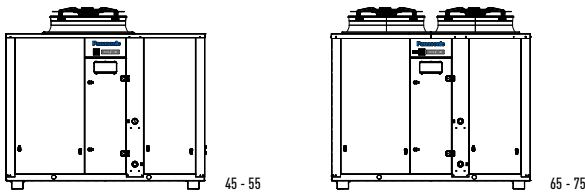
ECOi-W 20 - 25 - 30 - 35 - 40 (Page 10-11)

Compact and powerful heat pump chiller series with Panasonic quality verification. ECOi-W Series guarantees quiet operation. Low noise package is equipped as standard.



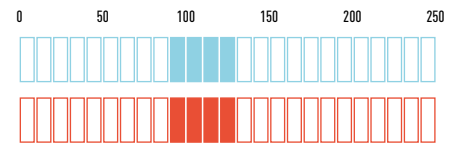
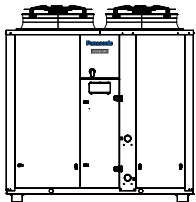
ECOi-W 45 - 55 - 65 - 75 (Page 12-13)

High seasonal efficiency in cooling, maximum SEER 4,04 in this range. ECOi-W Series offers a variety of options to meet your needs.



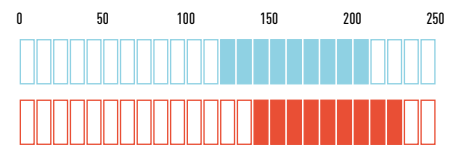
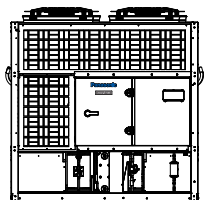
ECOi-W 90 - 105 - 125 (Page 14-15)

Customizable design gives high flexibility. Wide range of communication protocols fulfill the requirements in hotels, offices, industry applications.



ECOi-W 140 - 150 - 170 - 190 - 210 (Page 16-17)

Heat pump chiller series with powerful operation by 4 scroll compressors. Maximum water outlet temperature in heating is up to 55°C. Defrost limiting design ensures to provide stable hot water even at ambient conditions.



There is a reason to choose Panasonic as your partner.
Panasonic does not compromise on product quality, always strives for 100% Quality.
ECOi-W series offers smart technology meeting your needs at home and business.

Reliable quality

100% QUALITY
QUALITY CERTIFIED BY PANASONIC

Quality certified by Panasonic.
Panasonic does not compromise on product quality, safety, durability in order to provide the ultimate comfort when you need it most.



Eurovent Certified Performance.
The performance of ECOi-W Series has been certified by Eurovent to prove the high quality and high performance by Panasonic.
<https://www.eurovent-certification.com/>



ECOi-W Series are compliant with ErP regulation.
SEER follows COMMISSION REGULATION (EU) No 2016/2281.
SCOP follows COMMISSION REGULATION (EU) No 813/2013.

Support materials for customers

AutoCAD 2D files and BIM models for ECOi-W full range is ready at Panasonic PROClub.
<https://www.panasonicproclub.com>



Energy saving

HIGH SEER
4,04

High Seasonal Efficiency in cooling mode.
SEER follows COMMISSION REGULATION (EU) No 2016/2281.

HIGH SCOP
3,43

High Seasonal Efficiency in heating mode.
SCOP follows COMMISSION REGULATION (EU) No 813/2013.

High Performance and comfortability



Super Quiet.
Extra quiet version is available as standard (with sizes 20 – 40, 140 – 210).



Bluefin.
Bluefin coil comes as standard. The life time of coils have been extended thanks to the hydrophilic coating.



Ultimate Customisation.
Various different options for extra pumps, different ambient, hydraulic systems and more are offered. Ultimate customization for your needs and environment.



Automatic fan operation.
Convenient microprocessor control automatically adjusts fan speed to High, Medium or Low, corresponding to room sensor and maintains comfortable airflow throughout the room.



Down to -17°C in heating mode.
The ECOi-W system works in heating mode at outdoor temperature down to -17°C.



Up to 50°C in cooling mode.
The ECOi-W system works in cooling mode at outdoor temperature up to 50°C.



Defrost limiting cycle (140 – 210).
Each pair of coils can be defrosted wisely while the other pair of coils are running in heating mode. This alternated defrost cycle ensures stable hot water even at low ambient conditions.

High connectivity



Cloud control.
The Cloud control for ECOi-W series allows you to have complete control of all your installations. In a simple click, receive status updates from your systems in real-time, preventing breakdowns and optimizing costs.



BMS connectivity.
The communication port can be integrated into the ECOi-W system and provides easy connection and control. Modbus RTU is equipped as standard. Modbus TCP/IP, BACnet IP and BACnet MSTP as optional availability.

U- 020/025/030/035/040 CW

Cooling capacity: 19,4 to 37,4kW
 Heating capacity: 19,5 to 41,6kW

NEW
2019

Compact and powerful heat pump chiller series with Panasonic quality verification. ECOi-W Series guarantees quiet operation. Low noise package is equipped as standard.



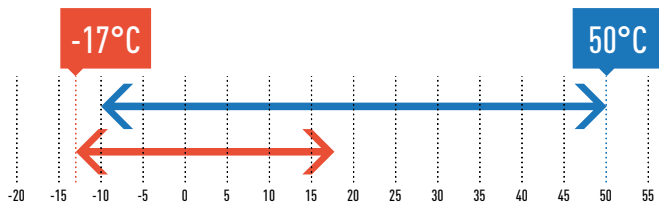
20 - 25 - 30

35 - 40

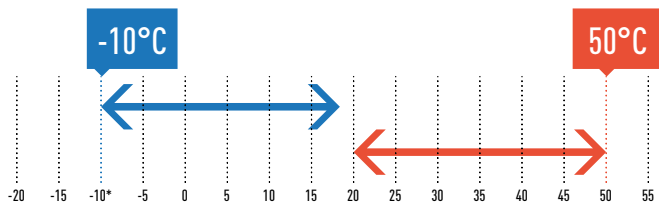


* Seasonal space heating energy efficiency class (Scale A+++ to D).

Ambient temperature.



Water outlet temperature.



Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).
 * With glycol 45%, 5°C without glycol.

- High seasonal efficiency in cooling and heating
- Eurovent certified
- Ambient temperature operation range: -10 - +50°C in cooling, -17 - +20°C in heating
- Water outlet temperature range: -10 - +18°C in cooling, +20 - +50°C in heating
- Super quiet operation
- Optimized design for service and maintenance
- Simple user friendly control as standard
- Modbus RTU as standard
- Cloud control option

Technical focus

- Chiller type: Heat pump
- Compressor type (number of compressors): Scroll compressors (2)
- Refrigeration type: R410
- Refrigerant circuit: 1
- Fan type (number of fans): Axial fan (1)
- Heat exchanger: Stainless Steel Plate Heat exchanger
- Flow switch, Water safety & Air purge valves included
- Water filter included (Mandatory site installation required)
- Night Mode setting to save energy and reduce noise level
- Water compensation curve control
- Optional Hydraulic Kit
- Epoxy finned coil treatment (Blygold)
- Optional Modbus TCP/IP, BACnet IP and BACnet MSTP

Available options

Options				
Pump	Pump drive	Hydraulic options	Ambient options	Misc. options
Single Pump (as standard)	Fixed Speed	Low water pressure sensor	Finned coil treatment - epoxy	Soft Starter
	Variable speed	Water isolation valves	Rubber pads	Power supply w/o neutral
	Variable capacity		Spring damper	Cloud Connection
	Constant outlet pressure		All seasons	Modbus TCP/IP
	Constant differential pressure		Nordic pack	BACnet MSTP
			High pressure fan	BACnet IP

The detail information on page 22.



PAW-SYSREMKIT
Optional Remote Control.



PAW-SYSSOV1
Optional Shut off valves kit for model 20 - 40.

Model			20	25	30	35	40
Standard without buffer tank			U-020CWNB	U-025CWNB	U-030CWNB	U-035CWNB	U-040CWNB
With buffer tank			U-020CWBS	U-025CWBS	U-030CWBS	U-035CWBS	U-040CWBS
Power supply	Voltage	V	400	400	400	400	400
	Phase		Three Phase	Three Phase	Three Phase	Three Phase	Three Phase
	Frequency	Hz	50	50	50	50	50
Cooling capacity ¹⁾		kW	19,40	25,30	26,90	35,80	37,40
Input power cooling ¹⁾		kW	6,10	8,61	9,34	13,51	13,64
Total EER 100% ¹⁾			3,18	2,94	2,88	2,65	2,74
SEER ²⁾			3,91	3,87	3,88	3,68	3,91
η_{sc} ²⁾			153,00	152,00	152,00	144,00	153,00
Heating capacity ³⁾		kW	19,50	26,90	29,70	37,30	41,60
Input power heating ³⁾		kW	6,11	9,28	9,93	13,23	13,51
SCOP ⁴⁾			3,37	3,27	3,27	3,36	3,40
η_{sh} ⁴⁾			132,00	128,00	128,00	132,00	133,00
Energy efficiency class (Scale A+++ to D) ⁵⁾			A+	A+	A+	A+	A+
Startup type			Direct	Direct	Direct	Direct	Direct
Maximum operating current		A	17,70	22,20	24,30	31,80	33,80
Startup current w/o softstarter / w softstarter		A	52,71 / 28,11	63,71 / 35,21	77,29 / 48,79	118,34 / 52,99	119,34 / 53,99
Sound power level (w standard fans)		dB(A)	75,0	75,0	75,0	76,0	76,0
Sound pressure level (w standard fans) ⁶⁾		dB(A)	42,8	42,8	42,8	43,8	43,8
Dimensions (w standard fans) w/o buffer tank	H x W x D	mm	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000	1983 x 1000 x 1000
Dimensions (w standard fans) w buffer tank	H x W x D	mm	1983 x 1000 x 1507	1983 x 1000 x 1507	1983 x 1000 x 1507	1983 x 1000 x 1507	1983 x 1000 x 1507
Weight (w 1 pump) w/o buffer tank		kg	280	290	320	330	330
Weight (w 1 pump) w buffer tank		kg	345	355	385	395	395
Refrigerant (R410A)		kg	6,5	8,4	8,4	9,1	9,2
Number of refrigerant circuit			1	1	1	1	1
Compressors							
Number			2	2	2	2	2
Type			Scroll	Scroll	Scroll	Scroll	Scroll
Part load step		%	0 / 50 / 100	0 / 50 / 100	0 / 50 / 100	0 / 50 / 100	0 / 50 / 100
Crankcase heater		W	2x40	2x40	2x49	2x49	2x49
Evaporator							
Number			1	1	1	1	1
Type			Plate	Plate	Plate	Plate	Plate
Nominal water flow (cooling)		m ³ /h	3,35	4,36	4,64	6,16	6,44
Water pressure drop (cooling)		kPa	23	37	22	37	40
Water volume		l	1,78	1,78	2,55	2,55	2,55
Antifreeze heater		W	30	30	30	30	30
Coils							
Number			1	1	1	1	1
Frontal surface		m ²	2,4	2,4	2,4	2,8	2,8
Number of rows			2	2	2	2	2
Fans standard							
Number			1	1	1	1	1
Airflow		m ³ /h	9000	13000	13000	16000	16000
Rotation speed		r.p.m.	900	900	900	650	650
Power input (each fan)		W	620	940	940	930	930
Water connections							
Type			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Inlet - diameter		Inch	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2
Outlet - diameter		Inch	1 1/2	1 1/2	1 1/2	1 1/2	1 1/2

1) Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard. 2) Following COMMISSION REGULATION (EU) No 2016/2281 for comfort application chillers. 3) Data refers to 45°C leaving warm water temperature and 7°C ambient coil air temperature with 87% R.H., according EN14511 standard. 4) Following COMMISSION REGULATION (EU) No 813/2013 for low-temperature heat pumps. 5) Following COMMISSION REGULATION (EU) No 811/2013 for low-temperature heat pumps. Scale from A+++ to D, as of 26th September 2019. 6) Sound pressure levels calculated at 10 meters. Sound pressure levels refer to ISO standard 3744 with parallelpiped shape.

* w: with, w/o: without.

Accessories	
PAW-SYSREMKIT	Remote Control

Accessories	
PAW-SYSSOV1	Shut off valves kit for model 20 - 40

HIGH SEER 3,91	HIGH SCOP 3,40	ErP	SUPER QUIET	BLUEFIN	ULTIMATE CUSTOMISATION	AUTOMATIC FAN	HEATING MODE -17°C	COOLING MODE 50°C	CLOUD	BMS CONNECTIVITY
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U - 045/055/065/075 CW

Cooling capacity: 46,8 to 71,6kW
 Heating capacity: 48,5 to 75,9kW

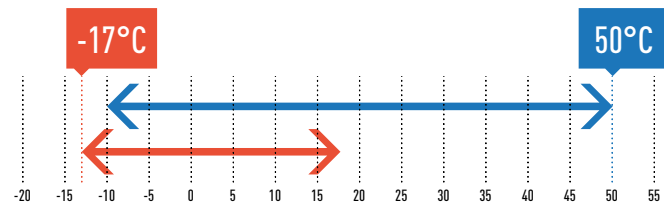
NEW
2019

High seasonal efficiency in cooling, maximum SEER 4,04 in this range. ECOi-W Series offers a variety of options to meet your needs.

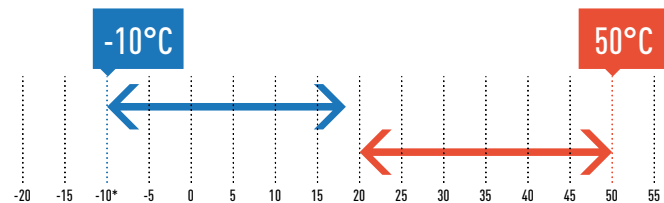


* Seasonal space heating energy efficiency class (Scale A+++ to D).

Ambient temperature.



Water outlet temperature.



Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).
 * With glycol 45%, 5°C without glycol.

- High seasonal efficiency in cooling and heating
- Eurovent certified
- Ambient temperature operation range: -10 - +50°C in cooling, -17 - +20°C in heating
- Water outlet temperature range: -10 - +18°C in cooling, +20 - +50°C in heating
- Optional extra-low noise kit available
- Optimized design for service and maintenance
- Simple user friendly control as standard
- Modbus RTU as standard
- Cloud control option

Technical focus

- Chiller type: Heat pump
- Compressor type (number of compressors): Scroll compressors (2)
- Refrigeration type: R410
- Refrigerant circuit: 1
- Fan type (number of fans): Axial fan (1 for 45/55, 2 for 65/75)
- Heat exchanger: Stainless Steel Plate Heat exchanger
- Flow switch, Water safety & Air purge valves included
- Water filter included (Mandatory site installation required)
- Night Mode setting to save energy and reduce noise level
- Water compensation curve control
- Optional Hydraulic Kit
- Optional Modbus TCP/IP, BACnet IP and BACnet MSTP

Available options

Options	Pump drive	Hydraulic options	Ambient options	Misc. options
Pump				
Single Pump	Variable speed	Low water pressure sensor	Finned coil treatment - epoxy	Soft Starter
Double Pump	Variable capacity	Water isolation valves	Outdoor coil protection grid	Power supply w/o neutral
	Constant outlet pressure		Rubber pads	Cloud Connection
	Constant differential pressure		Spring damper	Modbus TCP/IP
			All seasons fan control	BACnet MSTP
			Extra-low noise kit	BACnet IP
			High pressure fan	Container transport
				Refrigerant gauge

The detail information on page 22.



PAW-SYSREMKIT
Optional Remote Control.



PAW-SYSSOV2
Optional Shut off valves
kit for model 45 - 75.

Model			45	55	65	75
Standard without buffer tank			U-045CWNB	U-055CWNB	U-065CWNB	U-075CWNB
With buffer tank			U-045CWBM	U-055CWBM	U-065CWBM	U-075CWBM
Power supply	Voltage	V	400	400	400	400
	Phase		Three Phase	Three Phase	Three Phase	Three Phase
	Frequency	Hz	50	50	50	50
Cooling capacity ¹⁾		kW	46,80	53,30	65,80	71,60
Input power cooling ¹⁾		kW	16,90	19,67	22,10	24,26
Total EER 100% ¹⁾			2,77	2,71	2,98	2,95
SEER ²⁾			3,70	3,86	4,04	3,99
η_{sc} ²⁾			145,00	151,00	159,00	157,00
Heating capacity ³⁾		kW	48,50	58,20	67,20	75,90
Input power heating ³⁾		kW	17,32	20,35	22,47	24,33
SCOP ⁴⁾			3,23	3,27	3,43	3,40
η_{sh} ⁴⁾			126,00	128,00	134,00	133,00
Energy efficiency class (Scale A+++ to D) ⁵⁾			A+	A+	A+	—
Startup type			Direct	Direct	Direct	Direct
Maximum operating current			A	44,20	59,40	64,40
Startup current w/o softstarter / w softstarter			133,20 / 65,80	140,20 / 72,80	201,43 / 101,03	206,43 / 106,03
Sound power level (w standard fans)			80,0	80,0	80,0	80,0
Sound pressure level (w standard fans) ⁶⁾			47,8	47,8	47,8	47,8
Dimensions (w standard fans) w/o buffer tank			H x W x D	1986 x 2180 x 1160	1986 x 2180 x 1160	1986 x 2180 x 1160
Dimensions (w standard fans) w buffer tank			H x W x D	1986 x 2680 x 1160	1986 x 2680 x 1160	1986 x 2680 x 1160
Weight (w 1 pump) w/o buffer tank			kg	540	540	610
Weight (w 1 pump) w buffer tank			kg	700	700	770
Refrigerant (R410A)			kg	14,0	14,3	18,9
Number of refrigerant circuit			1	1	1	1
Compressors						
Number			2	2	2	2
Type			Scroll	Scroll	Scroll	Scroll
Part load step			%	0 / 50 / 100	0 / 43 / 57 / 100	0 / 40 / 60 / 100
Crankcase heater			W	2x66	2x66	2x66
Evaporator						
Number			1	1	1	1
Type			Plate	Plate	Plate	Plate
Nominal water flow (cooling)			m ³ /h	8,06	9,18	11,30
Water pressure drop (cooling)			kPa	30	35	28
Water volume			l	4,10	4,10	6,10
Antifreeze heater			W	30	30	2x30
Coils						
Number			1	1	2	2
Frontal surface			m ²	4,20	4,20	5,55
Number of rows			2	2	2	2
Fans standard						
Number			1	1	2	2
Airflow			m ³ /h	22500	22500	15000
Rotation speed			r.p.m.	790	790	650
Power input (each fan)			W	1650	1650	930
Water connections						
Type			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Inlet - diameter			Inch	2	2	2
Outlet - diameter			Inch	2	2	2

1) Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard. 2) Following COMMISSION REGULATION (EU) No 2016/2281 for comfort application chillers. 3) Data refers to 45°C leaving warm water temperature and 7°C ambient coil air temperature with 87% R.H., according EN14511 standard. 4) Following COMMISSION REGULATION (EU) No 813/2013 for low-temperature heat pumps. 5) Following COMMISSION REGULATION (EU) No 811/2013 for low-temperature heat pumps. Scale from A+++ to D, as of 26th September 2019. 6) Sound pressure levels calculated at 10 meters. Sound pressure levels refer to ISO standard 3744 with parallepiped shape.
* w: with, w/o: without.

Accessories	
PAW-SYSREMKIT	Remote Control

Accessories	
PAW-SYSSOV2	Shut off valves kit for model 45 - 75



U - 090/105/125 CW

Cooling capacity: 91,4 to 121,9kW
 Heating capacity: 88,1 to 119,1kW

NEW
2019

Customizable design gives high flexibility. Wide range of communication protocols fulfill the requirements in hotels, offices, industry applications.



R410A

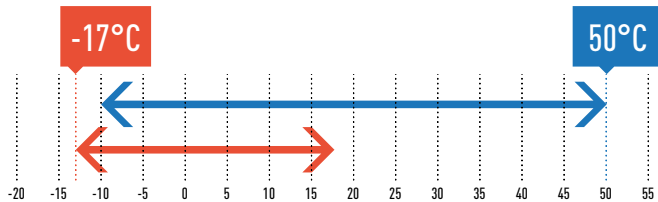


- High seasonal efficiency in cooling and heating
- Eurovent certified
- Ambient temperature operation range: -10 - +50°C in cooling, -17 - +20°C in heating
- Water outlet temperature range: -10 - +18°C in cooling, +20 - +50°C in heating
- Optional extra-low noise kit available
- Optimized design for service and maintenance
- Simple user friendly control as standard
- Modbus RTU as standard
- Cloud control option

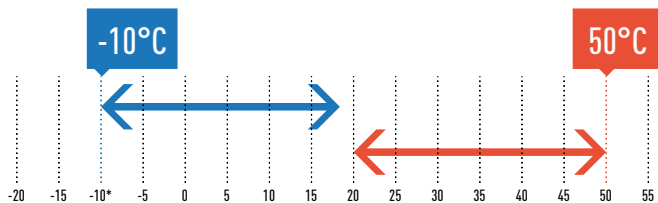
Technical focus

- Chiller type: Heat pump
- Compressor type (number of compressors): Scroll compressors (2)
- Refrigeration type: R410
- Refrigerant circuit: 1
- Fan type (number of fans): Axial fan (2)
- Heat exchanger: Stainless Steel Plate Heat exchanger
- Flow switch, Water safety & Air purge valves included
- Water filter included (Mandatory site installation required)
- Night Mode setting to save energy and reduce noise level
- Water compensation curve control
- Optional Hydraulic Kit
- Optional Modbus TCP/IP, BACnet IP and BACnet MSTP

Ambient temperature.



Water outlet temperature.



Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).
 * With glycol 45%, 5°C without glycol.

Available options

Options	Pump drive	Hydraulic options	Ambient options	Misc. options
Pump				
Single Pump	Variable speed	Low water pressure sensor	Finned coil treatment - epoxy	Soft Starter
Double Pump	Variable capacity	Water isolation valves	Outdoor coil protection grid	Power supply w/o neutral
	Constant outlet pressure		Rubber pads	Cloud Connection
	Constant differential pressure		Spring damper	Modbus TCP/IP
			All seasons fan control	BACnet MSTP
			Extra-low noise kit	BACnet IP
			High pressure fan	Container transport
				Refrigerant gauge

The detail information on page 22.



PAW-SYSREMKIT
Optional Remote Control.



PAW-SYSSOV3
Optional Shut off valves
kit for model 90 - 125.

Model			90	105	125
Standard without buffer tank			U-090CWNB	U-105CWNB	U-125CWNB
With buffer tank			U-090CWBM	U-105CWBM	U-125CWBM
Power supply	Voltage	V	400	400	400
	Phase		Three Phase	Three Phase	Three Phase
	Frequency	Hz	50	50	50
Cooling capacity ¹⁾		kW	91,40	106,20	121,90
Input power cooling ¹⁾		kW	34,36	38,06	46,35
Total EER 100% ¹⁾			2,66	2,79	2,63
SEER ²⁾			3,89	3,88	3,89
η_{sc} ²⁾			153,00	152,00	153,00
Heating capacity ³⁾		kW	88,10	101,00	119,10
Input power heating ³⁾		kW	33,75	38,40	45,46
SCOP ⁴⁾			3,26	3,31	3,35
η_{sh} ⁴⁾			128,00	129,00	131,00
Startup type			Direct	Direct	Direct
Maximum operating current		A	77,90	86,00	102,00
Startup current w/o softstarter / w softstarter		A	264,90 / 127,30	311,96 / 145,76	349,96 / 182,56
Sound power level (w standard fans)		dB(A)	83,0	83,0	83,0
Sound pressure level (w standard fans) ⁵⁾		dB(A)	50,8	50,8	50,8
Dimensions (w standard fans) w/o buffer tank	H x W x D	mm	2286 x 2180 x 1160	2286 x 2180 x 1160	2286 x 2180 x 1160
Dimensions (w standard fans) w buffer tank	H x W x D	mm	2286 x 2680 x 1160	2286 x 2680 x 1160	2286 x 2680 x 1160
Weight (w 1 pump) w/o buffer tank		kg	790	900	920
Weight (w 1 pump) w buffer tank		kg	950	1060	1080
Refrigerant (R410A)		kg	22,0	32,3	33,0
Number of refrigerant circuit			1	1	1
Compressors					
Number			2	2	2
Type			Scroll	Scroll	Scroll
Part load step		%	0 / 45 / 55 / 100	0 / 38 / 62 / 100	0 / 33 / 67 / 100
Crankcase heater		W	66 / 82	66 / 95	66 / 95
Evaporator					
Number			1	1	1
Type			Plate	Plate	Plate
Nominal water flow (cooling)		m ³ /h	15,73	18,25	20,95
Water pressure drop (cooling)		kPa	26	34	45
Water volume		l	10,80	10,80	10,80
Antifreeze heater		W	2x30	2x30	2x30
Coils					
Number			2	2	2
Frontal surface		m ²	6,4	6,4	6,4
Number of rows			2	3	3
Fans standard					
Number			2	2	2
Airflow		m ³ /h	21000	21000	21000
Rotation speed		r.p.m.	790	790	790
Power input (each fan)		W	1650	1650	1650
Water connections					
Type			Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228	Male gas threaded BSPP ISO 228
Inlet - diameter		Inch	2 1/2	2 1/2	2 1/2
Outlet - diameter		Inch	2 1/2	2 1/2	2 1/2

1) Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard. 2) Following COMMISSION REGULATION (EU) No 2016/2281 for comfort application chillers. 3) Data refers to 45°C leaving warm water temperature and 7°C ambient coil air temperature with 87% R.H., according EN14511 standard. 4) Following COMMISSION REGULATION (EU) No 813/2013 for low-temperature heat pumps. 5) Sound pressure levels calculated at 10 meters. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

* w: with, w/o: without.

Accessories

PAW-SYSREMKIT Remote Control

Accessories

PAW-SYSSOV3 Shut off valves kit for model 90 - 125



U - 140/150/170/190/210 CW

Cooling capacity: 125,4 to 195,4kW

Heating capacity: 143,7 to 217,6kW

NEW
2019

Heat pump chiller series with powerful operation by 4 scroll compressors.

Maximum water outlet temperature in heating is up to 55°C¹⁾. Defrost limiting design ensures to provide stable hot water even at low ambient conditions.



R410A

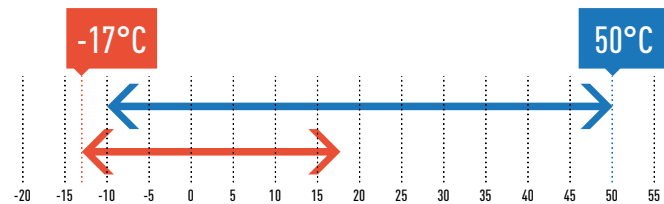


- Smart defrost:
Defrost limiting design to ensure a constant water outlet temperature even at very low temperatures

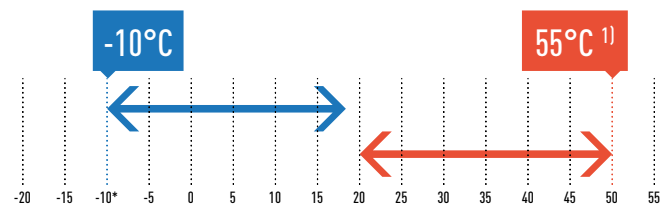
1 DEFROST CYCLE EVERY 130 MINUTES. Heating Capacity: +22%
Integrated COP: +15%
Improve SCOP Class

- High seasonal efficiency in cooling and heating
- Eurovent certified
- Ambient temperature operation range: -10 - +50°C in cooling, -17 - +20°C in heating
- Water outlet temperature range: -10 - +18°C in cooling, +20 - +55°C¹⁾ in heating
- Super quiet operation
- Victaulic water connections
- Optimized design for service and maintenance
- Simple user friendly control as standard
- Cloud control as standard
- Modbus RTU as standard
- Modbus TCP/IP as standard

Ambient temperature.



Water outlet temperature.



Cooling: Outside air temperature °C (DB). Heating: Outside air temperature °C (WB).
* With glycol 45%, 5°C without glycol.

Technical focus

- Chiller type: Heat pump
- Compressor type (number of compressors): Scroll compressors (4)
- Refrigeration type: R410
- Refrigerant circuit: 2
- Fan type (number of fans): Axial fan (4)
- Heat exchanger: Stainless Steel Plate Heat exchanger
- Flow switch, Water safety & Air purge valves included
- Water filter included (Mandatory site installation required)
- Night Mode setting to save energy and reduce noise level
- Water compensation curve control
- Optional Hydraulic Kit
- Optional gauges
- Optional BACnet

1) Please contact an authorized Panasonic dealer in the case of condition > 50°C.

Available options

Options				
Pump	Pump drive	Hydraulic options	Ambient options	Misc. options
Single Pump Low Pressure	Variable speed	Low water pressure sensor	Finned coil treatment - epoxy	Soft Starter
Single Pump High Pressure	Variable capacity	Water isolation valves	Outdoor coil protection grid	Power supply w/o neutral
Double Pump Low Pressure	Constant outlet pressure	Hydraulic gauges	Rubber pads	Cloud connection (standard)
Double Pump High Pressure	Constant differential pressure		Spring damper	Modbus TCP/IP
			All seasons fan control	BACnet MSTP
			Nordic pack	BACnet IP
			High pressure fan	Refrigerant gauge

The detail information on page 23.



PAW-SYSREMKIT
Optional Remote Control.

Model			140	150	170	190	210
Standard without buffer tank			U-140CWNB	U-150CWNB	U-170CWNB	U-190CWNB	U-210CWNB
With buffer tank			U-140CWBL	U-150CWBL	U-170CWBL	U-190CWBL	U-210CWBL
Power supply	Voltage	V	400	400	400	400	400
	Phase		Three Phase	Three Phase	Three Phase	Three Phase	Three Phase
	Frequency	Hz	50	50	50	50	50
Cooling capacity ¹⁾		kW	125,40	137,60	150,90	175,80	195,40
Input power cooling ¹⁾		kW	43,55	47,77	52,73	64,83	72,54
Total EER 100% ¹⁾			2,88	2,88	2,86	2,71	2,69
SEER ²⁾			3,87	3,87	3,91	3,69	3,68
η_{sc} ²⁾			152,00	152,00	153,00	145,00	144,00
Heating capacity ³⁾		kW	143,70	153,70	170,10	194,90	217,60
Input power heating ³⁾		kW	45,80	50,20	55,40	67,50	78,30
SCOP ⁴⁾			3,32	3,36	3,31	3,29	3,23
η_{sh} ⁴⁾			138,00	145,00	165,00	185,00	195,00
Startup type			Direct	Direct	Direct	Direct	Direct
Maximum operating current		A	108,00	119,00	136,00	153,00	170,00
Startup current w/o softstarter / w softstarter		A	251,00 / 130,00	262,00 / 141,00	324,00 / 161,00	341,00 / 178,00	396,00 / 201,00
Sound power level (w standard fans)		dB(A)	85,4	85,4	87,0	88,1	88,1
Sound pressure level (w standard fans) ⁵⁾		dB(A)	53,4	53,4	55,0	56,1	56,1
Dimensions (w standard fans) w/o buffer tank	H x W x D	mm	2295 x 2856 x 2210	2295 x 2856 x 2210	2321 x 2856 x 2210	2321 x 2856 x 2210	2321 x 2856 x 2210
Dimensions (w standard fans) w buffer tank	H x W x D	mm	2295 x 3666 x 2210	2295 x 3666 x 2210	2321 x 3666 x 2210	2321 x 3666 x 2210	2321 x 3666 x 2210
Weight (w 1 low Pa pump) w/o buffer tank		kg	1512	1515	1605	1677	1937
Weight (w 1 low Pa pump) w buffer tank		kg	1644	1647	1737	1809	2069
Refrigerant (R410A)		kg	2x24,7	2x24,7	24,7/33,3	2x33,3	2,33,3
Number of refrigerant circuit			2	2	2	2	2
Compressors							
Number			4	4	4	4	4
Type			Scroll	Scroll	Scroll	Scroll	Scroll
Part load step		%	0 / 24 / 26 / 48 / 50 / 52 / 74 / 76 / 100	0 / 23 / 27 / 46 / 50 / 54 / 73 / 77 / 100	0 / 20 / 24 / 44 / 45 / 55 / 69 / 80 / 100	0 / 22 / 28 / 44 / 50 / 56 / 72 / 78 / 100	0 / 19 / 31 / 38 / 50 / 62 / 69 / 81 / 100
Crankcase heater		W	4x66	4x66	3x66 / 82	2x82 / 2x66	2x95 / 2x66
Evaporator							
Number			1	1	1	1	1
Type			Plate	Plate	Plate	Plate	Plate
Nominal water flow (cooling)		m ³ /h	21,56	23,65	25,95	30,24	33,62
Water pressure drop (cooling)		kPa	33	39	24	32	40
Water volume		l	8,49	8,49	12,21	12,21	12,21
Antifreeze heater		W	60	60	120	120	120
Coils							
Number			4	4	4	4	4
Frontal surface		m ²	11,88	11,88	11,88	11,88	11,88
Number of rows			2 + 2	2 + 2	2 + 3	3 + 3	3 + 3
Fans standard							
Number			4	4	4	4	4
Airflow		m ³ /h	56000	56000	71000	86000	83000
Rotation speed		r.p.m.	900	900	900	900	900
Power input (each fan)		W	940	940	940 - 1650	1650	1650
Water connections							
Type			Victaulic	Victaulic	Victaulic	Victaulic	Victaulic
Inlet - diameter		Inch	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2
Outlet - diameter		Inch	2 1/2	2 1/2	2 1/2	2 1/2	2 1/2

1) Data refers to 7°C leaving chilled water temperature and 35°C condenser air temperature, according EN14511 standard. 2) Following COMMISSION REGULATION (EU) No 2016/2281 for comfort application chillers. 3) Data refers to 45°C leaving warm water temperature and 7°C ambient coil air temperature with 87% R.H., according EN14511 standard. 4) Following COMMISSION REGULATION (EU) No 813/2013 for low-temperature heat pumps. 5) Sound pressure levels calculated at 10 meters. Sound pressure levels refer to ISO standard 3744 with parallelepiped shape.

* w: with, w/o: without.

Accessories	
PAW-SYSREMKIT	Remote Control

Accessories	
PAW-SYSVICTH	Victaulic connection kit for model 140 - 210



CONTROL



SIMPLE USER FRIENDLY CONTROL



Main features

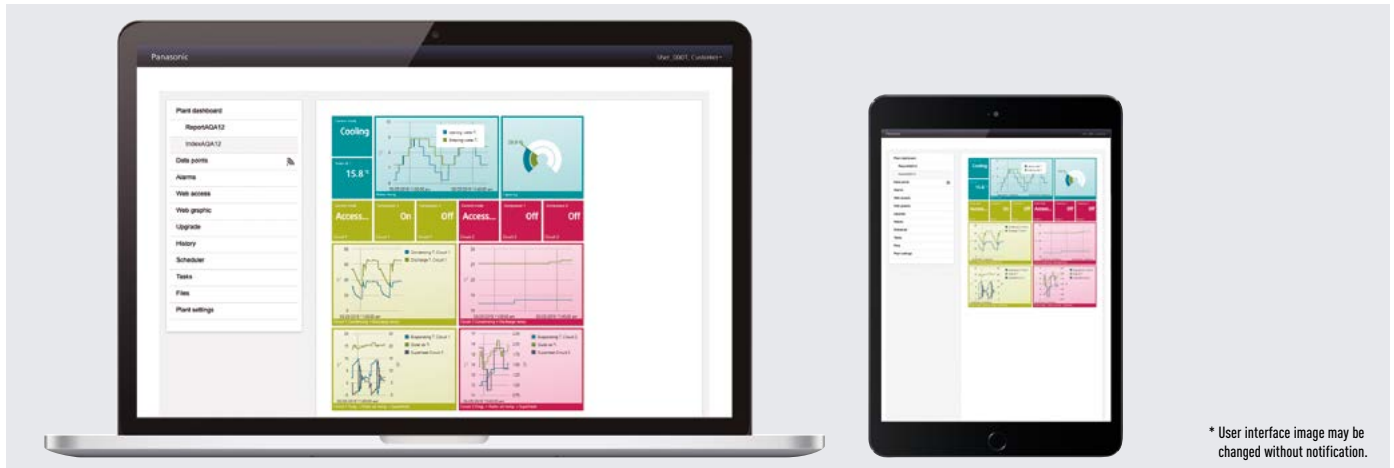
Basic operation	ON/OFF setting
	Cooling / Heating mode setting
Energy Saving	Intelligent logic control for inlet water temperature
	Night setback operation to reduce electrical consumption and noise
	Part load operating mode
	Maximum discharge temperature control
Service / Maintenance	Automatic Test operation at the push of a button
	Alarm notice with the latest 10 alarms
	Counter for operating hours of compressor and pump
	Compressor operating limits saved in a flash memory
Others	BMS compatible (RS485 ModBus RTU or BacNet MSTP protocol)

A control panel with intuitive design is equipped on all ECOi-W systems as standard.

The a microprocessor based control has a new IHM logic and implements a smart handling for your demand.



CLOUD



* User interface image may be changed without notification.

CLOUD CONTROL

Cloud control is available as standard in the size between 140 and 210*. This cloud control ensures your business promised from wherever you are, 24/07/365.

* Cloud access fee is required. Please contact an authorized Panasonic dealer for the detail information.

Flexible solution for your business.



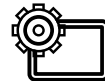
Every time



Everywhere



Multiplatform



Internet browser

Scalable solution for your business.



Small to large



1 to multi sites

Decrease your energy consumption & Optimize your maintenance interventions!

Adjust precisely your units' settings thanks to a relevant and real-time energy consumption analysis.

With one click, watch the operating state of your units, anticipate the dysfunctions and reduce your interventions on site.

Main features

Basic operation	Precise and visualized temperature data
	Set point adjustment
	Schedule timer setting
Energy Saving	Energy consumption monitoring
	Diagnosis
Service / Maintenance	Alarms notification
Security	Units location with a map view
	Different access levels

FAN COILS APPLICATION WITH ECOi-W HEAT PUMP CHILLER SYSTEM

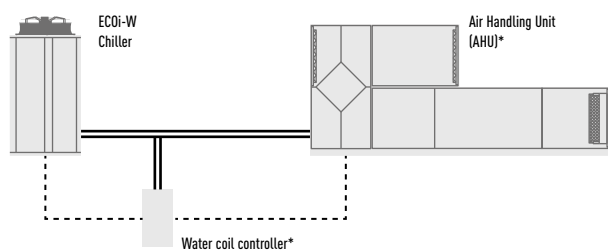


For the optimized comfort, ECOi-W series can be integrated Fan Coils.

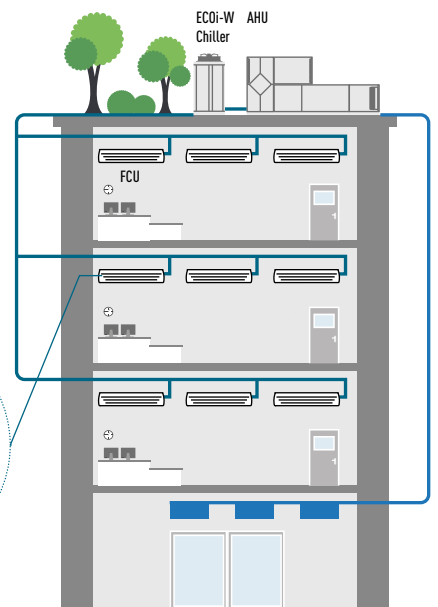
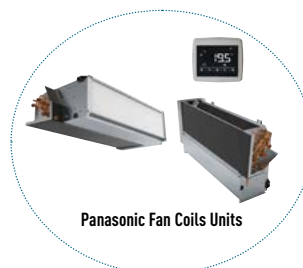
Panasonic Fan Coils

Easy to install, improved sound level and performance.
Quiet & comfort operation.

Cooling capacity 1,0 to 15kW. Heating capacity: 1,5 to 20kW.



* Field supplied products.



Technical focus

- Innovation for an optimum comfort
- Low energy consumption fan
- Quality and efficient Coil
- Flexible vertical - horizontal installation

Fan Coil controller PAW-FC-RC1 features:

- Room thermostat
- 3 outputs, 230V relays for fan control
- 2 outputs, 230V relays for heating / cooling control

- Modbus RTU slave
- 1 DI for presses detection (key card switch)
- 1 AI for sensor



PAW-FC-303TC
Optional Controller.
Wired remote controller.



PAW-FC-RC1
Optional Controller.
Wired remote controller.

		Compact units									High Static Pressure
Left side connection		PAW-FC-D11-1	PAW-FC-D15-1	PAW-FC-D24-1	PAW-FC-D28-1	PAW-FC-D40-1	PAW-FC-D55-1	PAW-FC-D65-1	PAW-FC-D90-1	PAW-FC-H150	
Right side connection		PAW-FC-D11-1-R	PAW-FC-D15-1-R	PAW-FC-D24-1-R	PAW-FC-D28-1-R	PAW-FC-D40-1-R	PAW-FC-D55-1-R	PAW-FC-D65-1-R	PAW-FC-D90-1-R	PAW-FC-H150-R	
Total cooling capacity ¹⁾	Med/S-Hi kW	1,0/1,5	1,2/1,7	2,0/2,5	2,4/3,2	3,2/4,2	4,6/5,8	6,1/7,3	6,1/8,1	11,9/14,8	
Sensible cooling capacity ¹⁾	Med/S-Hi kW	0,8/1,1	0,9/1,3	1,5/1,9	1,8/2,3	2,2/3,3	3,3/4,5	4,3/5,1	4,6/6,3	9,6/12,9	
Heating capacity (Hot water: 50-45°C) ¹⁾	Med/S-Hi kW	1,4/2,0	1,5/2,2	2,4/3,1	2,9/4,0	4,1/5,7	5,3/7,1	7,9/9,3	8,1/11,6	14,9/19,9	
Heating capacity (Hot water: 45-40°C) ²⁾	Med/S-Hi kW	1,2/1,7	1,3/1,9	2,0/2,6	2,4/3,4	3,5/4,8	4,4/5,9	6,6/7,8	6,8/9,9	12,0/15,5	
Power consumption	S-Lo/Med/S-Hi W	13/24/36	10/18/29	16/37/45	15/37/56	28/55/72	37/75/105	53/100/147	90/112/188	180/421/675	
Fuse rating	A	2	2	2	2	2	2	2	2	6	
Dimensions (including pan and electrical box)	H x W x D mm	220x570x430	220x570x430	220x753x430	220x938x430	220x1122x430	220x1307x430	220x1121x530	220x1316x530	356x1600x798	
Weight (without water content)	kg	13	13	15	20	22	26	27	38	63	
Sound power global	S-Lo/Med/S-Hi dB(A)	33/40/49	31/43/50	30/45/52	30/44/51	38/46/56	38/51/58	43/56/61	50/55/64	52/64/71	
Sound pressure global	S-Lo/Med/S-Hi dB(A)	24/31/40	22/34/41	21/36/43	21/35/42	25/37/47	29/42/49	34/47/52	41/46/55	31/45/51	
Static pressure ³⁾	Max Pa	30	30	50	50	70	70	70	70	110	
Airflow ¹⁾	Med/S-Hi m ³ /h	190/283	179/265	274/390	357/499	486/716	640/933	893/1064	936/1397	2112/3176	
Water pressure drop	Med/S-Hi kPa	19,5/39,2	3,9/6,3	19,3/28,8	17,1/28	22,8/46,9	37,4/60,2	15,4/21,5	19,3/32,5	19,9/26,1	
Fan speeds		3 speeds	3 speeds	3 speeds	3 speeds	3 speeds	3 speeds	3 speeds	3 speeds	3 speeds	
Fan motor and total speeds		AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	AC 5 speeds	
Drain pan and Air filter		Included	Included	Included	Included	Included	Included	Included	Included	Included	
Water connections	Inch	1/2	1/2	1/2	1/2	1/2	1/2	3/4	3/4	1	

Accessories

PAW-FC-RC1	Advanced wired control for Fan Coil
PAW-FC-303TC	Wired remote controller
PAW-FC-2WY-11/55-1	2 way valve + drain pan (for PAW-FC-D11/15/24/28/40/55-1)
PAW-FC-2WY-65/90-1	2 way valve + drain pan (for PAW-FC-D65/90-1)

Accessories

PAW-FC-2WY-150	2 way valve (for PAW-FC-H150)
PAW-FC-3WY-11/55-1	3 way valve + drain pan (for PAW-FC-D11/15/24/28/40/55-1)
PAW-FC-3WY-65/90-1	3 way valve + drain pan (for PAW-FC-D65/90-1)
PAW-FC-3WY-150	3 way valve (for PAW-FC-H150)

¹⁾ Airflow and capacity at 0Pa of static pressure. * Performances based on: Cooling: Air: 27°C DB / 19°C WB, Chilled water: 7°C / 12°C - Heating: Air: 20°C DB, Hot water: 50°C / 45°C. ²⁾ Airflow and capacity at 0Pa of static pressure. * Performances based on: Cooling: Air: 27°C DB / 19°C WB, Chilled water: 7°C / 12°C - Heating: Air: 20°C DB, Hot water: 45°C / 40°C. ³⁾ Airflow and capacity may vary at different values of static pressure.

MODEL REFERENCING AND OPTIONS

Options table 20 - 125

Option	Type	Ref.	Description	Model														
				20	25	30	35	40	45	55	65	75	90	105	125			
1	Capacity																	
2	Refrigerant & Compressor Type	W	R410A Fixed Speed	•	•	•	•	•	•	•	•	•	•	•	•	•		
		NB	No Buffer	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std		
		BS	Buffer tank (Small)	•	•	•	•	•										
3	Buffer Tank Option	BM	Buffer tank (Medium)						•	•	•	•	•	•	•	•		
			No Pump	•	•	•	•	•	Std	Std	Std	Std	Std	Std	Std	Std		
			Single Pump	Std	Std	Std	Std	Std	•	•	•	•	•	•	•	•	•	
4	Pump Option		Double Pump						•	•	•	•	•	•	•	•		
			Pump Drive - Fixed Speed *	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std		
			Pump Drive - Variable Speed (Single Pump)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
5	Pump Drive Option		Pump Drive - Variable Speed (Double Pump)						•	•	•	•	•	•	•	•		
			Pump Drive - Variable Capacity (Single Pump)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Pump Drive - Variable Capacity (Double Pump)						•	•	•	•	•	•	•	•	•	
			Pump Drive - Constant Outlet Pressure (Single Pump)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
			Pump Drive - Constant Outlet Pressure (Double Pump)						•	•	•	•	•	•	•	•	•	
			Pump Drive - Constant Differential Pressure (Single Pump) **	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	
			Pump Drive - Constant Differential Pressure (Double Pump)						•	•	•	•	•	•	•	•	•	
6	Hydraulic options		No Hydraulic Option	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std		
			Low water pressure sensor	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Water isolation valves	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Electric Heater - Low Power						•	•	•	•	•	•	•	•	•	
			Electric Heater - High Power						•	•	•	•	•	•	•	•	•	
7	Ambient Options		No Ambient Options	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std		
			Finned coil treatment - epoxy	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Outdoor coil protection grid	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Rubber pads	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Spring damper	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			All seasons	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Nordic pack ***	•	•	•	•	•										
			Low noise	Std	Std	Std	Std	Std	•	•	•	•	•	•	•	•	•	
			High pressure fan ****		•	•	•	•	•	•	•	•	•	•	•	•	•	
8	Misc. Options		No Miscellaneous Options	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std		
			Soft Starter	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Power supply w/o neutral *****	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0	S0		
			Cloud Connection	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Standard BMS Option (Modbus RTU)	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	Std	
			Modbus TCP/IP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Bacnet MSTP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Bacnet IP	•	•	•	•	•	•	•	•	•	•	•	•	•	•	
			Container transport						•	•	•	•	•	•	•	•	•	
			Refrigerant gauge						•	•	•	•	•	•	•	•	•	

* Fixed Speed Pump Drive is standard when selecting a pump. Please select alternative pump drive if required.
 ** Constant Differential Pump Drive option is only available on a special order and requires additional production time. Please contact your local sales representative.
 *** The Nordic Pack is not required on models 45 - 125 due to model design.
 **** High Pressure Fan is not available on Model 20 due to body design.
 ***** Power Supply without Neutral is only available on a special order and requires additional production time. Please contact your local sales representative.

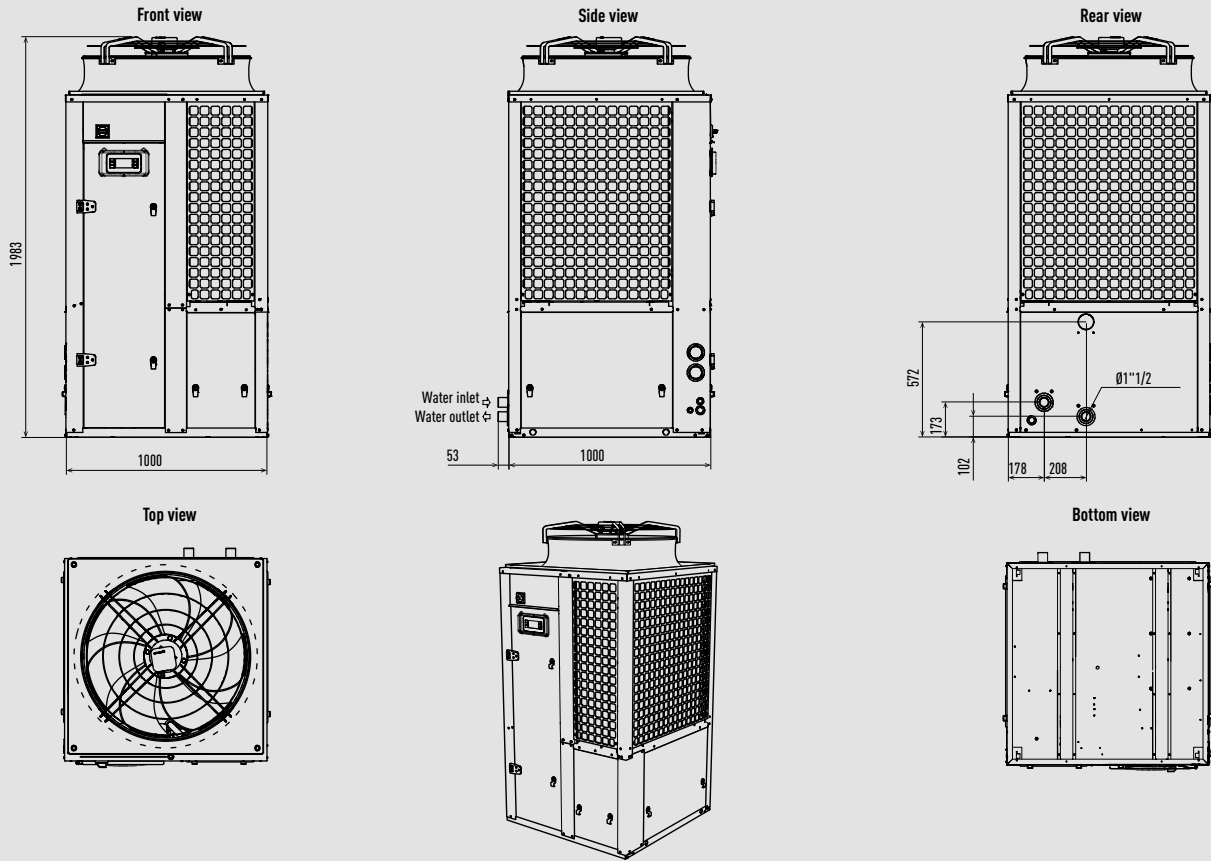
Options table 140 - 210

Option	Type	Ref.	Description	Model				
				140	150	170	190	210
1	Capacity			140	150	170	190	210
2	Refrigerant & Compressor Type	W	R410A Fixed Speed	•	•	•	•	•
3	Buffer Tank Option	NB	No Buffer	Std	Std	Std	Std	Std
		BL	Buffer tank (Large)	•	•	•	•	•
4	Pump Option		No Pump	•	•	•	•	•
			Single Pump Low Pressure	•	•	•	•	•
			Single Pump High Pressure	•	•	•	•	•
			Double Pump Low Pressure	•	•	•	•	•
			Double Pump High Pressure	•	•	•	•	•
5	Pump Drive Option		Pump Drive - Fixed Speed *	Std	Std	Std	Std	Std
			Pump Drive - Variable Speed (Single Pump)	•	•	•	•	•
			Pump Drive - Variable Speed (Double Pump)	•	•	•	•	•
			Pump Drive - Variable Capacity (Single Pump)	•	•	•	•	•
			Pump Drive - Variable Capacity (Double Pump)	•	•	•	•	•
			Pump Drive - Constant Outlet Pressure (Single Pump)	•	•	•	•	•
			Pump Drive - Constant Outlet Pressure (Double Pump)	•	•	•	•	•
			Pump Drive - Constant Differential Pressure (Single Pump) **	SO	SO	SO	SO	SO
	Pump Drive - Constant Differential Pressure (Double Pump) **	SO	SO	SO	SO	SO		
6	Hydraulic options		No Hydraulic Option	Std	Std	Std	Std	Std
			Low water pressure sensor	•	•	•	•	•
			Water isolation valves	•	•	•	•	•
			Hydraulic Gauges	•	•	•	•	•
7	Ambient Options		No Ambient Options	Std	Std	Std	Std	Std
			Finned coil treatment - epoxy	•	•	•	•	•
			Outdoor coil protection grid	•	•	•	•	•
			Rubber pads	•	•	•	•	•
			Spring damper	•	•	•	•	•
			All seasons	•	•	•	•	•
			Nordic pack	•	•	•	•	•
			Low noise	Std	Std	Std	Std	Std
	High pressure fan	•	•	•	•	•		
8	Misc. Options		No Miscellaneous Options	Std	Std	Std	Std	Std
			Soft Starter	•	•	•	•	•
			Power supply w/o neutral	•	•	•	•	•
			Cloud Connection	Std	Std	Std	Std	Std
			Standard BMS Option (Modbus RTU)	Std	Std	Std	Std	Std
			Modbus TCP/IP	•	•	•	•	•
			Bacnet MSTP	•	•	•	•	•
			Bacnet IP	•	•	•	•	•
	Refrigerant gauge	•	•	•	•	•		

* Fixed Speed Pump Drive is standard when selecting a pump. Please select alternative pump drive if required.

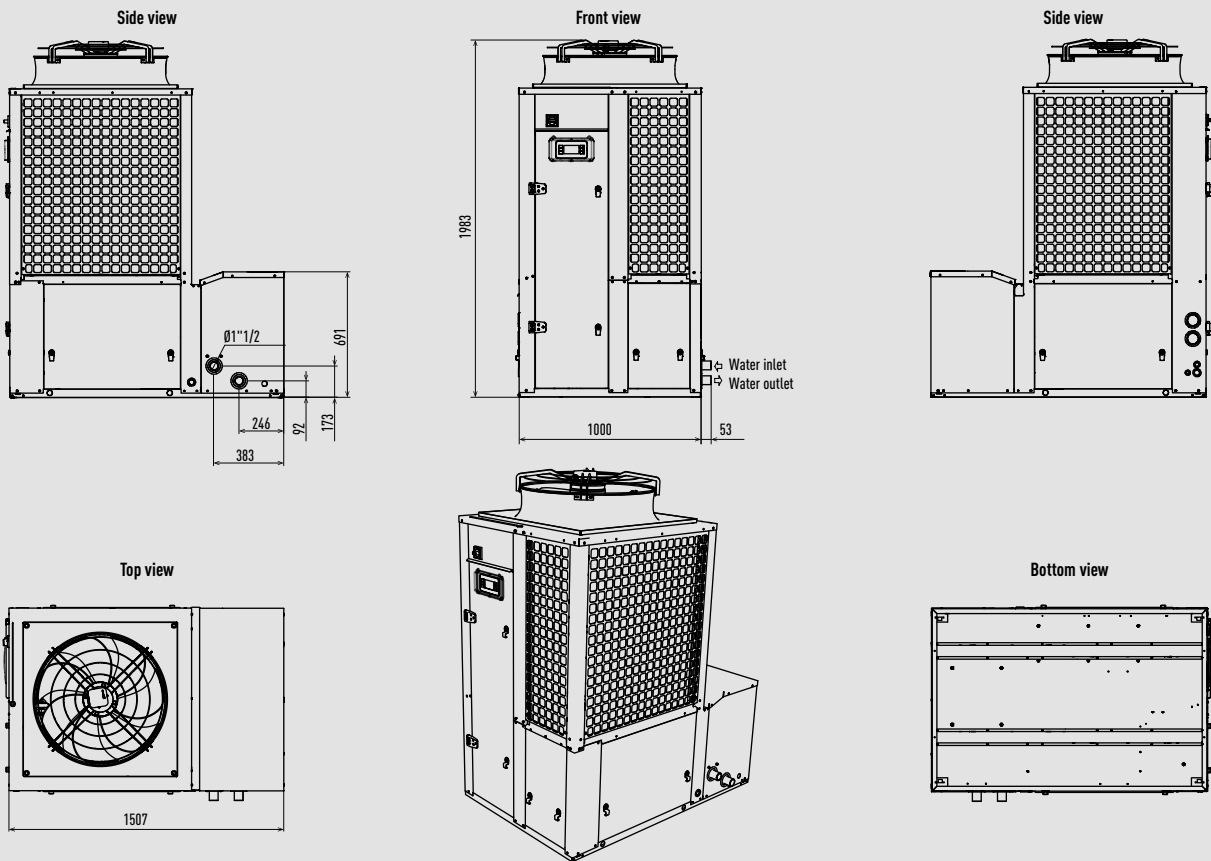
** Constant Differential Pump Drive options are only available on a special order and requires additional production time. Please contact your local sales representative.

ECOi-W 20 to 40 with condenser fans Standard



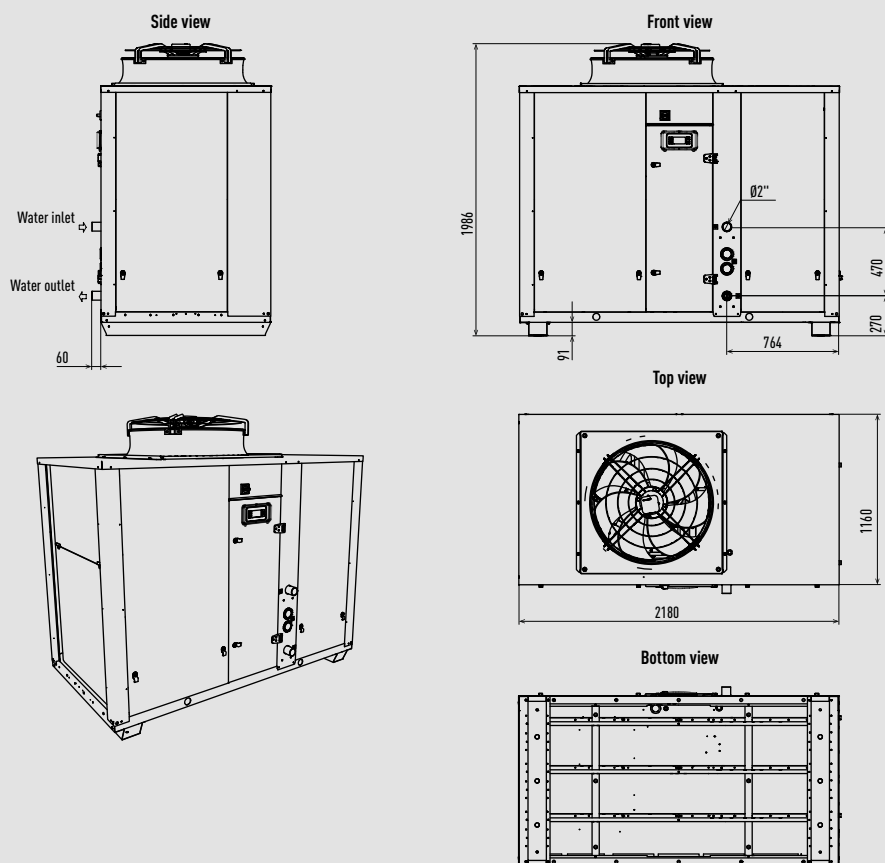
Unit: mm

ECOi-W 20 to 40 with condenser fans Standard and buffer tank



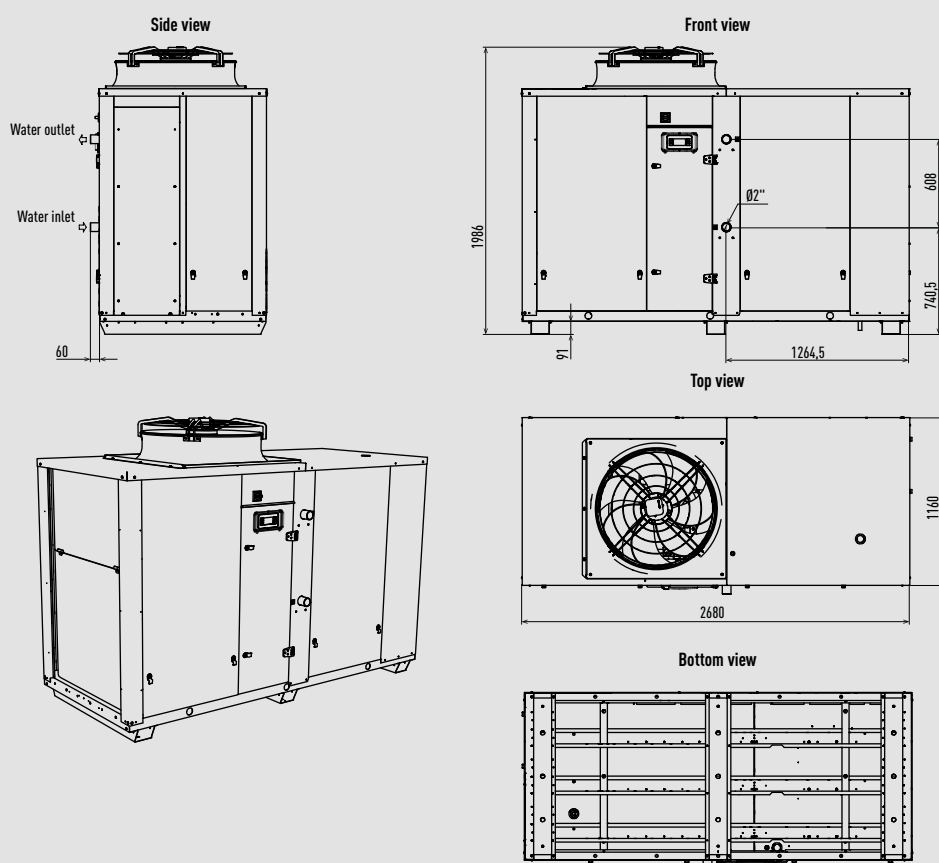
Unit: mm

ECOi-W 45 to 55 with condenser fans Standard



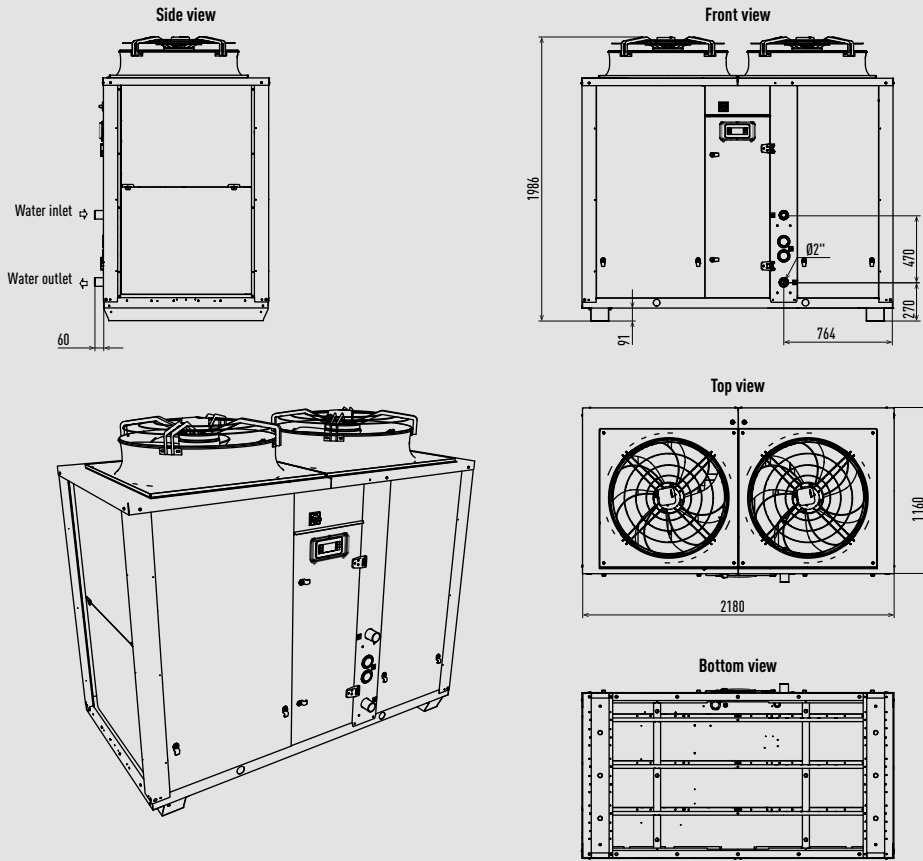
Unit: mm

ECOi-W 45 to 55 with condenser fans Standard and buffer tank



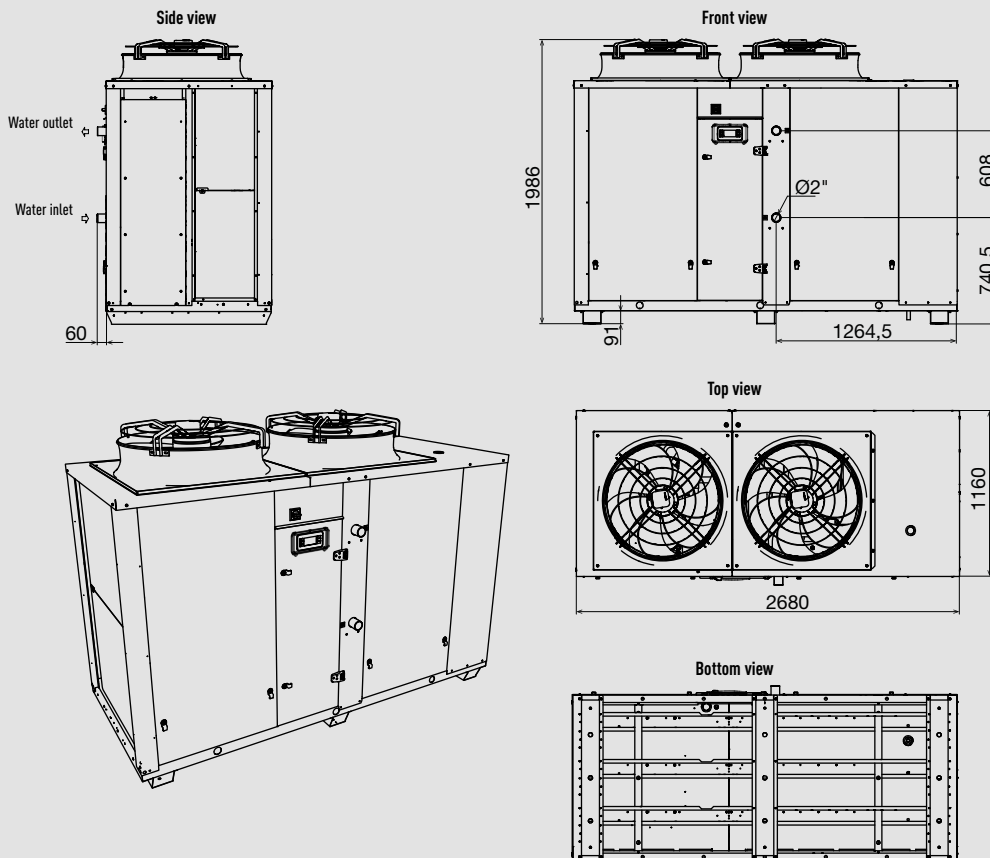
Unit: mm

ECOi-W 65 to 75 with condenser fans Standard



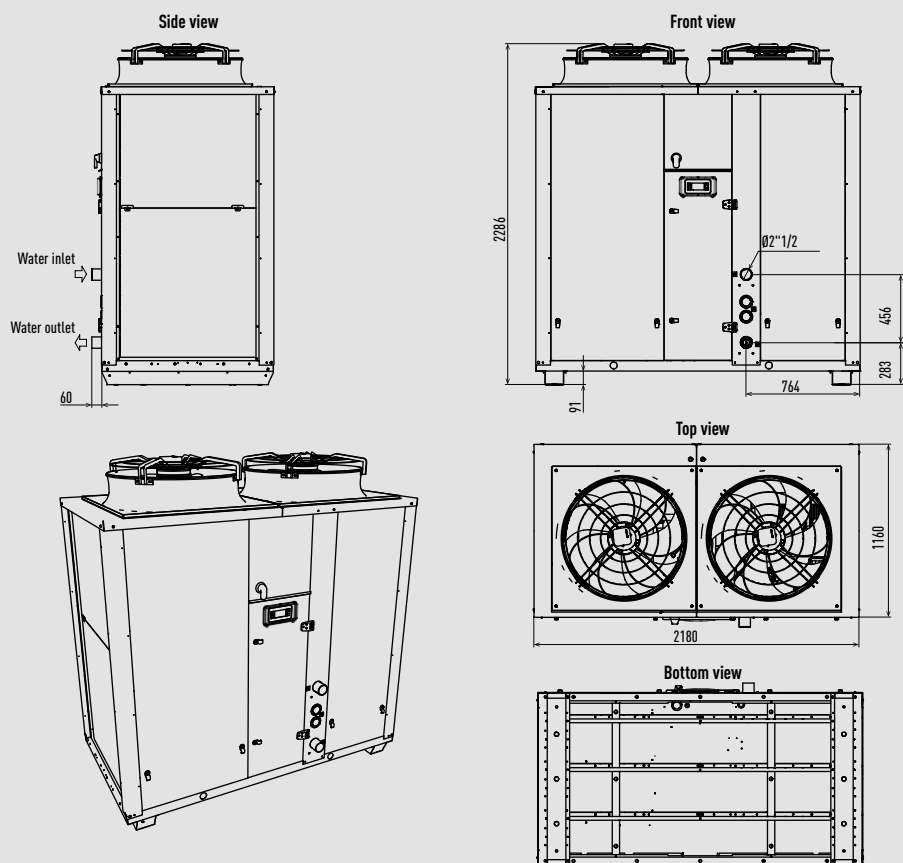
Unit: mm

ECOi-W 65 to 75 with condenser fans Standard and buffer tank



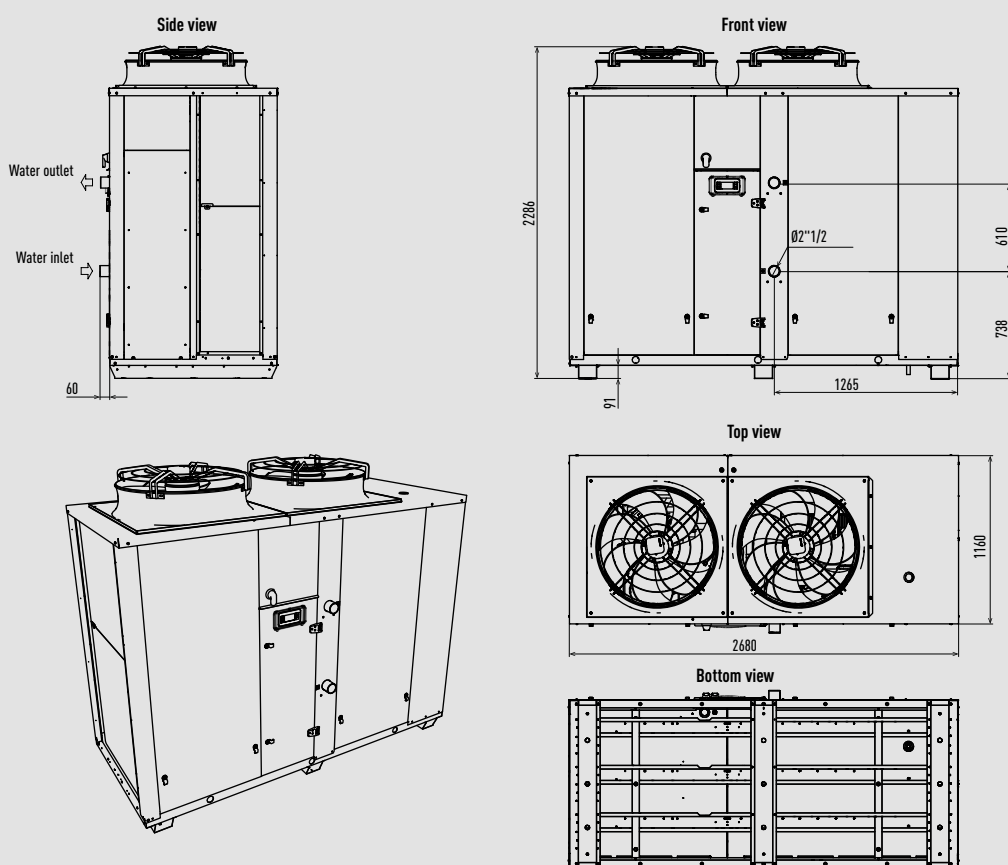
Unit: mm

ECOi-W 90 to 125 with condenser fans Standard



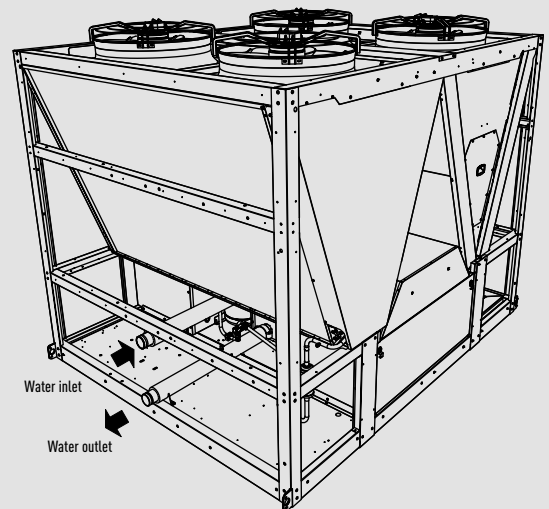
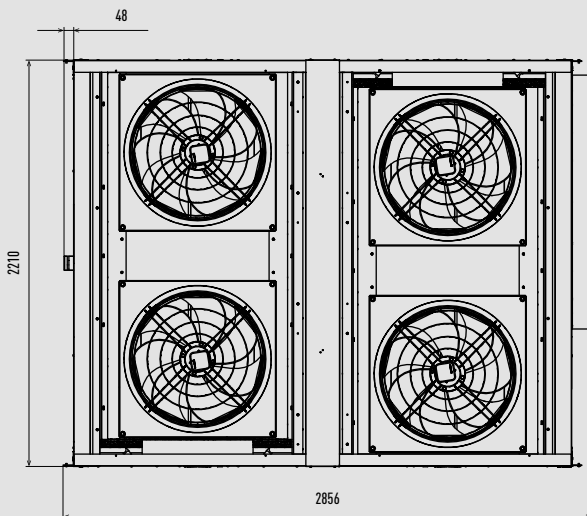
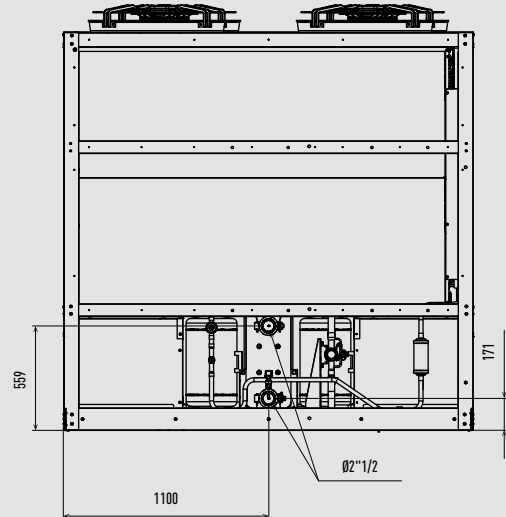
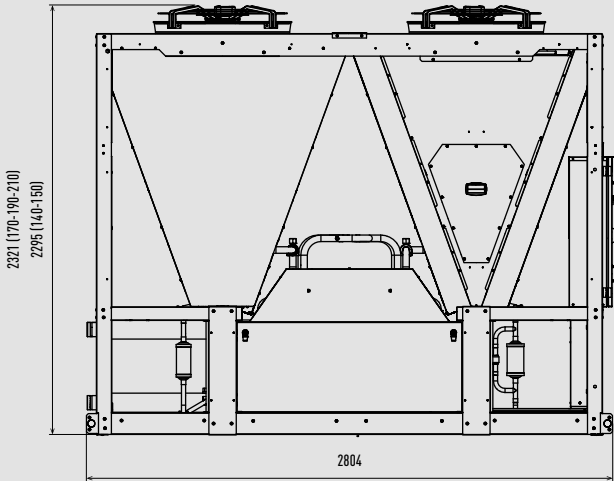
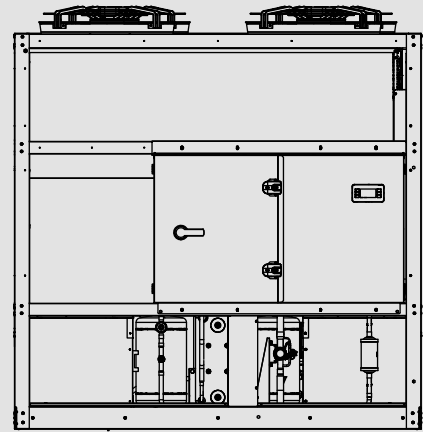
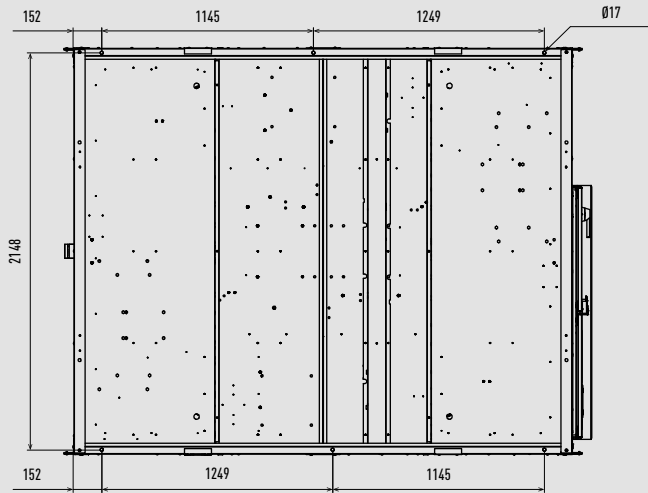
Unit: mm

ECOi-W 90 to 125 with condenser fans Standard and buffer tank

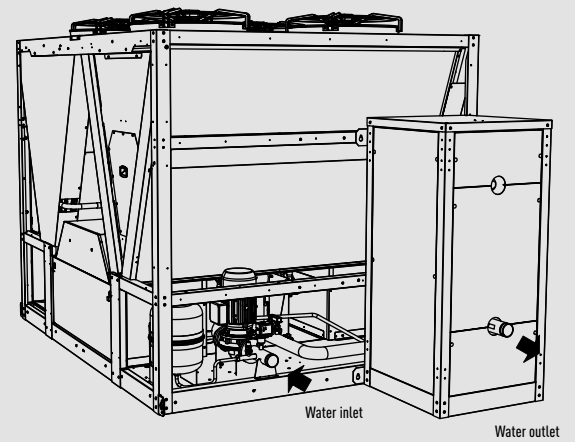
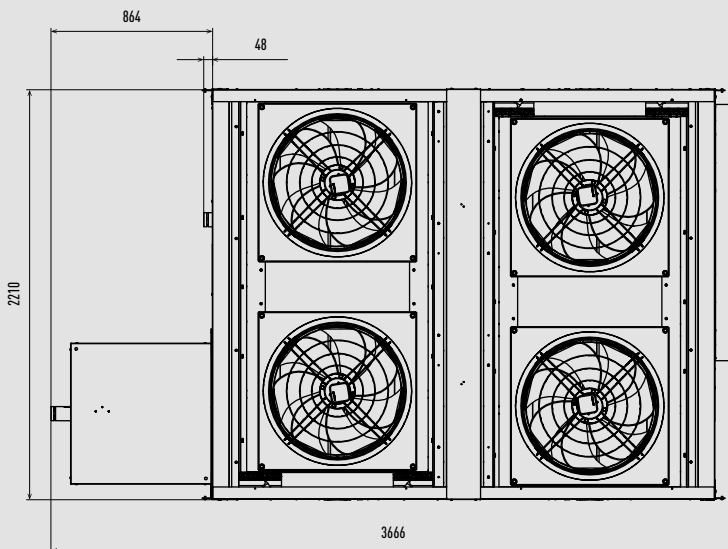
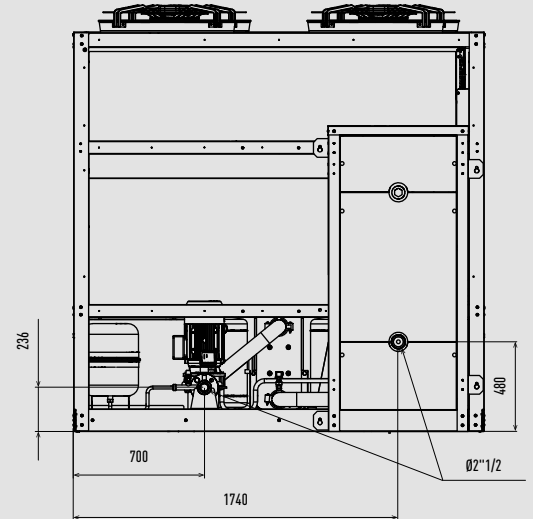
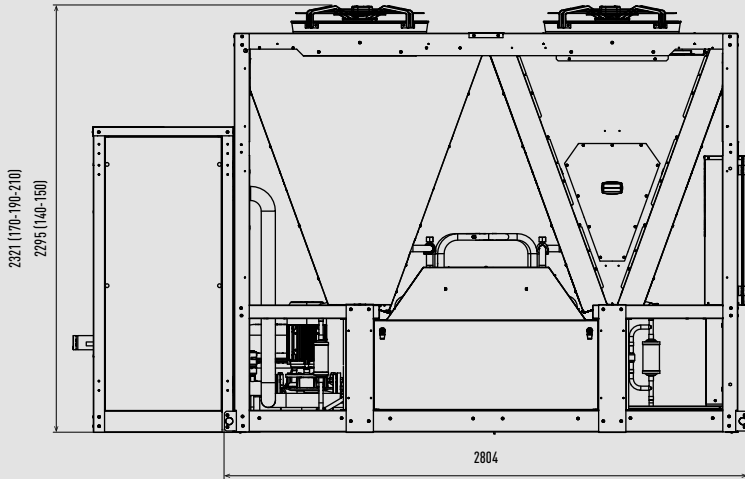
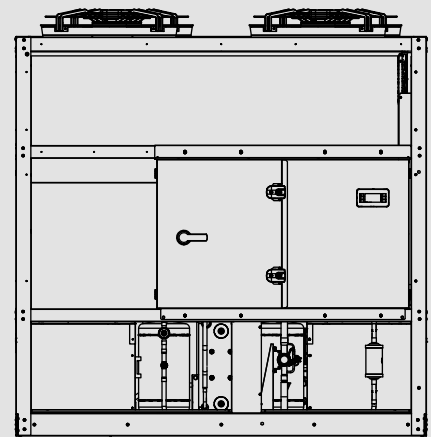
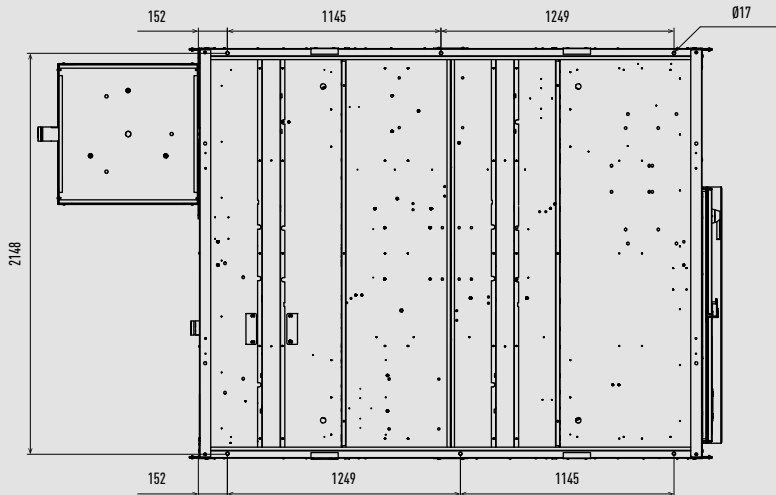


Unit: mm

ECOi-W 140 to 210 without pump



ECOi-W 140 to 210 with 1 pump and buffer tank







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