KEYTER

HVAC+R Solutions

2025/26

PRODUCT CATALOG

KEYTER

committed to the environment

KEYTER is a group of industrial companies dedicated to the design, engineering, manufacturing, and marketing of solutions based on refrigeration and air conditioning technologies (HVAC+R). KEYTER's team has over 35 years of experience in developing and manufacturing high-tech solutions based on the principles of sustainability, reliability and energy efficiency.

KEYTER is recognized for its strong focus on R&D&I and its commitment to developing projects in technological innovation and environmental protection.

Product &
360º Service

Focused on
energy efficiency

Committed to
the environment

contents

KEYTER

4 sales network 5 360º service 6 product range	*introduction*	4
11 ***nesea pro*** 18 ***medea pro*** 23 ***pacifica pro*** 30 ***ziran pro*** 38 ***ziran pro maxima***	*chillers & Heat Pumps pro series*	11
40 ***pacifica*** *inverter & euro* 48 ***adriatica*** *inverter & euro* 56 ***qu4tro*** 61 ***ventia*** 68 ***hibernia*** 73 ***argia***	*air-to-water chillers & Heat Pumps*	40
78 ***oneida eco q*** 79 ***medea*** 84 ***langia*** 88 ***medea maxima***	*water-to-water chillers & Heat Pumps*	78
93 ***atlantia*** 99 ***atlantia power*** 104 ***nemesis*** 109 ***helvetia*** 116 ***pangea eco*** *inverter* 121 ***pangea*** *inverter* 125 ***oneida eco*** *inverter*	*chillers*	93
128 pumping groups	*pumping groups*	128
132 ***daira*** 134 ***fancoils*** 136 ***belair***	*AHUs & Terminal Units*	132
139 ***persea evo*** 152 ***eirene*** *inverter* 158 ***thalia*** *inverter*	*rooftop high-efficiency air-to-air & autonomous units*	139
161 ***ocean***	*dehumidifiers*	161
169 ***life IT&Power*** 172 ***life data center*** 173 ***life airports*** 174 ***seila inverter***	*life solutions*	169
176 commercial terms 177 psychrometric	*information*	176

sales network

At KEYTER, we have an extensive commercial and technical service network in Europe, America, Africa, and the Middle East.

Energy-efficient air conditioning solutions with respect for the environment in over 75 countries worldwide. Tailored to the specific needs of each project, ensuring the highest quality and performance in our products.

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Technical Service

KEYTER has a highly experienced and qualified team to provide support to customers in installation, commissioning, supervision, and optimization of equipment operation, etc.

tailored support

The peace of mind of spare parts

At KEYTER, we understand the spare parts service not as a business area, but as an added value we provide to our customers, making their management easier and more efficient with personalized attention.

customer-oriented

Comprehensive Service Solution

TECHNOLOGY DEVELOPED AND MANUFACTURED IN SPAIN

KEYTER develops and manufactures efficient HVAC+R air conditioning solutions. Continuous collaboration with global industry leaders enables us to incorporate the latest technologies in energy efficiency, allowing us to offer the market solutions that ensure the most efficient operation of their facilities.

Service Spain
service@keyter.com

International Service
international.service@keyter.com

Propane Chillers & Heat Pumps (R-290)

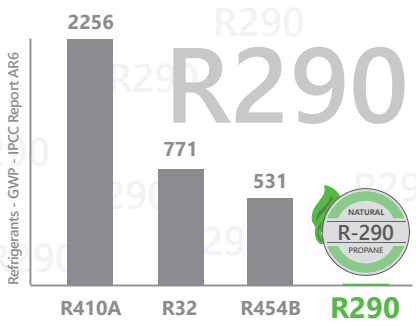
nesea pro KWFA

2-16 kW 4-23 kW

scroll inverter

EC heat recovery HT

Air-to-Water Chillers and Heat Pumps for Cold Climates | High Temperature up to 75°C



medea pro KZVB

4-22 kW 5-26 kW

scroll inverter

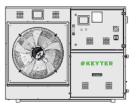
heat recovery HT

Water-to-Water Chillers and Heat Pumps with production up to 75°C

cascade systems

5-110 kW 5-130 kW

x5



2-80 kW 4-115 kW

x5

ziran pro KWR & maxima KWRH

33-194 kW 41-253 kW

semi-hermetic inverter

EC heat recovery HT

Air-to-Water Chillers and Heat Pumps for Cold Climates

pacifica pro KWEB

33-105 kW 38-120 kW

scroll inverter

EC heat recovery HT

Chillers and Air-to-Water Heat Pumps for Mild | Medium Climate

Air-Cooled Chillers & Heat Pumps

adriatica KWG

22-206 kW 49-152 kW

inverter version euro version

EC heat recovery

Air-to-Water Chillers and Heat Pumps for Mild Climates

pacifica KWE

43-310 kW 49-262 kW

inverter version euro version

EC heat recovery

Air-to-Water Chillers and Heat Pumps for Mild to Moderate Climates

ventia KWPC | KWPM

121-582 kW 130-624 kW

Tandem multiscroll compressors

Air-to-Water Heat Pumps for Mild to Moderate Climates

hibernia KWNA

227-583 kW 239-631 kW

Trio multiscroll compressors

Air-to-Water Heat Pumps for Cold Climates

Multipurpose Heat Pump

argia KWHA

27-107 kW 29-116 kW

Tandem multiscroll compressors

High-Temperature Air-to-Water Heat Pumps for Mild Climates up to 70°C

qu4tro K4A

68-285kW 80-358 kW

Simultaneous Production of Hot and Cold Water

Multipurpose air-to-Water Heat Pumps for Mild to Moderate Climates

Water-cooled chillers & heat pumps

medea KZV

26-302 kW 30-353kW

Multiscroll compressors

Chillers and Heat Pumps with Water Production up to 60°C

langia KZBA

183-713 kW 202-806 kW

Multiscroll compressors

Chillers and Heat Pumps with Water Production up to 60°C

Water-cooled high-temperature heat pumps

medea maxima KZVH

74-289 kW

Multiscroll compressors

High-Temperature Water Production Heat Pumps up to 78°C

oneida eco q KZT

283-1683 kW

Inverter screw compressors

High-Temperature Water Production Heat Pumps up to 85°C

Chillers

Air-cooled multiscroll chillers

nemesis modular KWS

atlantia & atlantia power KWA | KWM KWP | KWB

185-831 kW

- Tandem multiscroll compressors
- Shell-and-tube heat exchangers KWM (Atlantia) | KWB (Atlantia Power)
- Plate heat exchangers KWA (Atlantia) | KWP (Atlantia Power)

helvetia modular

helvetia KWZE

116-932 kW

- Tandem multiscroll compressors
- Shell-and-tube heat exchangers
- Plate heat exchangers

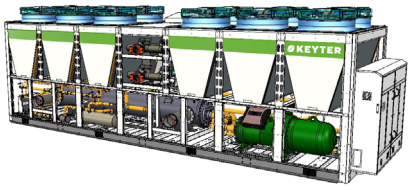
Air-cooled screw chillers

pangea eco KWT

239-1242 kW

- Inverter screw compressors
- Shell-and-tube heat exchangers

Total heat recovery



System that utilizes residual condensation heat from air to heat water for both domestic hot water (DHW) and industrial applications.

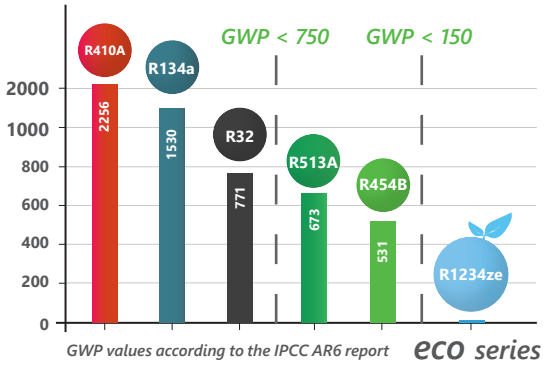
Water-cooled screw chillers

oneida eco KZT

177-1429 kW

- Inverter screw compressors
- Shell-and-tube heat exchangers

Refrigerants - GWP



AHUs & Terminal units

Air Handling Units & Heat Recovery Units

2000 m³/h - 46000 m³/h

- Air renewal
- Heat recovery
- Indoor air quality
- Air purification

Fancoils & Air Conditioning Units

16-98 kW 22-118 kW

High-efficiency air-to-air rooftop units

6000 m³/h - 55000 m³/h

persea evo KCRA

20-317 kW | 19-332 kW

inverter version | euro version

Innovative Full Inverter Energy Recovery System

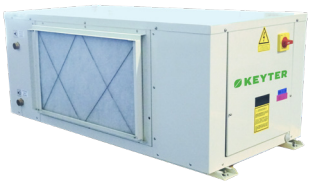
Autonomous units

eirene KCV

19-108 kW | 17-109 kW

inverter

Horizontal and vertical compact air-to-air units



thalia KGH

8-50 kW | 9-58 kW

Compressors Scroll

Horizontal compact water-cooled units

Dehumidifiers

ocean DTS

11-194 kW | 14-150 kW

Tandem multiscroll compressors

7 kg/h | 2000 m³/h - 311 kg/h | 48000 m³/h

Enclosure made of double-sided painted sandwich panels with 50 mm thick rock wool insulation, optimized for corrosive environments.

SEALIX Heat Exchanger for enhanced protection against corrosion, chlorine, and salt.

Air renewal with mixing section, free cooling, and energy recovery.

Preheating of pool water through condensation heat recovery.

Life solutions

IT&Power KCVC & data center

airports KCRP

Compact PCA Units for Aircraft & Low-Profile Equipment for Boarding Bridges.

Heat Pumps

Chillers and Heat Pumps ***R-290***

11	*nesea pro*	*KWFA*	NATURAL R-290 PROPANO	*Reversible heat pump* *Cooling only*
18	*medea pro*	*KZVB*	NATURAL R-290 PROPANO	*Reversible heat pump* *Cooling only*
23	*pacifica pro*	*KWEB*	NATURAL R-290 PROPANO	*Reversible heat pump* *Cooling only*
30	*ziran pro*	*KWR*	NATURAL R-290 PROPANO	*Reversible heat pump* *Cooling only*
38	*ziran maxima*	*KWRH*	NATURAL R-290 PROPANO	*Reversible heat pump*

Air-to-water Chillers and Heat Pumps

40	*pacifica* *inverter & euro*	*KWE*	R454B	*Reversible heat pump* *Cooling only*
48	*adriatica* *inverter & euro*	*KWG*	R454B	*Reversible heat pump* *Cooling only*
56	*qu4tro*	*K4A*	R454B	*Multipurpose heat pump*
61	*ventia*	*KWPC | KWPM*	R454B	*Reversible heat pump*
68	*hibernia*	*KWNA*	R454B	*Reversible heat pump*
73	*argia*	*KWHA*	R513A	*Reversible heat pump*

Water-to-water Chillers and Heat Pumps

78	*oneida eco q*	*KZT*	HFO R1234ze Low GWP	*Heating only*
79	*medea*	*KZV*	R454B	*Reversible heat pump* *Cooling only | Heating only*
84	*langia*	*KZBA*	R454B	*Reversible heat pump* *Cooling only | Heating only*
88	*medea maxima*	*KZVH*	R513A	*Heating only*

KEYTER

NESEA *Pro*

2-16 kW 4-23 kW

Scroll-Inverter · EC · heat recovery · HT

Air-to-water Heat Pumps Suitable for Cold Climates | Water production up to 75ºC

In heating-only, cooling-only and reversible designs, suitable for residential or commercial applications.

New PRO Series: Optimized for the use of R290 refrigerant and **Full-Inverter Technology**.

NATURAL R-290 PROPANE

Pro series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant, class A3, eco-friendly with low environmental impact (GWP = 3) and high thermodynamic performance. Also available with class A2L R454C refrigerant.
- Robust and reliable design integrates leak detection and an ATEX extraction fan for maximum safety.
- With careful insulation, they ensure proper equipment protection and noise reduction, achieving ultra-quiet operation.
- Units equipped with intelligent control that ensures an optimal defrosting process.

Codification:

KWFA | 1 | 020 | I | V | S4D

Series · Size · Power

Operating mode
I - Reversible heat pump
R - Cooling only

Version - Compressor Type
V - Scroll inverter compressor

Hydraulic Version
S - Standard unit
P - Version with hydraulic group

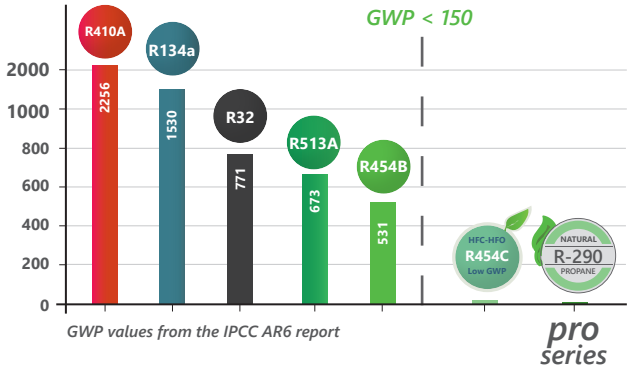
Electrical supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290 / **K** - R454C

Energy Efficiency

- Compact **Full-Inverter** units equipped with a hermetic Scroll inverter compressor, electronic expansion valve, and EC fans that ensure the best seasonal performance (SEER/SCOP).
- Wide operating range with high efficiency and extended operating limits (operation down to -20ºC outdoor temperature at full load).
- Partial heat recovery available with the possibility of integrating the recirculation pump.

Refrigerants - GWP



nesea pro

range specification

		KWFA
General characteristics		
Refrigerant	R290	✓
	Equipment with refrigerant charge	✓
	Refrigerant R454C	●
	Leak detector	✓R290 ● R454C
	ATEX axial fan for refrigerant extraction	✓R290 ● R454C
	ATEX centrifugal fan for refrigerant extraction	●
	Indicator light in case of leakage	✓R290 ● R454C
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Perimeter enclosure insulation	✓
	Perimeter-enclosed equipment with 20 mm sandwich panels	●
	Anti-vibration supplements	●
Compressor	Inverter scroll technology	✓
	Compressor anti-vibration mounts	✓
	Acoustic insulation jacket	●
Expansion valves	Electronic expansion valves	✓
	Display for electronic expansion valve	●
Fans		
Outdoor fans	EC axial fans with integrated curved nozzle	✓
Heat exchangers		
Coils	Cu tube and Al fin coils	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Propane-water heat exchanger, AISI 316L stainless steel plates, copper-welded and thermally insulated	✓
Energy		
Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●
Hydraulic		
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●

✓ Included as standard
● Optional
- Not applicable

nesea pro

range specification

KEYTER

		KWFA
Installation		
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Control		
Electronic control and communication	Programmable AQUAMATIX electronic control	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Electric energy meter	●
Electrical panel	Electrical panel insulated against refrigerant leaks	✓
	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

NATURAL R-290 PROPANE

nesea pro

R-290 technical data

KWFA model			KWFA 1020		
HEAT PUMP VERSION (I)					
	Compressor speed	rpm	1100	4550	5500
Cooling mode	Cooling power (1)	kW	2,5	13,7	15,4
		TR	0,7	3,9	4,4
		kBTU/h	8,5	46,6	52,6
	Absorbed power (2)	kW	0,8	5,3	6,8
	EER (3)	kW/kW	3,00	2,57	2,25
		BTU/(h*W)	10,23	8,78	7,69
	SEER (4)	kWh/kWh		5,1	
	ηs,c (4) (5)	%		202,2%	
Heating mode	Heating power (7)	kW	4,8	18,6	21,8
	Absorbed power (2)	kW	1,0	4,4	5,5
	COP (3)	kW/kW	4,73	4,24	3,96
		BTU/(h*W)	16,14	14,48	13,53
	SCOP (4)	kWh/kWh		4,6	
	ηs,h (4) (5)	%		182,6%	
	SCOP (6)	kWh/kWh		3,8	
	ηs,h (6) (5)	%		147,7%	
TECHNICAL SPECIFICATIONS					
Power supply			400 V / III / 50 Hz with neutral		
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R290/3		
	No. of refrig. circuits / compressors		1/1		
	No. power stages		20-100%		
Hydraulic circuit	Indoor water flow rate	m^3/h	0,8	3,2	3,8
	Type of heat exchanger		brazed stainless steel plate heat exchanger		
	Hydraulic connections Ø	inch	1''		
Outdoor fan	Outdoor air flow rate	m^3/h	6000	8000	
	Number of fans		1		
	Ø and Type of fan	mm	630 EC		
Equipment sound pressure (Lp 10) (8)		dB (A)	40	44	45
Weights (S version)	Empty weight	kg	260	260	260
	In-service weight	kg	262	262	262

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to EN: 14511-2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for low-temperature applications and average climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for medium-temperature applications and average climate.
(7) Nominal heating capacity for an inlet/outlet water temperature of 30/35ºC and an outdoor air temperature of 7ºC DB/6ºC WB. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(8) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

nesea pro

R-454C technical data

KWFA model			KWFA 1020		
HEAT PUMP VERSION (I)					
	Compressor speed	rpm	1800	4550	5500
Cooling mode	Cooling power (1)	kW	5,6	14,0	15,2
		TR	1,6	4,0	4,3
		kBTU/h	19,1	47,9	52,0
	Absorbed power (2)	kW	1,6	5,8	7,5
	EER (3)	kW/kW	3,46	2,43	2,04
		BTU/(h*W)	11,79	8,29	6,96
	SEER (4)	kWh/kWh		4,8	
	ηs,c (4) (5)	%		190,0%	
Heating mode	Heating power (7)	kW	8,0	19,3	22,3
	Absorbed power (2)	kW	1,6	4,8	6,0
	COP (3)	kW/kW	5,09	4,04	3,70
		BTU/(h*W)	17,36	13,78	12,63
	SCOP (4)	kWh/kWh		4,3	
	ηs,h (4) (5)	%		169,1%	
	SCOP (6)	kWh/kWh		3,5	
	ηs,h (6) (5)	%		137,1%	
TECHNICAL SPECIFICATIONS					
Power supply				400 V / III / 50 Hz with neutral	
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2		R454C / 148	
	No. of refrig. circuits / compressors			1/1	
	No. power stages			33-100%	
Hydraulic circuit	Indoor water flow rate	m^3/h	1,4	3,3	3,9
	Type of heat exchanger			brazed stainless steel plate heat exchanger	
	Hydraulic connections Ø	inch		1''	
Outdoor fan	Outdoor air flow rate	m^3/h	6000	8000	
	Number of fans			1	
	Ø and Type of fan	mm		630 EC	
Equipment sound pressure (Lp 10) (8)		dB (A)	41	44	45
Weights (S version)	Empty weight	kg	260	260	260
	In-service weight	kg	262	262	262

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to EN: 14511-2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for low-temperature applications and average climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for medium-temperature applications and average climate.
(7) Nominal heating capacity for an inlet/outlet water temperature of 30/35ºC and an outdoor air temperature of 7ºC DB/6ºC WB. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(8) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

NATURAL R-290 PROPANE

nesea pro

energy efficiency and decarbonization

Energy Efficiency

Compact Full-Inverter units equipped with hermetic Scroll inverter compressors and high efficiency heat exchangers that ensure very high seasonal performance (SEER/SCOP).

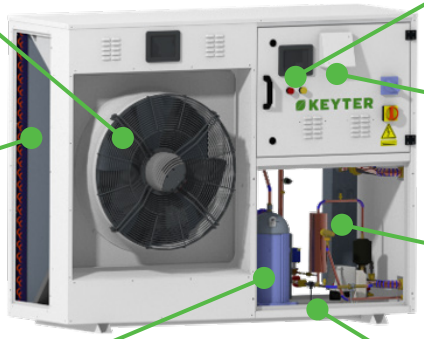
Robust and reliable design for indoor installation integrates leak detection and an ATEX axial extraction fan for maximum safety.

Inverter

The optimized electronic axial fan minimizes noise.

Removable panel for access to the copper aluminum coil optimized for refrigerant charge reduction.

Refrigeration circuit with scroll inverter compressor and electronic expansion valve.



Indicator lights in case of refrigerant leakage.

- Electrical panel in a sealed compartment separate from the refrigeration circuit.
- SIEMENS electronic control programmable AQUAMATIX and CLIMATIX HMI terminal.

Brazed plate heat exchanger made of AISI 316L stainless steel. Optimized for:
- Maximizing energy efficiency.
- Minimizing pressure losses.

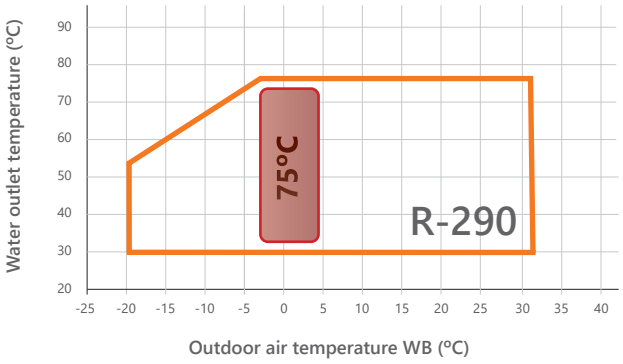
Fully enclosed refrigeration compartment with an optional 20mm sandwich panel.

Decarbonization

High-temperature water production throughout the year for boiler replacement and carbon footprint reduction.

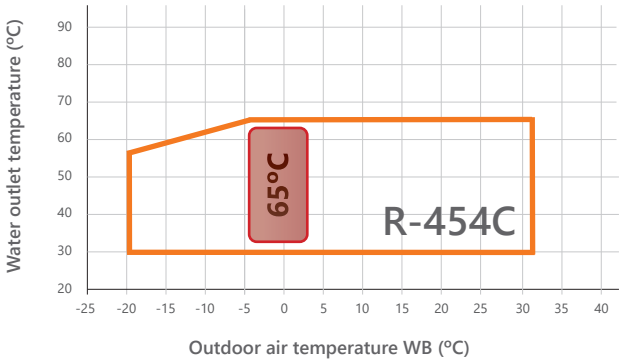
Heating mode (R-290):

KWFA 1020 at 4550 rpm



Heating mode (R-454C):

KWFA 1020 at 4550 rpm



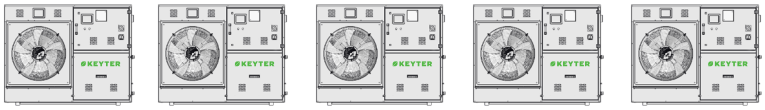
Cascade system

Nesea Pro heat pumps can be installed in a cascade of up to 5 units in parallel, reaching a total modulation capacity in a single installation of:

Total heating capacity up to 5 x 23 kW → up to 115 kW
Total cooling capacity up to 5 x 16 kW → up to 80 kW

This simultaneous cascade system operation requires a rotation board that allows for the optimal management of this system.

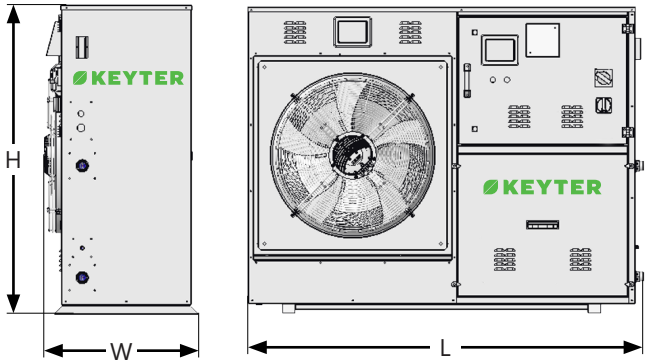
The control management for cascade installations allows monitoring of the operating hours of each unit to extend their lifespan and prioritizes operation at partial load to optimize system performance.



2-80 kW 4-115 kW

Dimensions

Series 1 S/P



Standard equipment dimensions (mm)	
Bodywork	**Series 1 S/P**
L	1670
W	600
H	1300

NATURAL R-290 PROPANE

KEYTER

MEDEA *Pro*

4-22 kW···110 kW 5-26 kW···130 kW

Scroll-inverter · Heat recovery · HT

Water-to-water Heat Pumps Production up to 77°C

Available in heating-only, cooling-only, reversible, and reversible hydraulic circuit versions, designed for residential or commercial applications.

New PRO Series: Optimized for the use of R290 refrigerant and Full-Inverter Technology.

NATURAL R-290 PROPANE

Pro series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant, class A3, environmentally friendly with low environmental impact (GWP = 3) and high thermodynamic performance.
- Maximum versatility to integrate into new or existing systems: with fan coils, underfloor heating, radiators, or for domestic hot water production.
- Different hydraulic versions available, recirculation pumps on the external and/or internal side.
- With careful insulation, they ensure adequate protection of the equipment and reduce noise levels, achieving ultra-quiet operation.

Energy Efficiency

- Compact Full-Inverter units equipped with a hermetic Scroll inverter compressor, electronic expansion valve, and latest generation plate heat exchangers.
- Excellent power modulation allows achieving very high seasonal energy efficiency.
- Partial heat recovery is available with the possibility to integrate the recirculation pump.

Codification:

KZVB | | **I V S4D**

Series | Size | Power

Operating mode
I - **Reversible heat pump**
R - **Cooling only**
Q - **Heating only**
C - **Reversible hydraulic circuit, non-reversible refrigeration circuit (without a 4-way valve)**

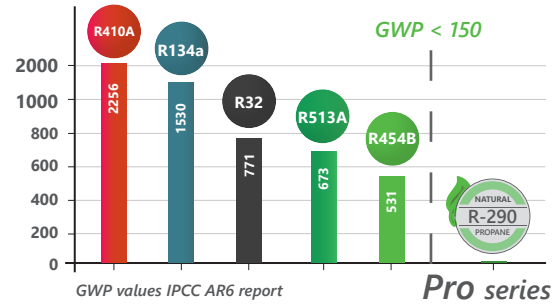
Version - Compressor Type
V - Compressors scroll inverter

Hydraulic version
S - Standard equipment
P - Version with hydraulic group with pump on the internal side
H - Version with hydraulic group with pump on the external side
B - Hydraulic group with pump on the internal and external sides

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290

Refrigerants - GWP



medea pro

technical data

KZVB model				KZVB 1015		
Heat pump reversible		Compressor revolutions	rpm	1100	4350	5500
	Cooling mode	Cooling capacity (1)	kW	4,3	17,0	21,8
			TR	2,0	5,0	7,0
			kBTU/h	24,0	60,0	84,0
		Absorbed power (2)	kW	0,73	3,59	4,93
		EER (3)	W/W	5,73	4,56	4,25
		SEER (4)	kWh/kWh		5,93	
		ηs,c (5)	%		229,1%	
	Heating mode	Heating power (6)	kW	5,0	20,7	26,1
		Absorbed power (2)	kW	0,73	3,66	5,07
		COP (3)	W/W	6,74	5,32	4,77
		SCOP average climate, 30-35ºC (4)	kWh/kWh		6,5	
		ηs,h average climate, 30-35ºC (5)	%		254,1%	
TECHNICAL SPECIFICATIONS						
Power supply					400 V / III / 50 Hz with neutral	
Refrigeration circuit		Refrigerant fluid / GWP	kg CO_2		R290/3	
		Refrigerant charge	kg		0,68	
		Compressor type			Hermetic Scroll Inverter	
		No. of refrig. circuits / compressors			1/1	
		No. power stages			20-100%	
Hydraulic circuit evaporator side	Heat pump equipment Cooling mode	Indoor water flow rate	m^3/h	0,73	2,92	3,75
		Nº and type of exchanger			1 x brazed stainless steel plate heat exchanger	
		Pressure drop	kPa	10,5	22,7	25,9
		Hydraulic connections Ø	inch		1''	
Hydraulic circuit condenser side		Indoor water flow rate	m^3/h	0,86	3,52	4,55
		Type of heat exchanger			1 x brazed stainless steel plate heat exchanger	
		Pressure drop	kPa	9,52	27,92	37,12
		Hydraulic connections Ø	inch		1''	
Hydraulic circuit evaporator side	Heat pump equipment Heat mode	Indoor water flow rate	m^3/h	1,23	4,92	6,10
		Nº and type of exchanger			1 x brazed stainless steel plate heat exchanger	
		Pressure drop	kPa	8,10	49,59	73,17
		Hydraulic connections Ø	inch		1''	
Hydraulic circuit condenser side		Indoor water flow rate	m^3/h	0,86	3,56	4,49
		Type of heat exchanger			1 x brazed stainless steel plate heat exchanger	
		Pressure drop	kPa	6,77	27,87	40,65
		Hydraulic connections Ø	inch		1''	
Equipment sound pressure (Lp 10) (7)			dB (A)	37,8	39,9	40,7
Weight			kg		299	

(1) Nominal cooling capacity for an evaporator inlet/outlet temperature of 12/7ºC and a condenser inlet/outlet temperature of 30/35ºC. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Total power absorbed by compressors.
(3) EER and COP calculated according to EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal space heating energy efficiency (ηs,h) are calculated for low-temperature applications and a medium climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Nominal heating capacity for a condenser inlet/outlet temperature of 30/35ºC and an evaporator inlet/outlet temperature of 10/7ºC. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(7) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

medea pro

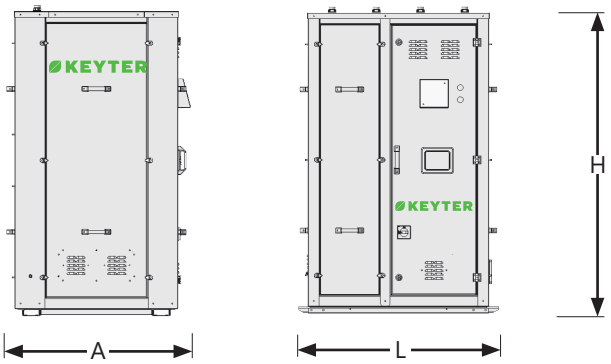
range specification

		KZVB
General characteristics		
Refrigerant	R290	✓
	Leak detector	✓
	ATEX centrifugal fan for refrigerant extraction	✓
	ATEX axial fan for refrigerant extraction	●
	Indicator light in case of leakage	✓
Bodywork	Self-supporting galvanized steel bodywork/cabinet with thermosetting polyester paint treatment, oven-cured, without panels	✓
	Customized color to suit the needs of the installation	●
	Perimeter enclosure of the equipment with panels	✓
	Acoustic insulation of panels (10 mm)	●
	Acoustic insulation of panels (20 mm)	●
	Perimeter enclosure with 50 mm rockwool sandwich panel	●
	Anti-vibration supplements	●
Compressors	Inverter scroll technology	✓
	Compressor anti-vibration mounts	✓
	Acoustic insulation jacket	●
Expansion valves	Electronic expansion valve	✓
	Display for electronic expansion valve	●
Heat exchangers		
Heat exchangers	Stainless steel plate heat exchanger	✓
Hydraulic		
Hydraulic components	Flexible water inlet and outlet connections	●
	VICTAULIC connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment	●
Energy		
Energy recovery	Partial condensation energy recovery	●
	Hydraulic pump for the recovery circuit	●
Installation		
Power supply	400 V / III ph / 50 Hz with neutral	✓
	Safe power supply (400 V / III ph / 50 Hz with neutral) independently for ATEX extraction fan in case of leakage	✓
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●

✓ Included as standard ● Optional - Not applicable

Dimensions

Series 1 S/P/H



Standard equipment dimensions (mm)	
Bodywork	**Series 1 S/P/H**
L	900
A	800
H	1500

Control

		KZVB
Electronic control and communication	Programmable AQUAMATIX electronic control	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors	✓
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Differential switches	●
	Electric energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Design of electrical switchgear for high temperatures	✓
	Forced ventilation of the electrical panel	●
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

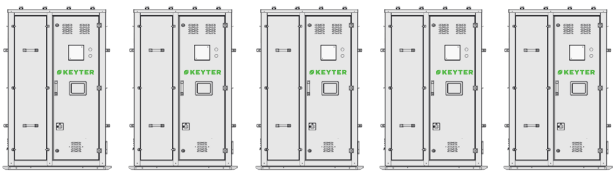
Cascade system

The Medea Pro heat pumps can be installed in a cascade configuration of up to 5 units in parallel, achieving a total modulation capacity in a single installation of:

Total heating capacity up to 5 x 26 kW → up to 130 kW
Total cooling capacity up to 5 x 22 kW → up to 110 kW

This simultaneous operation of the cascade system requires a rotating plate that allows for optimal management of the system.

The control management for cascade installations allows for tracking the operating hours of each unit to extend their lifespan and prioritizes operation at partial load to optimize system performance.



5-110 kW 5-130 kW

NATURAL R-290 PROPANE

medea pro

energy efficiency and decarbonization

Energy Efficiency

Compact Full-Inverter units equipped with hermetic Scroll inverter compressors and high efficiency heat exchangers that ensure very high seasonal performance (SEER/SCOP).

Robust and reliable design for indoor installation integrates leak detection and ATEX centrifugal extraction fan for maximum safety in technical rooms.

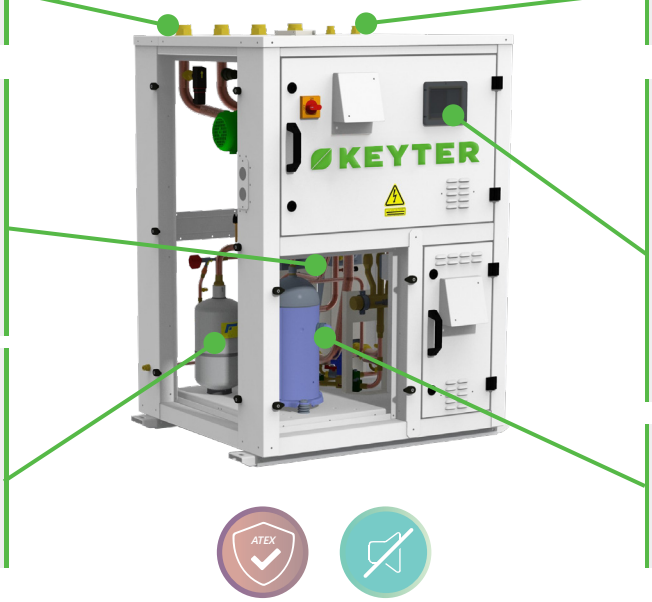
Inverter

Hydraulic connections for main circuits.

Welded stainless steel AISI 316L plate heat exchangers.

Optimized to:
- maximize energy efficiency.
- minimize pressure losses.

Fully panelized equipment as standard. Optional 50 mm thick rock wool sandwich panel available.



Partial recovery hydraulic connections.

- Electrical panel in a sealed compartment separate from the refrigeration circuit.
- Variable frequency drive panel.
- SIEMENS electronic control programmable AQUAMATIX and CLIMATIX HMI terminal.

Refrigeration circuit with inverter scroll compressor and electronic expansion valve.

Decarbonization

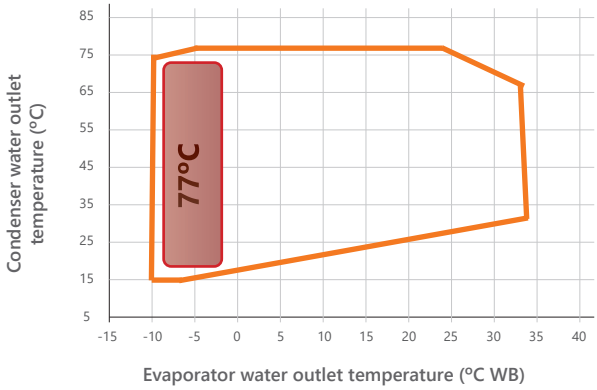
Production of high-temperature water year-round for boiler replacement and reduction of carbon footprint.

HT

Equipment at 4350 RPM

Heating mode:

KZVB 1015 at 4350 rpm



KEYTER

PACIFICA *Pro*

29-120 kW 32-132 kW

scroll inverter

EC heat recovery HT

Air-to-water heat pumps suitable for cold climates | water production up to 75°C

Available in reversible or cooling-only versions, designed for residential, commercial, and industrial applications.

Allows modular systems of up to 5 units (up to 600 kW in cooling and 660 kW in heating).

NATURAL R-290 PROPANE

Pro Series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant, A3 class, environmentally friendly with low global warming potential (GWP = 3) and high thermodynamic performance.
- Robust and reliable design with integrated leak detection and ATEX extraction fan for maximum safety.
- With carefully designed insulation, the unit ensures proper protection and noise reduction, achieving ultra-quiet operation.
- Units equipped with intelligent control to ensure an optimal defrosting process.

Codification:

KWEB | | | I V S4D

Series | Size | Power

Operating mode
I - Reversible heat pump
R - Cooling only

Compressor Type
V - Compresor scroll inverter

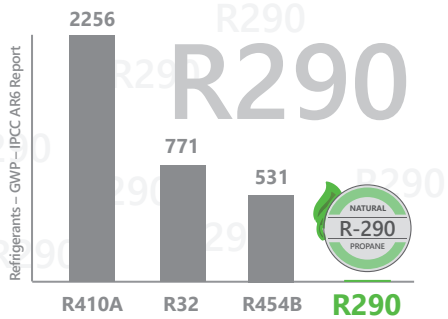
Hydraulic version
S - Standard unit / **P -** Version with hydraulic **kit**
H - Version with hydraulic kit and buffer tank
J - Version with hydraulic kit and high-capacity buffer tank

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290

Energy Efficiency

- Compact Full-Inverter units equipped with hermetic Scroll inverter compressor, electronic expansion valve, and EC fans, ensuring optimal seasonal performance (SEER/SCOP).
- Wide operating range with high efficiency and extended operating limits (full-load operation down to -20°C outdoor temperature).
- Partial heat recovery available, with the option to integrate the recirculation pump.



pacifica pro

range specification

General characteristics

		KWEB
Refrigerant	R290	✓
	Unit with refrigerant charge	✓
	Leak detector	✓
	ATEX axial refrigerant extraction fan	✓
	ATEX centrifugal refrigerant extraction fan	●
	Warning light in case of leak	✓
Bodywork	Self-supporting chassis/cabinet made of galvanized steel with oven-cured polyester powder coating	✓
	Custom color available to match installation requirements	●
	Enclosed compartment for refrigeration components with 10 mm polypropylene insulated panels	✓
	Enclosure for hydraulic components with 10 mm polypropylene insulated panels	✓
	20 mm polypropylene insulation for refrigeration and hydraulic compartments	●
	Enclosed hydraulic compartment with 20 mm rock wool sandwich panel	●
	Anti-vibration mounts available as accessories	●
Compressor	Scroll inverter technology	✓
	Compressor anti-vibration mounts	✓
	Acoustic insulation jacket	✓
Expansion valves	Electronic expansion valves	✓

Fans

Outdoor fans	EC axial fans with integrated curved nozzle	✓
	Condensing pressure control	✓
	High-performance EC axial fans	●
	EC plug fans (radial type)	●
	Curved external nozzles (available only with high-performance EC fans)	●
	AxiTop diffusers for axial fans (available only with high-performance EC fans)	●

Heat exchangers

Coils	Coils with copper tubes and aluminium fins	✓
	Coil with copper tubes / polyurethane pre-coated aluminium fins	●
	BLYGOLD: copper tubes / aluminium fins with Blygold coating	●
	COPPERFIN: copper tubes / copper fins	●
Heat exchangers	Propane-to-water heat exchanger, AISI 316L stainless steel brazed plates with copper, thermally insulated	✓

Energy

Energy recovery	Partial condensation heat recovery for DHW	●
	Pump in condensation heat recovery circuit	●
	Electric anti-freeze heater in DHW recovery plate heat exchanger	●

✓ Included as standard ● Optional - Not applicable

pacifica pro

range specification

KEYTER

Hydraulic (*)

		KWEB
Pumps (P/H version)	Single pump – standard available pressure (7–12 m.w.c.)	✓
	Single pump – high available pressure (15–20 m.w.c.)	●
	Single pump – very high available pressure (25–30 m.w.c.)	●
	Single pump with variable speed drive	●
	Backup pump (standard, high, or very high available pressure)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low-temperature kit for operation with water outlet temperature < 0 °C	●
	Low outdoor temperature kit	●
	Flexible inlet and outlet water connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the unit for version S	●
	Independent module with buffer tank available in 200 L / 375 L / 725 L + electric heaters	●

Installation

Protective grilles	Coil protection grille	●
Insulation	Thermal insulation on all cold metallic lines (refrigerant or water)	●
Power supply	400 V / 3-phase / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (contact us for available options)	●
Packaging	Packaging for maritime transport	●

Control

Electronic control and communication	AQUAMATIX programmable electronic controller	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for Modbus protocol	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety components	Main switch in the electrical panel	✓
	Circuit breakers for compressors, fans, and pumps	✓
	Residual current devices (RCDs)	●
	Low-pressure switch for pump protection	●
	PREMIUM phase control relay with phase failure detection and rotation direction protection	✓
	EXCELLENT phase control relay with added phase imbalance, overvoltage, and undervoltage detection	●
	Triple protection for the plate heat exchanger: water flow switch, water and refrigerant antifreeze protections	✓
	Energy meter	●
Electrical panel	Refrigerant leak-insulated electrical panel	✓
	Fully wired electrical panel with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Electrical components designed for high-temperature environments	✓
	Tropicalized electrical panel	●
	Socket outlet for general use	●
	Anti-freeze electric heater in electrical panel for low outdoor temperatures	●

Available in three versions depending on the hydraulic components included:

- **S Version** - Standard unit, without hydraulic module.
- **P Version** - Unit with hydraulic module, including hydraulic pump, without buffer tank.
- **H Version** - Unit with hydraulic module, including hydraulic pump and buffer tank.

Series PRO

NATURAL R-290 PROPANE

pacifica pro

technical data

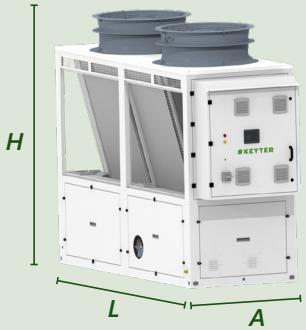
KWEB			2035		2050		2055		5060	
Compressor speed (Hz)			fnom	fmax	fnom	fmax	fnom	fmax	fnom	fmax
Cooling mode	Nominal cooling capacity (1)	kW	29,2	37,4	38,4	48,9	47,2	59,8	49,8	65,3
		TR	8,5	10,5	11	14	13,5	17	14	18,5
		kBTU/h	102	126	132	168	162	204	168	222
	Absorbed power (2)	kW	9,9	14,8	14,0	21,6	17,0	26,7	17,9	27,1
	EER (3)	kW/kW	2,94	2,53	2,75	2,26	2,77	2,24	2,79	2,41
		BTU/(h*W)	10,03	8,62	9,38	7,73	9,46	7,64	9,51	8,22
	SEER (4)	kWh/kWh	4,4		4,5		4,4		4,3	
	ηs,c (5)	%	174,7%		175,3%		173,7%		168,3%	
Heating mode 30/35	Nominal heating capacity (6)	kW	35,4	43,1	48,1	57,1	57,0	65,9	60,0	75,8
	Absorbed power (2)	kW	9,1	12,7	12,3	17,6	14,4	20,5	17,0	24,0
	COP (3)	kW/kW	3,87	3,39	3,90	3,24	3,97	3,21	3,53	3,16
		BTU/(h*W)	13,21	11,57	13,30	11,06	13,55	10,95	12,05	10,79
	SCOP (9)	kWh/kWh	4,8		4,7		4,9		4,5	
	ηs,h (9) (5)	%	187,4%		186%		193,4%		176,9%	
Heating mode 47/55	Nominal heating capacity (6)	kW	32,0	40,0	44,0	54,2	54,4	70,0	54,4	70,0
	Absorbed power (2)	kW	12,3	16,9	16,5	23,0	22,3	31,0	22,3	31,0
	COP (3)	kW/kW	2,61	2,37	2,67	2,36	2,44	2,25	2,44	2,25
		BTU/(h*W)	8,92	8,08	9,12	8,04	8,33	7,69	8,33	7,69
	SCOP (9)	kWh/kWh	3,6		3,7		3,3		3,5	
	ηs,h (9) (5)	%	142,0%		143,6%		136,3%		136,3%	
Heating mode 55/65	Nominal heating capacity (6)	kW	31	-	42,3	-	51,1	-	52,2	-
	Absorbed power (2)	kW	14	-	19,2	-	22,5	-	25,7	-
	COP (3)	kW/kW	2,15	-	2,20	-	2,27	-	2,03	-
		BTU/(h*W)	7,33	-	7,52	-	7,75	-	6,93	-
	SCOP (9)	kWh/kWh	3,1		3,2		3,3		3,0	
	ηs,h (9) (5)	%	122,2%		123,7%		127,4%		118%	
TECHNICAL SPECIFICATIONS										
Power supply			400 V / III / 50 Hz with neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R290/3							
	No. of circuits / compressors		1/1						2/2	
	No. of capacity stages		25-100%		25-100%		25-100%		12,5-100%	
Hydraulic circuit	Heating water flow rate (12)	m^3/h	6,1	7,5	8,3	9,9	9,9	11,4	10,4	13,1
	Cooling water flow rate	m^3/h	5,0	6,4	6,6	8,4	8,1	10,3	8,6	11,3
	Type of heat exchanger		Brazed stainless steel plates							
	No. of heat exchangers		1		1		1		2'	
	Buffer tank capacity – H version	(L)	200		200		200		200	
	Hydraulic connection Ø	(inch)	1 1/2''		2''		2''		2''	
Outdoor fan	Outdoor air flow (summer)	m^3/h	22000		22000		22000		44000	
	Outdoor air flow (winter)	m^3/h	22000		22000		22000		44000	
	Number of fans		1		1		1		2	
	Ø and Type of fan	mm	800 EC-Z		800 EC-Z		800 EC-Z		800 EC-Z	
Equipment sound pressure (Lp10) (9)		dB(A)	48	49	49	50	50	51	50	52
Weights (S version)	Empty weight	kg	640		666		639		1153	
	In-service weight	kg	646		672		706		1161	

(1) Nominal cooling capacity for water inlet/outlet temperatures of 12/7°C (53.6/44.6°F) and outdoor air temperature of 35°C (95°F). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).
(2) Nominal power input of compressors and outdoor fans.
(3) EER and COP calculated in accordance with EN 14511:2022.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) ηs,c values in compliance with Ecodesign Regulation EU 2016/2281 for comfort applications. ηs,h values in accordance with Ecodesign Regulation EU 813/2013 for heat pump applications.
(6) Nominal heating capacity for water inlet/outlet temperatures of 30/35°C (86/95°F) and outdoor air temperature of 7°C (44.6°F). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).

Series 2

Dimensions (mm)

Chassis	L	A	H
S/P	1875	1100	2375
H	2975	1100	2375



pacifica pro

technical data

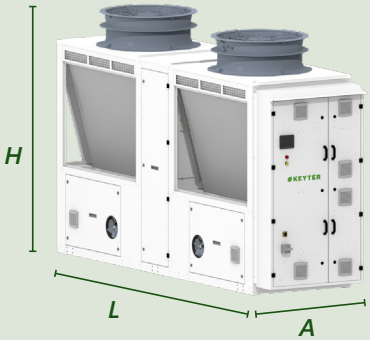
KWEB			5070		6100		6120	
Compressor speed (Hz)			fnom	fmax	fnom	fmax	fnom	fmax
Cooling mode	Nominal cooling capacity (1)	kW	58,1	74,2	76,8	97,8	94,4	119,5
		TR	16,5	21	22	28	27	34
		kBTU/h	198	252	264	336	324	408
	Absorbed power (2)	kW	20,4	30,3	27,9	43,1	34,0	53,3
	EER (3)	kW/kW	2,85	2,45	2,75	2,27	2,77	2,24
		BTU/(h*W)	9,72	8,37	9,39	7,73	9,47	7,65
	SEER (4)	kWh/kWh	4,4		4,5		4,4	
	ηs,c (5)	%	172,9%		176,6%		174,7%	
Heating mode 30/35	Nominal heating capacity (6)	kW	70,7	86,2	96,2	114,3	114,0	131,7
	Absorbed power (2)	kW	18,9	26,0	24,7	35,2	28,7	41,0
	COP (3)	kW/kW	3,75	3,31	3,90	3,24	3,97	3,21
		BTU/(h*W)	12,79	11,31	13,31	11,07	13,56	10,95
	SCOP (9)	kWh/kWh						
	ηs,h (9) (5)	%	186,2%		186,6%		194,0%	
Heating mode 47/55	Nominal heating capacity (6)	kW	64,0	80,1	88,1	108,3	105,6	125,6
	Absorbed power (2)	kW	25,1	34,4	32,9	45,9	38,5	54,1
	COP (3)	kW/kW	2,55	2,33	2,67	2,36	2,74	2,32
		BTU/(h*W)	8,71	7,95	9,12	8,04	9,35	7,92
	SCOP (9)	kWh/kWh	3,6		3,7		3,8	
	ηs,h (9) (5)	%	141,1%		143,9%		148,3%	
Heating mode 55/65	Nominal heating capacity (6)	kW	61,5	-	84,7	-	102,1	-
	Absorbed power (2)	kW	29,2	-	38,4	-	44,9	-
	COP (3)	kW/kW	2,10	-	2,21	-	2,27	-
		BTU/(h*W)	7,18	-	7,52	-	7,75	-
	SCOP (9)	kWh/kWh	3,1		3,2		3,3	
	ηs,h (9) (5)	%	121,4%		124,0%		127,6%	
TECHNICAL SPECIFICATIONS								
Power supply			400 V / III / 50 Hz with neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R290/3					
	No. of circuits / compressors		2/2		2/2		2/2	
	No. of capacity stages		12,5-100%		12,5-100%		12,5-100%	
Hydraulic circuit	Heating water flow rate (12)	m^3/h	12,3	14,9	16,7	19,8	19,8	22,8
	Cooling water flow rate	m^3/h	10,0	12,8	13,2	16,8	16,2	20,6
	Type of heat exchanger		Brazed stainless steel plates					
	No. of heat exchangers		2		2		2''	
	Buffer tank capacity – H version	(L)	200		375		375	
	Hydraulic connection Ø	(inch)	2''		2 1/2''		2 1/2''	
Outdoor fan	Outdoor air flow (summer)	m^3/h	44000		44000		44000	
	Outdoor air flow (winter)	m^3/h	44000		44000		44000	
	Number of fans		2		2		2	
	Ø and Type of fan	mm	800 EC-Z		800 EC-Z		800 EC-Z	
Equipment sound pressure (Lp10) (9)		dB(A)	52	54	51	52	53	54
Weights (S version)	Empty weight	kg	1153		1392		1417	
	In-service weight	kg	1161		1405		1431	

(7) Nominal heating capacity for water inlet/outlet temperatures of 47/55°C (116.6/131°F) and outdoor air temperature of 7°C (44.6°F). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).
(8) Nominal heating capacity for water inlet/outlet temperatures of 55/65°C (131/149°F) and outdoor air temperature of 7°C (44.6°F). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).
(9) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications in a medium climate.
(10) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications in a medium climate.
(11) Seasonal Coefficient of Performance (SCOP) and seasonal space heating energy efficiency (ηs,h) calculated for high-temperature applications in a medium climate.
(12) Water flow rate calculated for water inlet/outlet temperatures of 30/35°C (86/95°F) and outdoor air temperature of 7°C (44.6°F).
(13) Sound pressure level, measured in dB(A) under free-field conditions, at 10 meters from the source with a directivity factor of 1.

Series 5

Dimensions (mm)

Chassis	L	A	H
S/P	3260	1100	2375
H	4360	1100	2375



Series 6

Dimensions (mm)

Chassis	L	A	H
S/P	3920	1100	2375
H	5020	1100	2375

pacifica pro

energy efficiency, robust and safe design

Equipment with Inverter technology

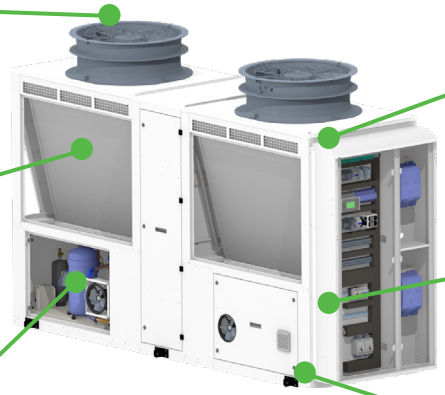
Compact Full-Inverter units equipped with hermetic scroll inverter compressors, high quality EC fans, and high-efficiency heat exchangers, ensuring very high seasonal performance **(average SEER 4.4 / SCOP35 4.7 / SCOP55 3.7)**.

Inverter

High-efficiency, low-noise EC outdoor fans with integrated curved nozzle

Cu-Al coils Polyurethane, Blygold, and Cu-Cu protections

Hermetic scroll compressors by Danfoss with variable frequency drive



SIEMENS programmable electronic control (AQUAMATIX) and CLIMATIX HMI terminal

Electronic expansion valve

Brazed plate heat exchanger made of AISI 316L stainless steel

Robust and safe design

With carefully designed insulation, the unit ensures proper protection and sound level reduction, achieving very quiet operation in the standard version.

Additionally, a super-silent mode can be achieved through the use of sandwich panels, reduced fan speed, and compressor frequency modulation, reaching a sound pressure level (Lp) below 45 dB(A) at 10 meters.

Enclosed compartment for refrigeration and hydraulic components with 10 mm polypropylene insulated panels in the standard version.

Easy access through removable panels.

Optional sandwich panels available with 20 mm thick rock wool insulation (M0 rating).

Electrical panel in a sealed compartment with forced ventilation as standard.

Units equipped with intelligent control that ensures an optimal defrosting process.

Night Mode with reduced fan and compressor speeds.

Integrated leak detection and ATEX extraction fan as standard for maximum safety.

ATEX

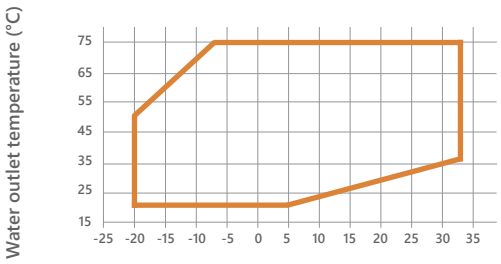
pacifica pro

decarbonization and modular systems

Decarbonization and sustainability

Wide operating range with high efficiency and extended operating limits (operation down to -20°C outdoor temperature at full load).

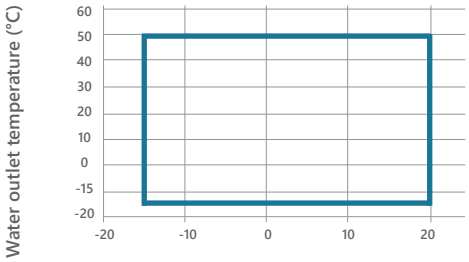
Heating Mode:



Outdoor air temperature (°C WB)

Orange zone: full load operation map of the unit.

Cooling Mode:

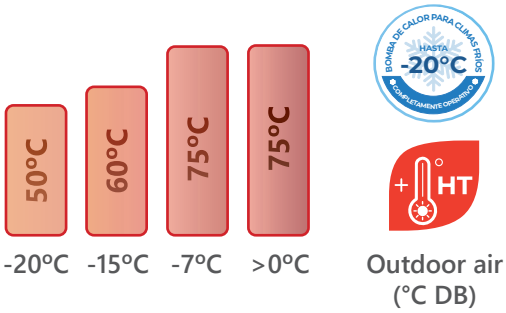


Outdoor air temperature (°C WB)

Blue zone: full load operation map of the unit.

High-temperature water production all year round for boiler replacement and carbon footprint reduction.

PACIFICA *Pro*



- **Integrated Legionella prevention control.**
- **Dual setpoint management** – allows the management of two setpoints for heating and DHW through a digital input.
- **Domestic hot water management** – allows DHW scheduling and setpoint control, with the ability to manage a built-in 3-way valve to supply water either to the heating circuit or to the storage tank.

Modular systems for high-capacity applications

The PACIFICA PRO range allows the creation of modular systems with up to 5 units. It offers an effective and simple solution for large-scale installations requiring high-capacity equipment, reaching up to 600 kW.

up to 600 kW up to 660 kW

Modular assembly is carried out through a quick and easy interconnection. In addition, the system offers a significant redundant and continuous operation solution thanks to its modular architecture and the electrical independence of each module.

KEYTER

ZIRAN *Pro*

33-194 kW 41-253 kW

semi-hermetic inverter · EC · heat recovery · HT

Bitzer

Air-to-water reversible heat pumps

Reversible or cooling-only units with a thermal power ranging from 41 kW to 253 kW, designed for commercial applications.

Optimized for the use of R290 refrigerant and **Full-Inverter technology**, these units are part of the new PRO Series developed by KEYTER.

NATURAL R-290 PROPANE

Pro series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant (A3 class), environmentally friendly with low global warming potential (GWP=3) and high thermodynamic performance.
- High-temperature water production.
- The robust and reliable design integrates leak detection and an ATEX extraction fan for maximum safety.
- With careful insulation, they ensure proper equipment protection and noise reduction, achieving ultra-quiet operation.
- The units are equipped with intelligent control that ensures an optimal defrosting process.

Codification:

KWR | Series | Size | Power | I V S4D

Operating mode
I - Heat pump
R - Cooling only

Version - Compressor Type
V - Inverter piston type compressors

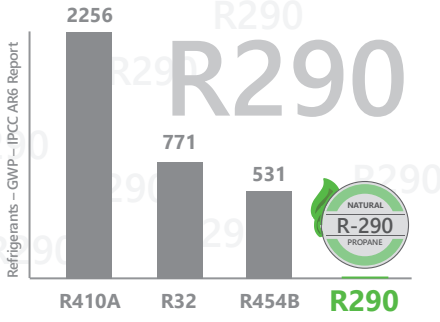
Hydraulic version
S - Standard equipment
P - Version with hydraulic group
H - Version with hydraulic group and buffer tank

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290

Energy Efficiency

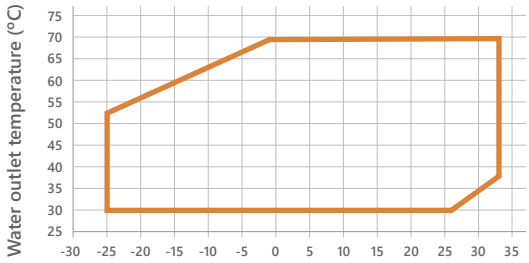
- Compact Full-Inverter units equipped with BITZER semi-hermetic inverter piston compressors, high-quality EC fans ensuring the best seasonal performance (SEER/SCOP).
- High-efficiency heat exchangers.
- These units have a wide operating range with high efficiency and extended operating limits, functioning **at full load down to -25°C** outdoor temperature.



Decarbonization

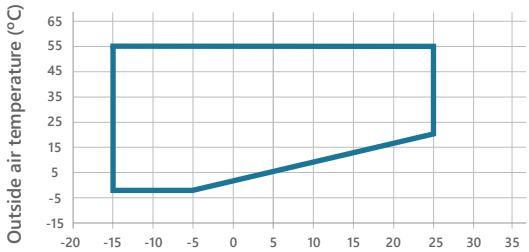
Wide operating range with high efficiency and extended operating limits, functioning down to -25°C ambient temperature at full load.

Heating mode:



Orange zone: full load operation map of the unit.

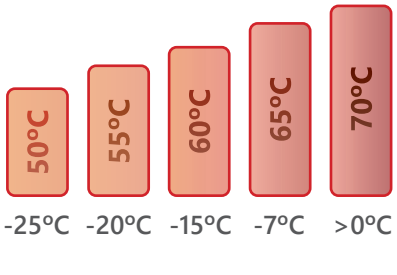
Cooling mode:



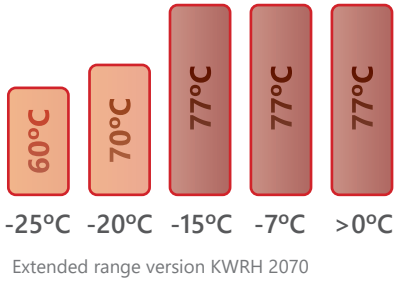
Blue zone: full load operation map of the unit.

Year-round high-temperature water production for boiler replacement and carbon footprint reduction.

ZIRAN *Pro*



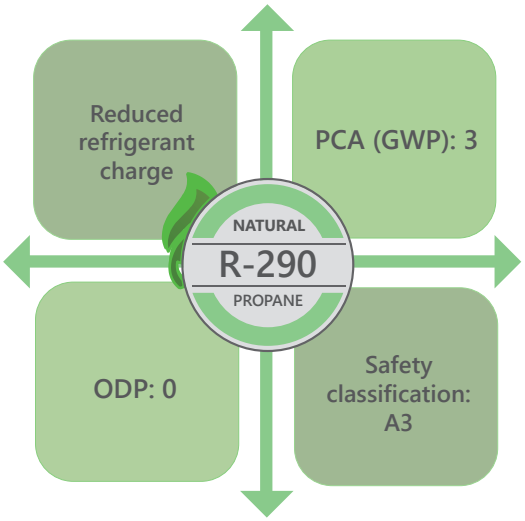
ZIRAN *Pro Maxima*

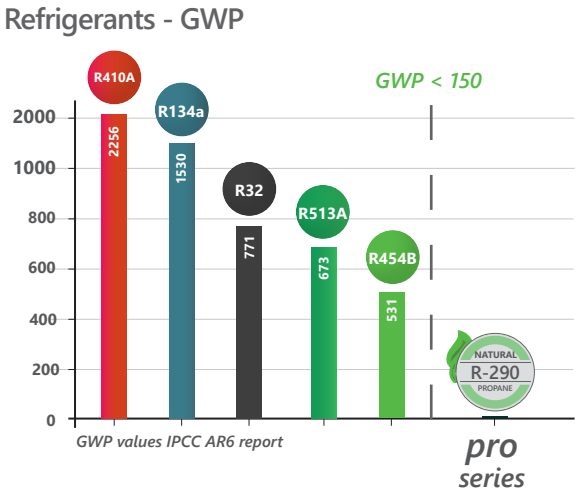


Extended range version KWRH 2070

Adaptation and Environment

Reduced charge of natural R290 refrigerant, class A3, eco-friendly with low environmental impact (GWP=3) and high thermodynamic performance.





ziran pro

range specification

		KWR
General characteristics		
Refrigerant	R290	✓
	Equipment with refrigerant charge	✓
	Leak detector	✓
	ATEX axial fan for refrigerant extraction	✓
	ATEX centrifugal fan for refrigerant extraction	●
	Indicator light in case of leakage	✓
Bodywork	Self-supporting chassis/cabinet in galvanized steel with a polyester powder coating cured in an oven	✓
	Customized color to suit the needs of the installation	●
	Enclosed compartment with panels for refrigeration components	✓
	Polypropylene insulation of the panels in the refrigeration compartment	●
	Enclosed compartment with 20 mm rock wool sandwich panels for refrigeration components	●
	Enclosed compartment with panels for hydraulic components	●
	Polypropylene insulation of the panels in the hydraulic compartment	●
	Enclosed compartment with 20 mm rock wool sandwich panels for hydraulic components	●
	Anti-vibration supplements	●
Compressors	BITZER piston technology with frequency inverter	✓
	Compressor anti-vibration mounts	✓
Expansion valves	Electronic expansion valves	✓
Fans		
Outdoor fans	EC axial fans with integrated curved nozzle	✓
	Condensing pressure control	✓
	High-performance EC axial fans	●
	EC plug-fan radial fans	●
	Curved external nozzles (Silent ring) (available only with high-performance EC fans)	●
	AxiTop diffusers for axial fans (available only with high-performance EC fans)	●
Heat exchangers		
Coils	Cu tube and Al fin coils	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Propane-water heat exchanger, AISI 316L stainless steel plates, copper-welded and thermally insulated	✓
Energy		
Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●
	Pump in the condensation heat recovery circuit	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●

✓ Included as standard
● Optional
- Not applicable

ziran pro

range specification

KEYTER

		KWR
Hydraulic		
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓
	Single pump with high pressure available (15-20 mH_2O)	●
	Single pump, very high available pressure (25-30 mH_2O)	●
	Pump with variable speed drive	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●
	Independent module with available buffer tank of 200 liters / 375 liters / 725 liters + electric heaters	●
Installation		
Protection grilles	Coil protection grille	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Control		
Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Electrical panel insulated against refrigerant leaks	✓
	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

Hydraulic versions

Available in three versions depending on the hydraulic components included:

- **S Version** - Standard unit, without hydraulic group.
- **P Version** - Unit with hydraulic group, including hydraulic pump and without buffer tank.
- **H Version** - Unit with hydraulic group, including hydraulic pump and buffer tank.

NATURAL R-290 PROPANE

ziran pro

R290 technical data

KWR model			1030	1060	2070	2080	2100
COOLING-ONLY VERSION (R) | HEAT PUMP VERSION (I)							
Cooling mode	Nominal cooling capacity (1)	kW	33,4	55,2	72,5	81,0	92,0
		TR	9,5	15,5	20,5	23,0	26,0
		kBTU/h	114	186	246	276	312
	Absorbed power (2)	kW	11,1	20,5	27,5	31,9	38,9
	EER (3)	kW/kW	3,00	2,70	2,64	2,54	2,36
		BTU/(h*W)	10,24	9,20	8,99	8,66	8,06
	SEER (4)	kWh/kWh	4,3	4,1	4,3	4,1	4,1
	ηs,c (5)	%	168,0%	162,0%	167,9%	162,6%	162,1%
HEAT PUMP VERSION (I)							
Heating mode	Nominal heating power (6)	kW	41,5	68,1	91,4	107,7	124,9
	Absorbed power (2)	kW	9,5	16,3	23,4	27,8	33,1
	COP (3)	kW/kW	4,38	4,18	3,90	3,88	3,78
		BTU/(h*W)	14,95	14,27	13,30	13,24	12,88
	SCOP (7)	kWh/kWh	4,2	4,1	4,1	4,1	4,1
	ηs,h (7) (5)	%	163,2%	161,2%	161,3%	161,2%	160,8%
	SCOP (8)	kWh/kWh	3,7	3,6	3,6	3,6	3,6
	ηs,h (8) (5)	%	143,2%	141,2%	141,3%	141,2%	140,8%
TECHNICAL SPECIFICATIONS							
Power supply			400 V / III / 50 Hz with neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R290/3				
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	1/1
	No. power stages		50-100%	50-100%	50-100%	50-100%	50-100%
Hydraulic circuit	Indoor water flow rate	m^3/h	7,1	11,7	15,7	18,6	21,5
	Type of heat exchanger		brazed stainless steel plate heat exchanger				
	Ø hydraulic connections	(inch)	1 1/2''	2''	2''	2''	2''
Outdoor fan	Outside air flow for cooling	m^3/h	19000	19000	38000	38000	38000
	Outside air flow for heating	m^3/h	21000	21000	35000	39000	39000
	Number of fans		1	1	2	2	2
	Ø and Type of fan	mm	800 EC-Z	800 EC-Z	800 EC-Z	800 EC-Z	800 EC-Z
Sound pressure level of the equipment (Lp10) (9)		dB(A)	55	60	60	62	62
Weights (S version)	Empty weight	kg	997	1059	1271	1285	1290
	In-service weight	kg	1003	1067	1280	1294	1300

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C (53.6/44.6°F) and an outdoor air temperature of 35°C (95°F). Capacities calculated with a fouling factor in the plate heat exchanger of 0.43*10^-4 (m^2K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Values of ηs,c in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications. Values of ηs,h conforming to Ecodesign under EU Regulation 813/2013 for heat pump applications.

KWR series 1

KWR series 2

ziran pro

R290 technical data

KWR model			3120	4140	4160	4200
COOLING-ONLY VERSION (R) | HEAT PUMP VERSION (I)						
Cooling mode	Nominal cooling capacity (1)	kW	113,5	148,1	167,6	193,9
		TR	32,5	42,0	47,5	55,0
		kBTU/h	390	504	570	660
	Absorbed power (2)	kW	40,5	54,5	63,2	77,5
	EER (3)	kW/kW	2,80	2,72	2,65	2,50
		BTU/(h*W)	9,55	9,27	9,04	8,54
	SEER (4)	kWh/kWh	4,2	4,3	4,2	4,1
	ηs,c (5)	%	164,1%	169,7%	165,6%	162,7%
HEAT PUMP VERSION (I)						
Heating mode	Nominal heating power (6)	kW	137,9	177,1	209,2	252,8
	Absorbed power (2)	kW	30,9	46,0	54,2	65,5
	COP (3)	kW/kW	4,47	3,85	3,86	3,86
		BTU/(h*W)	15,25	13,12	13,17	13,16
	SCOP (7)	kWh/kWh	4,1	4,1	4,1	4,1
	ηs,h (7) (5)	%	161,7%	161,8%	161,3%	160,9%
	SCOP (8)	kWh/kWh	3,6	3,6	3,6	3,6
	ηs,h (8) (5)	%	141,7%	141,8%	141,3%	140,9%
TECHNICAL SPECIFICATIONS						
Power supply			400 V / III / 50 Hz with neutral			
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R290/3			
	No. of refrig. circuits / compressors		2/2	2/2	2/2	2/2
	No. power stages		25-100%	25-100%	25-100%	25-100%
Hydraulic circuit	Indoor water flow rate	m^3/h	23,7	30,5	36,0	43,5
	Type of heat exchanger		brazed stainless steel plate heat exchanger			
	Ø hydraulic connections	(inch)	DN80	DN80	DN80	DN80
Outdoor fan	Outside air flow for cooling	m^3/h	38000	76000	76000	76000
	Outside air flow for heating	m^3/h	39000	70000	78000	78000
	Number of fans		2	4	4	4
	Ø and Type of fan	mm	800 EC-Z	800 EC-Z	800 EC-Z	800 EC-Z
Sound pressure level of the equipment (Lp10) (9)		dB(A)	63	63	65	65
Weights (S version)	Empty weight	kg	2023	2387	2400	2411
	In-service weight	kg	2039	2408	2423	2434

(6) Nominal heating power for an inlet/outlet water temperature of 30/35°C (86/95°F) and outdoor air temperature of 7°C (44.6°F). Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(7) Seasonal coefficient of performance (SCOP) and seasonal heating energy efficiency (ηs,h) calculated for low-temperature applications and moderate climate.
(8) Seasonal Coefficient of Performance (SCOP) and Seasonal Heating Energy Efficiency (ηs,h) calculated for medium temperature applications and moderate climate.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

KWR series 3

KWR series 4

ziran pro

energy efficiency and design

Energy Efficiency

Equipment with Inverter technology

Compact **Full-Inverter** units equipped with BITZER semi-hermetic inverter piston compressors, high-quality EC fans, and high-efficiency heat exchangers, ensuring very high seasonal performance (SEER/SCOP).

Inverter

High-efficiency and low-noise outdoor EC fans, with integrated curved nozzle.

Cu-Al coils with polyurethane, Blygold, and Cu-Cu coatings

Stainless steel AISI 316L brazed plate heat exchanger

SIEMENS electronic control, programmable AQUAMATIX, and CLIMATIX HMI terminal

Electronic expansion valve

BITZER semi-hermetic piston compressors with frequency INVERTER

Robust and safe design

- Robust and reliable outdoor design integrates leak detection and ATEX extraction fan for maximum safety.
- Compatible with optional sandwich panel with 20 mm thick rock wool insulation (M0).
- With careful insulation, it guarantees adequate equipment protection and noise level reduction, achieving ultra-silent operation.

Hydraulic components in open enclosure, unpanelled.

Optional paneling and insulation available.

Electrical panel in a sealed compartment with standard forced ventilation.

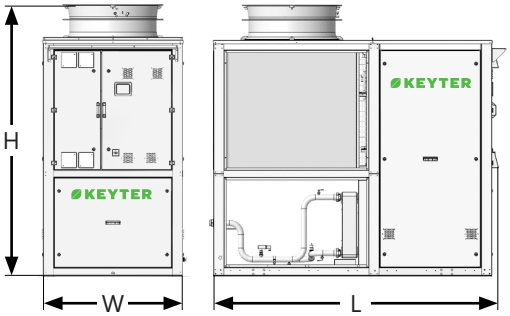
Units equipped with intelligent regulation that ensures an optimal defrosting process.

Refrigeration components separated in a closed compartment with easy accessibility via removable panels.

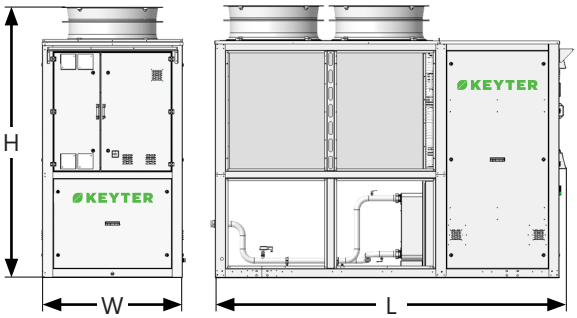
ziran pro

dimensions

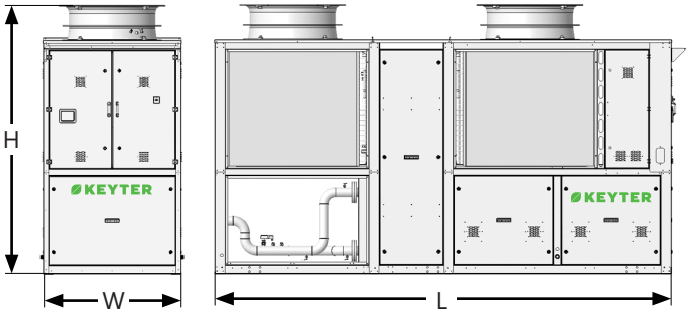
Series 1 S/P/H



Series 2 S/P/H

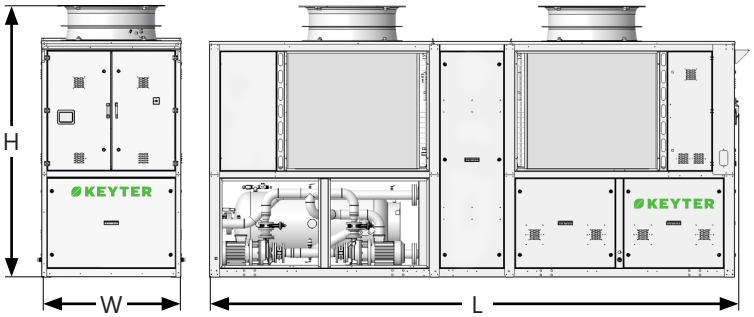


Series 3 S/P

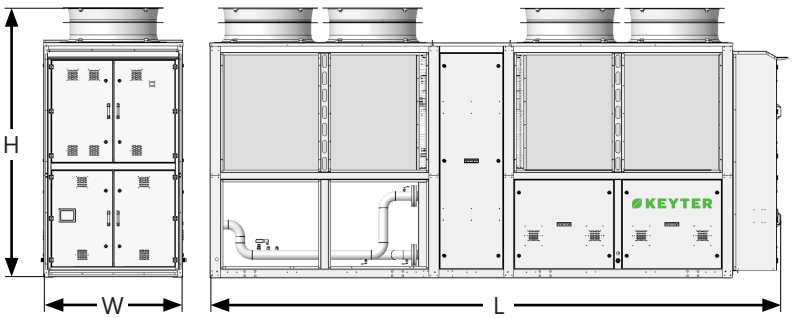


Dimensions (mm)					
	Series 1	Series 2	Series 3		Series 4
Bodywork	S/P/H	S/P/H	S/P	H	S/P/H
L	2640	3240	4340	4940	5350
W	1300	1300	1300	1300	1300
H	2550	2550	2550	2550	2550

Series 3 H



Series 4 S/P/H



NATURAL R-290 PROPANE

KEYTER

ZIRAN
Pro MAXIMA

41-84 kW 47-91 kW

NATURAL R-290 PROPANE

HEAT PUMP FOR COLD CLIMATES UNTIL -25°C FULLY OPERATIVE

semi-hermetic inverter · EC · heat recovery · HT

Air-to-water heat pumps suitable for cold climates | water production up to 77ºC

In reversible version, designed for residential or commercial applications.

New PRO Series: Optimized for the use of R290 refrigerant and **Full-Inverter technology**.

NATURAL R-290 PROPANE

Pro series

Adaptation and Environment

- Reduced charge of natural R290 refrigerant of A3 class, which is environmentally friendly with a low global warming potential (GWP=3) and high thermodynamic performance.
- High-temperature water production.
- The robust and reliable design integrates leak detection and an ATEX extraction fan for maximum safety.
- With careful insulation, they ensure proper equipment protection and noise reduction, achieving ultra-quiet operation.
- The units are equipped with intelligent control that ensures an optimal defrosting process.

Codification:

KWRH | 2 | 070 | I | V | S4D

Series · Size · Power

Operating mode
I - Reversible heat pump

Version - Compressor Type
V - Compressor scroll inverter

Hydraulic version
S - Standard equipment
P - Version with hydraulic group

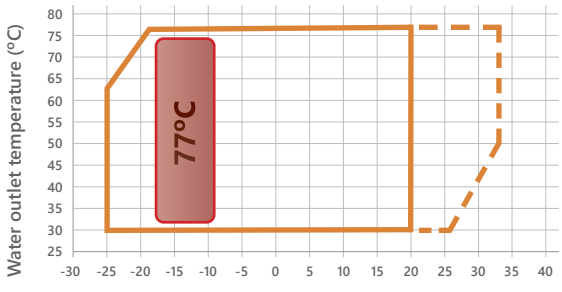
Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
D - R290

Energy Efficiency

- Compact Full-Inverter units are mounted with semi-hermetic piston compressors and high-quality EC fans, ensuring the best seasonal performance (SEER/SCOP).
- High-efficiency heat exchangers.
- These units have a wide operating range with high efficiency and extended operating limits, functioning **at full load down to -25ºC** outdoor temperature.

Heating mode (Compressor at 50Hz):



Orange zone: operation map of the unit at full load.

ziran pro maxima

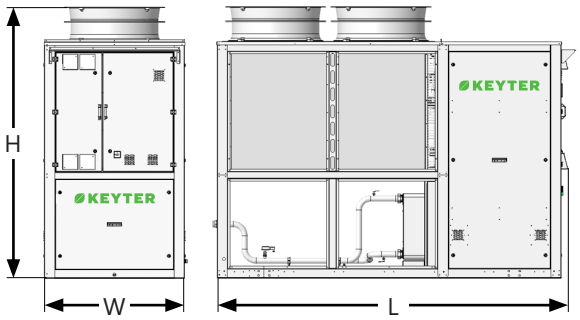
R-290 technical data

KWRH model			KWRH 2070		
	Compressor frequency	Hz	30	50	70
Cooling mode	Nominal cooling capacity (1)	kW	41,4	67,7	83,9
		TR	12,0	19,0	24,0
		kBTU/h	144	228	288
	Absorbed power (2)	kW	15,3	26,1	37,3
	EER (3)	kW/kW	2,69	2,58	2,23
		BTU/(h*W)	9,22	8,86	7,66
Heating mode	Nominal heating power (4)	kW	47,0	69,8	90,1
	Absorbed power (2)	kW	14,0	32,1	45,3
	COP (3)	kW/kW	3,35	2,17	1,98
		BTU/(h*W)	11,47	7,42	6,79
	SCOP (6)	kWh/kWh		3,4	
	ηs,h (6) (5)	%		131,2%	
TECHNICAL SPECIFICATIONS					
Power supply				400 V / III / 50 Hz with neutral	
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2		R290/3	
	No. of refrig. circuits / compressors			1/1	
	No. power stages			45-100%	
Hydraulic circuit	Indoor water flow rate	m^3/h	4,0	6,0	7,8
	Type of heat exchanger			brazed stainless steel plate heat exchanger	
	Hydraulic connections Ø	inch		2''	
Outdoor fan	Outdoor air flow rate for summer	m^3/h		38000	
	Outdoor air flow rate for winter	m^3/h		39000	
	Number of fans			2	
	Ø and Type of fan	mm		800 EC-Z	
Equipment sound pressure (Lp 10) (7)		dB (A)	58,4	60,2	62,0
Weights (S version)	Empty weight	kg		1255	
	In-service weight	kg		1264	

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C (53.6/44.6°F) and outdoor air temperature of 35°C (95°F). Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to EN: 14511-2022 standard.
(4) Nominal heating power for an inlet/outlet water temperature of 55/65°C (86/95°F) and outdoor air temperature of 7°C (44.6°F). Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43*10E-4 (m^2K/W).
(5) Values of ηs,c in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications. Values of ηs,h conforming to Ecodesign under EU Regulation 813/2013 for heat pump applications.
(6) Seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) calculated for high-temperature applications and medium climate.
(7) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

Dimensions

Series 2 S/P/H



Dimensions (mm)	
	Series 2
Bodywork	S/P/H
L	3240
W	1300
H	2550

pacifica

euro & inverter

Air-to-water chillers and heat pumps for mild | moderate climates

43-311 kW 48-262 kW

EC

heat recovery

inverter version

43-167 kW 49-178 kW

Chillers and heat pumps equipped with full inverter technology, integrating inverter compressors, electronic expansion valve, and variable-speed electronic fans for maximum energy savings and compliance with ErP 2021 regulations.

euro version

43-311 kW 48-262 kW

Chillers and heat pumps equipped with multiscroll compressor technology and electronic fans for significant energy savings and compliance with ErP 2021 regulations.

Adaptation and Environment

- Reduced refrigerant charge with low-GWP R-454B, minimizing CO_2 footprint (77% less GWP than R-410A and 31% less than R-32).
- Available with plate heat exchangers or with shell-and-tube heat exchangers (bodywork KWE-6).
- Standard condensing pressure control for year-round operation.
- This range integrates the compressors in a closed and insulated compartment from the air stream, offering versions with a hydraulic group and built-in buffer tank.

Energy Efficiency

- Very high efficiency at both partial and full loads, reducing operating costs in both the Euro version and the Inverter version.
- Partial and total heat recovery system from hot gases for domestic hot water (DHW).
- Freecooling water system for free cooling (bodywork KWE-6).

Codification:

KWE [ ] R M S4C

Series | Size | Power

Operating mode
I - Reversible heat pump
R - Cooling only

Version - Compressor Type
M - EURO version, multiscroll compressors.
V - INVERTER version, inverter technology compressors.

Hydraulic version
S - Standard equipment / **P -** Version with hydraulic kit /
H - Version with hydraulic kit and buffer tank /
J - Version with a hydraulic kit and a higher-capacity buffer tank

Power supply
4 - 400V/III/50Hz (standard)

Refrigerant
C - R454B / **W -** R410A / **B -** R452B

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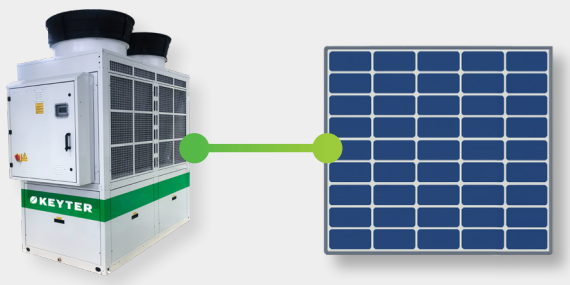
technical data inverter version R454B

KWE model			2036	2046	2052	5070	5090	6130	6160	6200
COOLING-ONLY VERSION (R)										
Cooling	Nominal cooling capacity (1)	kW	34,9	43,3	51,8	67,2	88,5	117,5	146,0	167,1
		TR	10,0	12,5	14,5	19,0	25,0	33,5	41,5	47,5
		kBTU/h	119	148	177	229	302	401	498	570
	Absorbed power (2)	kW	9,1	11,3	13,6	17,2	22,8	36,9	43,3	50,9
	EER (3)	kW/kW	3,83	3,81	3,80	3,91	3,88	3,18	3,37	3,28
		BTU/(h*W)	13,05	13,01	12,96	13,33	13,25	10,86	11,51	11,20
	SEER (4)	kW/kW	5,5	5,7	6,3	5,9	5,7	5,8	5,9	5,7
	ηs,c (5)	%	215,2%	224,1%	248,2%	231,7%	225,4%	226,9%	231,7%	222,8%
	SEPR (7°C) (6)	kW/kW	6,64	6,97	7,57	6,99	7,02	7,12	7,24	7,05
	SEPR (-8°C) (6)	kW/kW	4,71	5,00	5,71	5,16	5,15	5,09	5,26	5,02
	IPLV (7)	kW/TR	0,58	0,59	0,56	0,48	0,54	0,62	0,61	0,64
		Btu/kW*h	19,03	20,24	21,28	22,61	21,76	19,81	19,30	18,49
HEAT PUMP VERSION (I)										
Cooling mode	Nominal cooling capacity (1)	kW	33,8	42,1	50,2	66,2	87,5	115,9	144,0	164,9
	Absorbed power (2)	kW	9,3	11,5	13,9	17,7	23,4	38,1	44,5	52,2
	EER (3)	kW	3,64	3,65	3,61	3,74	3,73	3,04	3,23	3,16
	SEER (4)	kW/kW	5,2	5,5	6,0	5,6	5,5	5,5	5,7	5,5
	ηs,c (5)	%	206,1%	215,1%	238,2%	220,7%	217,9%	218,7%	223,9%	215,4%
	SEPR (7°C) (6)	kW/kW	6,41	6,78	7,40	6,76	6,77	6,94	7,05	6,85
	SEPR (-8°C) (6)	kW/kW	4,49	4,78	5,40	4,91	4,92	4,94	5,15	4,76
	IPLV	kW/ton	0,60	0,61	0,58	0,51	0,56	0,65	0,63	0,66
	IPLV	kBtuh/kW	18,33	19,46	20,50	21,44	21,18	18,27	18,71	17,83
Heating mode	Heating power (8)	kW	37,7	49,2	55,5	77,5	98,1	131,3	160,5	177,6
	Absorbed power (2)	kW	10,5	12,3	14,7	22,6	28,3	37,0	43,1	48,2
	COP (3)	kW/kW	3,59	3,99	3,78	3,43	3,47	3,55	3,73	3,68
	SCOP average (4)	kW/kW	3,9	3,9	4,0	3,8	3,9	3,9	4,1	3,9
	ηs,h average (5)	%	150,8%	151,0%	157,0%	147,0%	151,1%	151,1%	159,4%	154,5%
TECHNICAL SPECIFICATIONS										
Power supply			400V / III / 50HZ with neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466							
	No. of refrig. circuits / compressors		1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		25%-100%	25%-100%	25%-100%	12.5%-100%	12.5%-100%	12.5%-100%	12.5%-100%	12.5%-100%
Hydraulic circuit	Indoor water flow rate	m^3/h	6,0	7,4	8,9	11,6	15,2	20,2	25,1	28,8
	Type of heat exchanger		brazed stainless steel plate heat exchanger							
	Ø hydraulic connections	inch	1 1/2"	1 1/2"	2"	2"	2"	DN 80	DN 80	DN 80
Outdoor fan	Outdoor air flow rate	m^3/h	22000	22000	22000	44000	44000	44000	44000	66000
	Number of fans		1	1	1	2	2	2	2	3
	Ø and Type of fan	mm	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC
Sound pressure of the equipment (Lp10) (9)		dB(A)	53	53	54	57	58	59	60	62
Weights	Empty weight (10)	kg	513	535	543	1110	1153	1320	1371	1665
	In-service weight (10)	kg	520	543	552	1124	1168	1338	1390	1689

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and indoor air temperature of 35°C.
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to standard EN: 14511-2022.
(4) Seasonal energy efficiency factor in cooling SEER and seasonal coefficient of performance in heating SCOP for medium-temperature applications, calculated according to EN 14825:2022.
(5) Seasonal Energy Efficiency for cooling (ηs,c) and heating (ηs,h) of spaces, in accordance with EU Ecodesign Regulation 2016/2281. ηs,c values comply with Ecodesign Regulation EU 2016/2281 for comfort applications. ηs,h values conform to Ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Seasonal Energy Performance Factor of high-temperature process chillers (12/7°C) and medium-temperature (-2/-8°C) chillers, calculated according to EN 14825:2022. SEPR values (12/7°C) in compliance with the EU Ecodesign Regulation EU 2016/2281 for high-temperature process applications. SEPR values (-2/-8°C) in compliance with the EU Ecodesign Regulation EU 2015/1095 for medium and low-temperature process applications.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.
(10) Weight calculated for the standard unit without options, in cooling-only version and without hydraulic group.

Intelligent energy management



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range specification

General characteristics

			INVERTER	EURO
Refrigerant	R454B		✓	✓
	Equipment with refrigerant charge		✓	✓
	Refrigerants R410A or R452B		●	●
	Leak detection		●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment		✓	✓
	Customized color to suit the needs of the installation		●	●
	Enclosed lower compartment with sheet metal for compressors and refrigeration components		✓	✓
	Insulation in the lower refrigeration compartment		●	●
	Anti-vibration supplements		●	●
Compressors	Multiscroll technology in tandem		-	✓
	Inverter technology		✓	-
	Compressor anti-vibration mounts		✓	✓
	Soft starter		-	●
	Acoustic insulation jacket		●	●
	Original high-performance acoustic insulation jacket from the manufacturer		●	●
Expansion valves	Thermostatic expansion valves		-	●
	Electronic expansion valves		✓	✓

Fans

Outdoor fans	EC technology axial fans		✓	✓
	AC technology axial fans		-	●
	Curved external fan nozzles (Silent ring)	in series 2-5-61xx-62xx	✓	✓
	Straight external fan nozzles	in series 63xx	-	✓
	AxiTop diffusers for axial fans		●	●
	High-performance EC axial fans		●	●
	EC plug-fan radial fans		●	●

Heat exchangers (*)

Coils	Cu tube and Al fin coils		✓	✓
	Al / Al microchannel coils in cooling-only units	R version	●	●
	Cu tube bundle / polyurethane pre-lacquered Al fins		●	●
	ALUCOAST: high-strength Cu tubes / Al fins		●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating		●	●
	COPPERFIN: Cu tubes / Cu fins		●	●
Heat exchangers	Refrigerant-water heat exchanger, AISI 316L stainless steel plates, copper-welded, and thermally insulated		✓	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix		●	●
	Shell-and-tube heat exchanger	in series 6	●	●

Energy (*)

Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)		●	●
	Total recovery of condensation energy for domestic hot water (DHW)	in series 6	●	●
	Pump in the condensation heat recovery circuit		●	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery		●	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	in series 6	●	●

✓ Included as standard
● Optional
- Not applicable

* Some options may require changes to the equipment dimensions; please consult us.

Hydraulic versions:

KWE - Standard Version (S) Unit without hydraulic group. Los equipos KWE feature triple protection for the plate heat exchanger, as they come standard with a flow switch, anti-freeze protection for water, and anti-freeze protection for refrigerant.

KWE - Version with hydraulic group (P) Hydraulic group included, composed of a circulation pump suitable for water or glycol-water mixtures down to 0ºC, expansion vessel, purge and shut-off valves, pressure gauges, and flow switch.

For water temperatures below 0ºC, a low-temperature kit is required, which involves changing the pump and adding electric heaters to Hydraulic components for operation with water down to -10ºC.

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range specification

KEYTER

Hydraulic (*)

		INVERTER	EURO
Pumps (KWE-version P/H/J)	Single pump, normal available pressure (7-12 mH_2O)	✓	✓
	Single pump with high pressure available (15-20 mH_2O)	●	●
	Single pump, very high available pressure (25-30 mH_2O)	●	●
	Pump with variable speed drive	●	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	●
	Electronic pump	●	●
	Electronic backup pump	●	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●	●
	Low outdoor temperature kit	●	●
	Flexible water inlet and outlet connections	●	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with 200 liters / 375 liters / 725 liters buffer tank available + electrical resistances	●	●

Installation

Outdoor coil	Coil protection grille	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz with neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX		✓	✓
	Climatix HMI user terminal for AQUAMATIX control		✓	✓
	RS485 communication interface for ModBus communication		✓	✓
	Modbus TCP/IP and BACnet IP communication		✓	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve		✓	✓
Additional control and safety components	Main switch in electrical panel		✓	✓
	Magneto-thermal protections for compressors, fans and pumps		✓	✓
	Differential switches		●	●
	Low pressure switch for pump protection		●	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection		✓	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection		●	●
	Triple protection for the plate heat exchanger with water flow switch and anti-freeze protections for both water and refrigerant		✓	✓
	Electric energy meter		●	●
Electrical panel	Fully wired electrical panel, with IP54 protection		✓	✓
	Forced ventilation of the electrical panel	series KWE 2-5	●	●
		series KWE 6	✓	✓
	Design of electrical switchgear for high temperatures		✓	✓
	Tropicalised electrical panel		●	●
	Socket for common use		●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures		●	●

KWE - Version with hydraulic group and buffer tank (H) The equipment is designed with an integrated hydraulic group that also includes an inertia tank with anti-freeze electric heater to reduce the frequency of compressor starts and stops.

The hydraulic group is integrated into the chassis of the unit in all models, except for series 6, where the hydraulic group is provided in a separate module but supplied with the equipment.
Optionally, an independent module can be supplied with the unit, featuring an inertia tank with a capacity of either 375 liters or 725 liters, along with anti-freeze electric heaters.

For water temperatures below 0ºC, it is necessary to order the low-temperature kit for the hydraulic group.

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R454B technical data euro version

KWE *euro* model			**2036**	**2046**	**2052**	**2065**	**5070**	**5080**	**5090**	**5100**	**5120**	**6130**	**6140**
COOLING-ONLY VERSION (R)													
Cooling	Cooling capacity (1)	kW	33,1	43,8	49,2	58,2	63,4	73,6	81,5	95,9	104,7	114,1	122,0
		TR	9,5	12,5	14,0	16,5	18,0	21,0	23,0	27,5	30,0	32,5	34,5
		kBTU/h	113	150	168	199	216	251	278	327	357	389	416
	Absorbed power (2)	kW	9,6	11,6	13,5	18,9	20,4	21,2	23,8	27,8	32,3	36,5	40,7
	EER (3)	kW/kW	3,46	3,77	3,65	3,09	3,11	3,47	3,43	3,45	3,24	3,12	3,00
		BTU/(h*W)	11,79	12,87	12,45	10,53	10,61	11,85	11,70	11,79	11,06	10,66	10,22
	SEER (4)	kWh/kWh	5,1	5,4	5,3	4,9	5,2	5,1	5,2	5,4	5,4	5,2	5,1
	ηs,c (5)	%	201,0%	213,3%	209,1%	193,4%	203,9%	201,4%	203,1%	211,2%	212,6%	205,4%	201,1%
	SEPR (7°C) (6)	kWh/kWh	6,19	6,49	6,42	6,00	6,34	6,19	6,29	6,49	6,54	6,35	6,24
	SEPR (-8°C) (6)	kWh/kWh	4,29	4,58	4,48	4,12	4,45	4,30	4,28	4,47	4,62	4,41	4,31
	IPLV (7)	kW/TR	0,57	0,55	0,56	0,60	0,56	0,59	0,58	0,56	0,55	0,56	0,57
		Btu/kW*h	20,07	21,08	20,88	19,59	21,01	20,07	20,62	21,31	21,54	20,91	20,60
HEAT PUMP VERSION (I)													
Cooling mode	Nominal cooling capacity (1)	kW	32,1	42,7	47,7	56,7	61,6	71,6	79,9	94,7	103,3	112,5	120,3
	Absorbed power (2)	kW	9,8	11,8	13,7	19,3	20,8	21,7	24,3	28,6	33,3	37,7	42,0
	EER (3)	kW/kW	3,29	3,62	3,47	2,95	2,97	3,29	3,29	3,31	3,11	2,99	2,86
	SEER (4)	kW/kW	4,9	5,2	5,1	4,7	5,0	4,9	5,0	5,2	5,2	5,0	4,9
	ηs,c (5)	%	194,1%	204,1%	201,2%	184,9%	195,8%	194,2%	196,3%	203,7%	205,8%	198,2%	194,2%
	SEPR (7°C) (6)	kW/kW	5,97	6,31	6,24	5,85	6,09	6,01	6,11	6,30	6,35	6,07	5,99
	SEPR (-8°C) (6)	kW/kW	4,17	4,42	4,30	3,88	4,07	4,12	4,20	4,44	4,37	4,25	4,14
	IPLV	kW/ton	0,60	0,58	0,59	0,63	0,58	0,61	0,59	0,57	0,56	0,58	0,59
	IPLV	kBtuh/kW	19,65	20,25	20,03	18,81	20,12	19,38	19,96	20,68	20,91	20,24	19,89
Heating mode	Heating power (8)	kW	37,7	48,9	54,9	65,1	72,8	85,1	95,8	107,6	122,1	130,6	141,0
	Absorbed power (2)	kW	10,7	13,6	15,6	20,1	21,6	26,9	29,0	31,3	35,5	37,9	42,3
	COP (3)	kW/kW	3,51	3,60	3,51	3,24	3,36	3,16	3,30	3,44	3,44	3,45	3,33
	SCOP average (4)	kW/kW	3,8	3,6	3,8	3,7	3,9	3,7	3,8	3,8	3,8	3,5	3,4
	ηs,h average (5)	%	149,5%	140,0%	148,2%	144,9%	152,8%	145,5%	147,9%	150,0%	149,2%	135,4%	131,1%
TECHNICAL SPECIFICATIONS													
Power supply			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	3	2	2	2	4	4	4	4
Hydraulic circuit	Indoor water flow rate	m^3/h	5,7	7,5	8,5	10,0	10,9	12,7	14,0	16,5	18,0	19,6	21,0
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections	inch	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2 1/2"	2 1/2"	DN 80	DN 80
Outdoor fan	Outdoor air flow rate	m^3/h	22000	22000	22000	22000	44000	44000	44000	44000	44000	44000	44000
	Number of fans		1	1	1	1	2	2	2	2	2	2	2
	Ø and Type of fan	mm	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC
Sound pressure level of the equipment (Lp10) (9)		dB(A)	53	53	54	55	57	57	58	58	58	59	60
Weights	Empty weight (10)	kg	464	517	544	552	1004	1017	1026	1199	1199	1369	1383
	In-service weight (10)	kg	471	525	553	561	1018	1032	1041	1215	1215	1387	1401

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and indoor air temperature of 35°C.
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to standard EN: 14511-2022.
(4) Seasonal energy efficiency factor in cooling SEER and seasonal coefficient of performance in heating SCOP for medium-temperature applications, calculated according to EN 14825:2022.
(5) Seasonal Energy Efficiency for cooling (ηs,c) and heating (ηs,h) of spaces, in accordance with EU Ecodesign Regulation 2016/2281. ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.

KWE Series 2

KWE Series 5

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R454B technical data euro version

KWE *euro* model			**6150**	**6160**	**6170**	**6180**	**6200**	**6210**	**6240**	**6270**	**6300**	**6340**	**6380**
COOLING-ONLY VERSION (R)													
Cooling	Cooling capacity (1)	kW	130,6	138,6	146,0	152,9	158,6	183,2	208,0	230,0	256,1	282,4	310,4
		TR	37,0	39,5	41,5	43,5	45,0	52,0	59,0	65,5	73,0	80,5	88,5
		kBTU/h	446	473	498	522	541	625	710	785	874	964	1059
	Absorbed power (2)	kW	41,8	42,8	46,8	50,8	50,3	54,5	62,1	69,8	78,9	91,0	103,0
	EER (3)	kW/kW	3,13	3,24	3,12	3,01	3,15	3,36	3,35	3,30	3,25	3,10	3,01
		BTU/(h*W)	10,67	11,06	10,65	10,27	10,75	11,47	11,44	11,25	11,08	10,59	10,28
	SEER (4)	kWh/kWh	5,3	5,4	5,2	5,0	5,1	5,5	5,5	5,5	5,3	5,2	5,2
	ηs,c (5)	%	207,2%	210,9%	203,7%	198,2%	201,4%	215,8%	216,6%	215,1%	210,3%	204,7%	202,9%
	SEPR (7°C) (6)	kWh/kWh	6,44	6,50	6,32	6,08	6,16	6,64	6,57	6,62	6,42	6,30	6,35
	SEPR (-8°C) (6)	kWh/kWh	4,38	4,47	4,38	4,20	4,32	4,75	4,72	4,61	4,50	4,36	4,29
	IPLV (7)	kW/TR	0,56	0,56	0,57	0,59	0,57	0,54	0,54	0,55	0,57	0,58	0,58
		Btu/kW*h	20,94	21,20	20,61	20,05	20,53	21,82	21,72	21,44	20,90	20,48	20,23
HEAT PUMP VERSION (I)													
Cooling mode	Nominal cooling capacity (1)	kW	128,8	136,7	-	-	156,6	180,8	205,2	226,8	-	-	-
	Absorbed power (2)	kW	43,0	44,0	-	-	51,6	56,0	63,8	71,7	-	-	-
	EER (3)	kW/kW	2,99	3,10	-	-	3,03	3,23	3,22	3,16	-	-	-
	SEER (4)	kW/kW	5,1	5,2	-	-	4,9	5,3	5,3	5,3	-	-	-
	ηs,c (5)	%	200,2%	204,1%	-	-	194,2%	208,9%	210,2%	209,2%	-	-	-
	SEPR (7°C) (6)	kW/kW	6,11	6,31	-	-	6,04	6,45	6,48	6,42	-	-	-
	SEPR (-8°C) (6)	kW/kW	4,20	4,36	-	-	4,09	4,52	4,55	4,48	-	-	-
	IPLV	kW/ton	0,58	0,57	-	-	0,59	0,56	0,56	0,57	-	-	-
	IPLV	kBtuh/kW	20,29	20,60	-	-	19,77	21,12	21,08	20,82	-	-	-
Heating mode	Heating power (8)	kW	149,8	158,6	-	-	176,4	204,8	231,3	261,6	-	-	-
	Absorbed power (2)	kW	43,2	44,1	-	-	49,3	57,2	63,9	71,9	-	-	-
	COP (3)	kW/kW	3,47	3,60	-	-	3,58	3,58	3,62	3,64	-	-	-
	SCOP average (4)	kW/kW	3,5	3,6	-	-	3,5	3,5	3,5	3,6	-	-	-
	ηs,h average (5)	%	137,1%	141,3%	-	-	137,6%	138,0%	137,4%	139,2%	-	-	-
TECHNICAL SPECIFICATIONS													
Power supply			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	No. of refrig. circuits / compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4
	No. power stages		4	4	4	4	4	4	4	4	4	4	4
Hydraulic circuit	Indoor water flow rate	m^3/h	22,5	23,9	25,1	26,3	27,3	31,5	35,8	39,6	44,1	48,6	53,4
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections	inch	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80	DN 100	DN 100	DN 100
Outdoor fan	Outdoor air flow rate	m^3/h	44000	44000	44000	44000	66000	66000	66000	66000	88000	88000	88000
	Number of fans		2	2	2	2	3	3	3	3	4	4	4
	Ø and Type of fan	mm	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC
Sound pressure level of the equipment (Lp10) (9)		dB(A)	60	60	60	60	62	63	63	63	65	65	65
Weights	Empty weight (10)	kg	1383	1383	1307	1326	1650	1772	1889	1910	1971	2051	2148
	In-service weight (10)	kg	1402	1402	1327	1347	1674	1797	1917	1938	2001	2083	2180

(6) Seasonal Energy Performance Factor of high-temperature process chillers (12/7°C) and medium-temperature (-2/-8°C) chillers, calculated according to EN 14825:2022. SEPR values (12/7°C) in compliance with the EU Ecodesign Regulation EU 2016/2281 for high-temperature process applications. SEPR values (-2/-8°C) in compliance with the EU Ecodesign Regulation EU 2015/1095 for medium and low-temperature process applications.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.
(10) Weight calculated for the standard unit without options, in cooling-only version and without hydraulic group.

KWE Series 61

KWE Series 62

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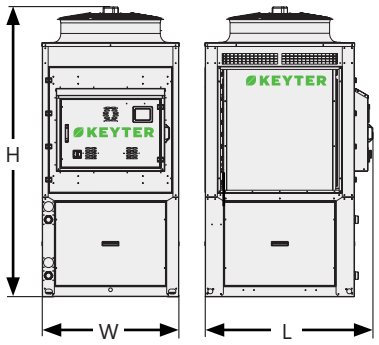
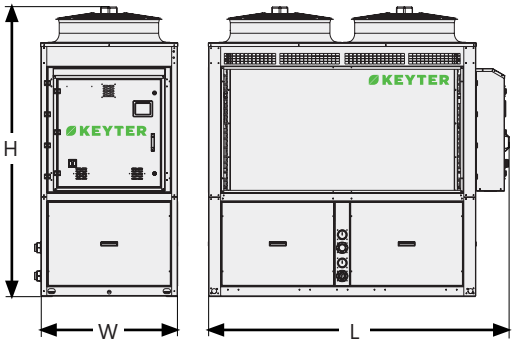
dimensions

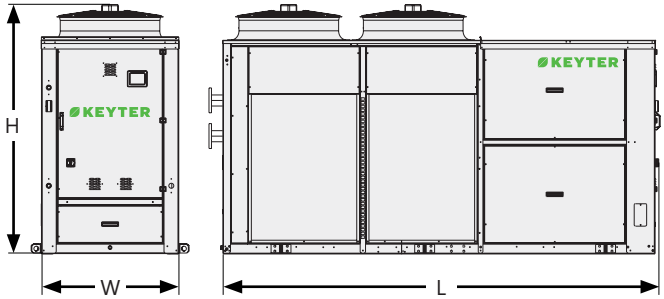
Series 2 S/P



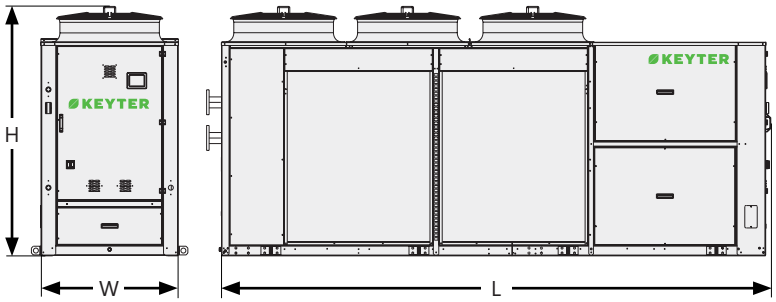
Series 5 S/P



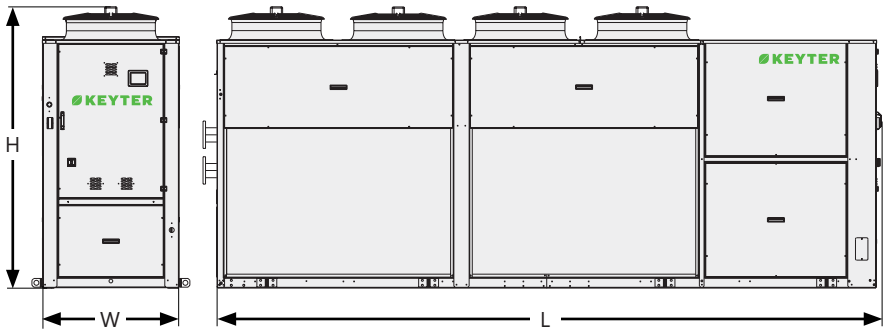
Series 61 S/P



Series 62 S/P



Series 63 S/P

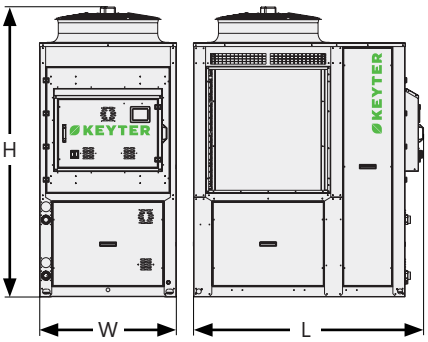


Dimensions Versions S y P		Series 2	Series 5	Series 61	Series 62	Series 63
L	(mm)	1415	2420	3515	4415	5340
W	(mm)	1100	1100	1100	1100	1100
H	(mm)	2345	2345	2020	2020	2295

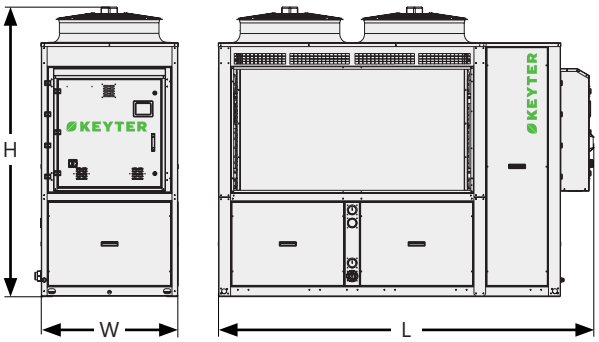
pacifica

dimensions

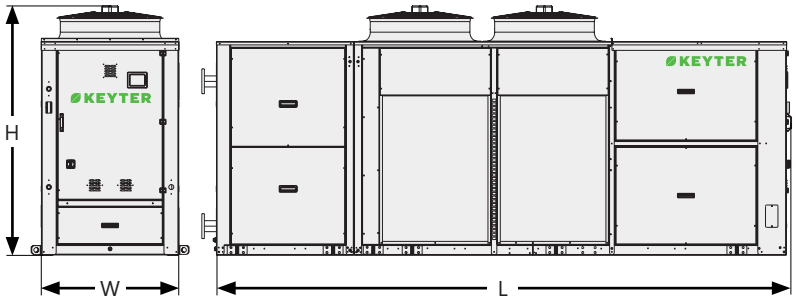
Series 2 H/J



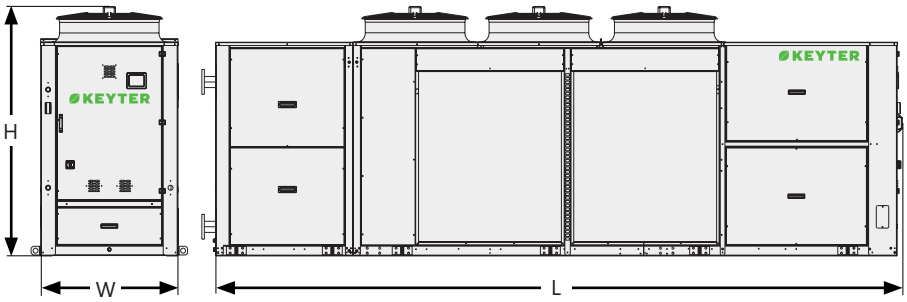
Series 5 H/J



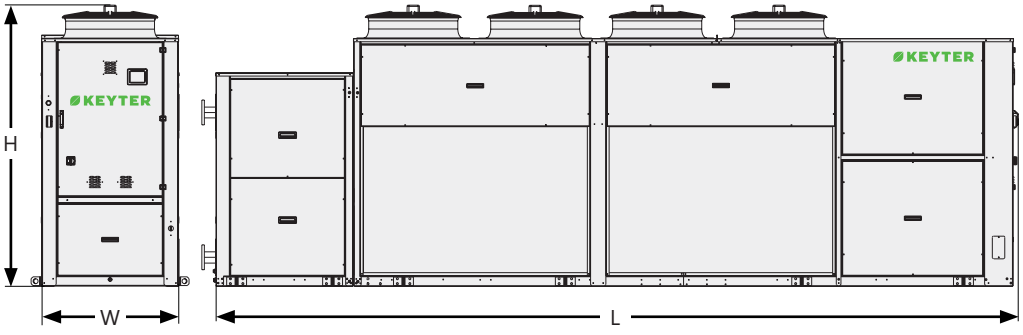
Series 61 H



Series 62 H



Series 63 H



Dimensions Version H		Series 2	Series 5	Series 61	Series 62	Series 63
L	(mm)	1915	3020	4625	5525	6450
W	(mm)	1100	1100	1100	1100	1100
H	(mm)	2345	2345	2020	2020	2295

Dimensions Version J		Series 2	Series 5
L	(mm)	2165	3270
W	(mm)	1100	1100
H	(mm)	2345	2345

adriatica

euro & inverter

Air-to-water chillers and heat pumps for mild climate

22-206 kW 49-152 kW

EC

heat recovery

version inverter

22-81 kW 52-80 kW

Chillers and heat pumps equipped with full inverter technology, integrating inverter compressors, electronic expansion valve, and variable-speed electronic fans for maximum energy savings and compliance with ErP 2021 regulations.

version euro

42-206 kW 49-152 kW

Chillers and heat pumps equipped with tandem or trio multi-scroll compressor technology to optimize energy savings and comply with ErP 2021 regulations.

Adaptation and Environment

- Reduced refrigerant charge with low-GWP R-454B, minimizing CO_2 footprint (77% less GWP than R-410A and 31% less than R-32).
- Available with plate heat exchangers or with shell-and-tube heat exchangers.
- Standard condensing pressure control for year-round operation.
- This range integrates compressors, hydraulic group, and built-in buffer tank within the air stream, offering a very compact version.

Energy Efficiency

- High efficiency at both partial and full loads, reducing operating costs in both the Euro version and the Inverter version.
- Partial and total heat recovery system from hot gases for domestic hot water (DHW).
- Water free cooling system for cost-free cooling (bodywork KWG-3).

Codification:

KWG — Series | Size | Power | R M S4C

Operating mode
I - Reversible heat pump
R - Cooling only

Version - Compressor Type
M - EURO Version , Compressors multiscroll
V - INVERTER Version , Inverter Technology Compressors

Hydraulic version
S - Standard equipment
P - Version with hydraulic group
H - Version with hydraulic group and buffer tank

Power supply
4 - 400V/III/50Hz (standard)

Refrigerant
C - R454B / **W -** R410A

adriatica

technical data inverter version R454B

KEYTER

R454B ErP 2021

KWG *inverter* model			1022	1030	2045	3052	3070	3090
COOLING-ONLY VERSION (R)								
Cooling	Nominal cooling capacity (1)	kW	22,0	28,5	39,5	52,4	64,1	80,9
		TR	6,5	8,5	11,5	15,0	18,5	23,5
		kBTU/h	78	102	138	180	222	282
	Absorbed power (2)	kW	7,2	9,0	11,4	15,4	19,8	24,9
	EER (3)	kW/kW	3,06	3,17	3,45	3,39	3,24	3,24
	SEER (4)	kW/kW	4,9	4,9	5,4	5,7	5,7	5,4
	ηs,c (5)	%	193,9%	192,0%	211,2%	225,5%	223,2%	213,0%
	SEPR (7°C) (6)	kW/kW	6,12	6,07	6,54	6,89	6,84	6,59
	SEPR (-8°C) (6)	kW/kW	4,18	4,13	4,61	4,96	4,91	4,66
	IPLV (7)	kW/TR	19,78	0,60	22,25	24,28	23,99	22,54
		kBtu/kW*h	0,59	19,49	0,53	0,48	0,49	0,52
HEAT PUMP VERSION (I)								
Cooling mode	Nominal cooling capacity (1)	kW	-	-	-	51,5	62,9	79,5
	Absorbed power (2)	kW	-	-	-	15,6	20,0	25,2
	EER (3)	kW	-	-	-	3,30	3,15	3,16
	SEER (4)	kW/kW	-	-	-	5,6	5,6	5,3
	ηs,c (5)	%	-	-	-	221,2%	219,0%	208,4%
	SEPR (7°C) (6)	kW/kW	-	-	-	6,79	6,74	6,47
	SEPR (-8°C) (6)	kW/kW	-	-	-	4,86	4,81	4,53
	IPLV	kW/ton	-	-	-	23,70	23,41	21,81
		kBtuh/kW	-	-	-	0,49	0,50	0,54
Heating mode	Heating power (8)	kW	-	-	-	52,3	69,9	90,4
	Absorbed power (2)	kW	-	-	-	15,2	20,8	26,4
	COP (3)	kW/kW	-	-	-	3,44	3,36	3,43
	SCOP average (4)	kWh/kWh	-	-	-	3,7	3,7	3,5
	ηs,h average (5)	%	-	-	-	146,2%	145,3%	135,3%
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50HZ with neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466					
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	1/1	2/2
	No. power stages		25%-100%	25%-100%	25%-100%	25%-100%	25%-100%	12.5%-100%
Hydraulic circuit	Indoor water flow rate	m³/h	3,8	4,9	6,8	9,0	11,0	13,9
	Type of heat exchanger		brazed stainless steel plate heat exchanger					
	Ø hydraulic connections	inch	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
	Buffer tank capacity (H)	liters	200	200	200	200	200	200
Outdoor fan	Outdoor air flow microchannel	m³/h	18000	18000	18000	22000	22000	36000
	Outdoor air flow Cu-Al	m³/h	20000	20000	20000	22000	22000	39000
	Number of fans		1	1	1	1	1	2
	Ø and Type of fan	mm	800 EC	800 EC	800 EC	800 EC	800 EC	800 EC
Sound pressure of the equipment (Lp10) (9)		dB(A)	52	53	56	58	60	60
Weights (S version)	Empty weight (Mode R)	kg	300	310	399	481	542	665
	In-service weight (Mode R)	kg	302	313	404	486	549	673
	Empty weight (Mode I)	kg	-	-	-	524	607	712
	In-service weight (Mode I)	kg	-	-	-	539	624	730

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and indoor air temperature of 35°C.
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the Seasonal Coefficient of Performance (SCOP) and the Seasonal Energy Efficiency (ηs,h) are calculated for intermediate temperature applications and moderate climate conditions.
(5) Seasonal Energy Efficiency for cooling (Ƞs,c) and heating (Ƞs,h) of spaces, in accordance with EU Ecodesign Regulation 2016/2281. Ƞs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. Ƞs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Seasonal Energy Performance Factor (SEPR) for high-temperature process chillers (12/7°C) and medium-temperature process chillers (-2/-8°C), calculated in accordance with EN 14825:2022. SEPR values (12/7°C) comply with EU Ecodesign Regulation 2016/2281 for high-temperature process applications. SEPR values (-2/-8°C) comply with EU Ecodesign Regulation 2015/1095 for medium- and low-temperature process applications.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

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range specification

General characteristics

		INVERTER	EURO
Refrigerant	R454B	✓	✓
	Equipment with refrigerant charge	✓	✓
	R452B or R410A refrigerants (Check availability according to model)	●	●
	Leak detection	●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓	✓
	Customized color to suit the needs of the installation	●	●
	Enclosed lower compartment with sheet metal for compressors and refrigeration components	✓ (KWG 1-2)	✓ (KWG 2)
	Insulation in the lower refrigeration compartment	●	●
	Anti-vibration supplements	●	●
Compressors	Multi-scroll technology in tandem or trio configuration, depending on the model	-	✓
	Inverter technology	✓	-
	Compressor anti-vibration mounts	✓	✓
	Soft starter	-	●
	Acoustic insulation jacket	●	●
	Original high-performance acoustic insulation jacket from the manufacturer	●	●
Expansion valves	Electronic expansion valves	✓	✓
	Thermostatic expansion valves	-	●

Fans

		INVERTER	EURO
Outdoor fans	AC axial fans with variable speed drive (excepto modelos 3100 y 3120)	●	✓
	Axial fans with AC technology (only with R410A and thermostatic expansion valve)	-	●
	High-performance EC axial fans (Standard for models 3100 y 3120)	●	●
	EC technology axial fans	✓	●
	Curved exterior fan nozzles (Silent ring)	✓	✓
	AxiTop diffusers for axial fans (Only available with EC fans)	●	●
	EC plug-fan radial fans	●	●

Heat exchangers (*)

			INVERTER	EURO
Coils	Al / Al microchannel coils in cooling-only units	R version	✓	✓
	Cu tube and Al fin coils	R version	●	●
		I version	✓	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins		●	●
	ALUCOAST: high-strength Cu tubes / Al fins		●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating		●	●
	COPPERFIN: Cu tubes / Cu fins		●	●
Heat exchangers	Refrigerant-to-water heat exchanger, stainless steel AISI 316L plates brazed with copper and thermally insulated		✓	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix		●	●
	Shell and tube heat exchanger (check availability according to model)		●	●

Energy (*)

		INVERTER	EURO
Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●	●
	Pump in the condensation heat recovery circuit	●	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve. (Check availability according to model)	●	●

✓ Included as standard
● Optional
- Not applicable

* Some options may require changes to the equipment dimensions; please consult us.

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range specification

KEYTER

Hydraulic (*)

		INVERTER	EURO
Pumps (WG-version P/H/J)	Single pump, normal available pressure (7-12 mH_2O)	✓	✓
	Single pump with high pressure available (15-20 mH_2O)	●	●
	Single pump, very high available pressure (25-30 mH_2O)	●	●
	Pump with variable speed drive	●	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	●
	Electronic pump	●	●
	Electronic backup pump	●	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●	●
	Low outdoor temperature kit	●	●
	Flexible water inlet and outlet connections	●	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with 200 liters / 375 liters / 725 liters + buffer tank available Electrical resistances	●	●

Installation

Outdoor coil	Coil protection grille	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz with neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓
	RS485 communication interface for ModBus communication	✓	✓
	Modbus TCP/IP and BACnet IP communication	✓	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓	✓
Additional control and safety components	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors, fans and pumps	✓	✓
	Differential switches	●	●
	Low pressure switch for pump protection	●	●
	PREMIUM phase control relay with phase failure detection and rotation direction protection	✓	✓
	EXCELLENT phase control relay, featuring phase imbalance detection, overvoltage, and undervoltage protection	●	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-freeze protections for both water and refrigerant	✓	✓
	Electric energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Forced ventilation of the electrical panel	●	●
	Design of electrical switchgear for high temperatures	✓	✓
	Tropicalised electrical panel	●	●
	Socket for common use	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

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R454B technical data euro version

KWG *euro* model			**2035**	**2039**	**2045**	**3052**	**3060**	**3070**	**3080**	**3090**
COOLING-ONLY VERSION (R)										
Cooling	Cooling capacity (1)	kW	31,8	36,7	41,7	50,1	55,5	62,5	73,0	79,1
		TR	9,5	10,5	12,0	14,5	16,0	18,0	21,0	22,5
		kBTU/h	114	126	144	174	192	216	252	270
	Absorbed power (2)	kW	11,2	11,5	12,6	15,8	16,5	19,9	21,8	26,3
	EER (3)	kW/kW	2,84	3,18	3,30	3,18	3,36	3,14	3,36	3,01
	SEER (4)	kW/kW	4,5	4,4	4,4	5,0	5,1	5,0	5,0	4,7
	ηs,c (5)	%	176,3%	173,9%	174,0%	197,1%	199,2%	196,4%	197,4%	183,7%
	SEPR (7°C) (6)	kWh/kWh	5,47	5,42	5,42	6,00	6,05	5,98	6,00	5,66
	SEPR (-8°C) (6)	kWh/kWh	3,54	3,48	3,48	4,06	4,11	4,04	4,07	3,72
	IPLV (7)	kW/TR	0,64	0,65	17,91	21,46	21,77	21,35	21,49	19,39
		kBtu/kW*h	18,25	17,89	0,65	0,55	0,54	0,55	0,54	0,60
HEAT PUMP VERSION (I)										
Cooling mode	Nominal cooling capacity (1)	kW	-	-	-	49,2	54,6	61,3	71,7	77,8
	Absorbed power (2)	kW	-	-	-	15,9	16,7	20,2	21,9	26,5
	EER (3)	kW/kW	-	-	-	3,09	3,26	3,04	3,27	2,94
	SEER (4)	kWh/kWh	-	-	-	4,8	4,9	4,9	5,0	4,6
	ηs,c (5)	%	-	-	-	189,6%	192,7%	191,8%	195,0%	180,1%
	SEPR (7°C) (6)	kWh/kWh	-	-	-	5,81	5,88	5,86	5,94	5,57
	SEPR (-8°C) (6)	kWh/kWh	-	-	-	3,87	3,95	3,93	4,01	3,63
	IPLV	kBtu/kW*h	-	-	-	20,30	20,78	20,65	21,13	18,84
	IPLV	kW/TR	-	-	-	0,58	0,56	0,57	0,55	0,62
Heating mode	Heating power (8)	kW	-	-	-	52,2	62,3	69,7	78,9	86,5
	Absorbed power (2)	kW	-	-	-	15,4	18,0	20,2	23,9	27,4
	COP (3)	kW/kW	-	-	-	3,38	3,46	3,45	3,30	3,16
	SCOP average (4)	kWh/kWh	-	-	-	3,6	3,5	3,6	3,5	3,4
	ηs,h average (5)	%	-	-	-	142,0%	138,7%	138,9%	137,0%	133,8%
TECHNICAL SPECIFICATIONS										
Power supply			400V / III / 50HZ with neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466							
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
	No. power stages		2	2	2	2	2	2	2	2
Hydraulic circuit	Indoor water flow rate	m^3/h	5,5	6,3	7,2	8,6	9,6	10,8	12,6	13,6
	Type of heat exchanger		brazed stainless steel plate heat exchanger							
	Ø hydraulic connections	inch	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"
	Buffer tank capacity (H)	liters	200	200	200	200	200	200	200	200
Outdoor fan	Outdoor air flow microchannel	m^3/h	16000	16000	16000	19500	19500	19500	32000	32000
	Outdoor air flow Cu-Al	m^3/h	18500	18500	18500	19500	19500	19500	35000	35000
	Number of fans		1	1	1	1	1	1	2	2
	Ø and Type of fan	mm	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD
Sound pressure level of the equipment (Lp10) (9)		dB(A)	55	58	58	61	62	63	62	62
Weights (S version)	Empty weight (Mode R)	kg	400	401	446	528	531	537	579	586
	In-service weight (Mode R)	kg	404	405	451	533	536	543	585	593
	Empty weight (Mode I)	kg	-	-	-	585	588	616	658	665
	In-service weight (Mode I)	kg	-	-	-	600	603	633	675	683

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and indoor air temperature of 35°C.
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the Seasonal Coefficient of Performance (SCOP) and the Seasonal Energy Efficiency (ηs,h) are calculated for intermediate temperature applications and moderate climate conditions.
(5) Seasonal Energy Efficiency for cooling (ηs,c) and heating (ηs,h) of spaces, in accordance with EU Ecodesign Regulation 2016/2281. ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.

KWG Series 2

KWG Series 3052-70

KWG Series 3080

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R454B technical data euro version

KWG *euro* model			**3100**	**3120**	**4130**	**4140**	**4150**	**4180**	**4210**	**4240**
COOLING-ONLY VERSION (R)										
Cooling	Cooling capacity (1)	kW	87,7	98,3	103,5	116,4	137,3	152,9	180,2	206,0
		TR	25,0	28,0	29,5	33,5	39,5	43,5	51,5	59,0
		kBTU/h	300	336	354	402	474	522	618	708
	Absorbed power (2)	kW	29,2	31,9	33,4	36,8	46,0	52,9	59,2	68,4
	EER (3)	kW/kW	3,01	3,08	3,10	3,16	2,98	2,89	3,05	3,01
	SEER (4)	kW/kW	5,0	4,9	4,8	5,0	4,5	4,5	4,9	4,7
	ηs,c (5)	%	195,0%	191,6%	189,5%	195,8%	178,4%	175,4%	192,0%	186,6%
	SEPR (7°C) (6)	kWh/kWh	5,94	5,86	5,80	5,96	5,53	5,45	5,87	5,73
	SEPR (-8°C) (6)	kWh/kWh	4,01	3,92	3,87	4,03	3,59	3,52	3,93	3,80
	IPLV (7)	kW/TR	21,83	21,29	20,29	21,25	18,57	18,12	20,66	19,85
		kBtu/kW*h	0,54	0,55	0,58	0,55	0,63	0,65	0,57	0,59
HEAT PUMP VERSION (I)										
Cooling mode	Nominal cooling capacity (1)	kW	86,7	97,1	103,0	115,8	136,6	152,2	-	-
	Absorbed power (2)	kW	30,2	33,2	34,2	37,6	47,1	53,6	-	-
	EER (3)	kW/kW	2,87	2,93	3,01	3,08	2,90	2,84	-	-
	SEER (4)	kWh/kWh	4,9	4,8	4,8	4,6	4,5	4,4	-	-
	ηs,c (5)	%	192,7%	189,8%	187,1%	180,3%	175,1%	171,7%	-	-
	SEPR (7°C) (6)	kWh/kWh	5,88	5,81	5,74	5,57	5,44	5,36	-	-
	SEPR (-8°C) (6)	kWh/kWh	3,95	3,88	3,81	3,64	3,51	3,42	-	-
	IPLV	kBtu/kW*h	21,46	21,01	19,91	18,87	18,07	17,55	-	-
	IPLV	kW/TR	0,55	0,56	0,59	0,62	0,65	0,67	-	-
Heating mode	Heating power (8)	kW	98,7	111,8	114,3	127,7	150,7	169,8	-	-
	Absorbed power (2)	kW	29,9	33,8	35,2	39,3	49,0	56,7	-	-
	COP (3)	kW/kW	3,30	3,31	3,24	3,25	3,07	2,99	-	-
	SCOP average (4)	kWh/kWh	3,6	3,5	3,4	3,4	3,4	3,4	-	-
	ηs,h average (5)	%	140,7%	137,1%	134,7%	134,6%	134,5%	132,4%	-	-
TECHNICAL SPECIFICATIONS										
Power supply			400V / III / 50HZ with neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466							
	No. of refrig. circuits / compressors		1/3	1/3	1/3	1/3	2/4	2/4	2/6	2/6
	No. power stages		3	3	3	3	4	4	6	6
Hydraulic circuit	Indoor water flow rate	m^3/h	15,1	16,9	17,8	20,0	23,6	26,3	31,0	35,5
	Type of heat exchanger		brazed stainless steel plate heat exchanger							
	Ø hydraulic connections	inch	2 1/2"	2 1/2"	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80
	Buffer tank capacity (H)	liters	200	200	200	200	200	200	200	200
Outdoor fan	Outdoor air flow microchannel	m^3/h	32000	32000	39000	39000	64000	64000	64000	64000
	Outdoor air flow Cu-Al	m^3/h	35000	35000	39000	39000	70000	70000	64000	64000
	Number of fans		2	2	2	2	4	4	4	4
	Ø and Type of fan	mm	800 EC HP	800 EC HP	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD	800-6 AC VFD
Sound pressure level of the equipment (Lp10) (9)		dB(A)	60	61	64	64	66	67	67	67
Weights (S version)	Empty weight (Mode R)	kg	690	697	1043	1051	1216	1235	1381	1393
	In-service weight (Mode R)	kg	698	705	1053	1062	1230	1251	1400	1415
	Empty weight (Mode I)	kg	767	773	1134	1142	1339	1358	-	-
	In-service weight (Mode I)	kg	786	792	1160	1168	1369	1390	-	-

(6) Seasonal Energy Performance Ratio (SEPR) for high-temperature process chillers (12/7°C) and medium-temperature chillers (-2/-8°C), calculated according to EN 14825:2022. SEPR values (12/7°C) comply with the EU Ecodesign Regulation 2016/2281 for high-temperature process applications. SEPR values (-2/-8°C) comply with the EU Ecodesign Regulation 2015/1095 for medium- and low-temperature process applications.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

KWG Series 4130-40

KWG Series 4150-4240

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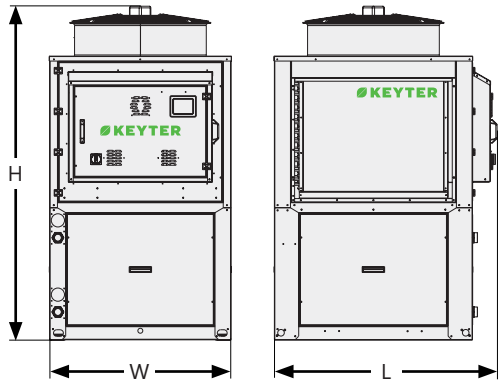
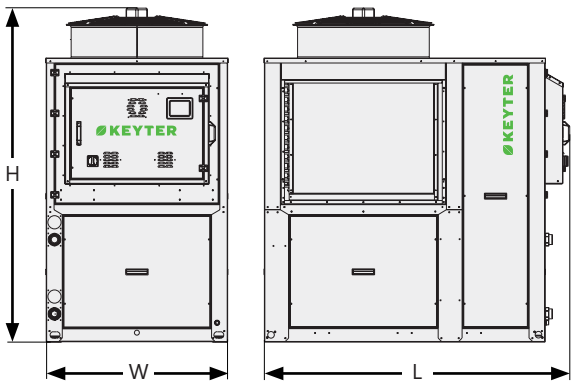
dimensions

Series 2 S/P

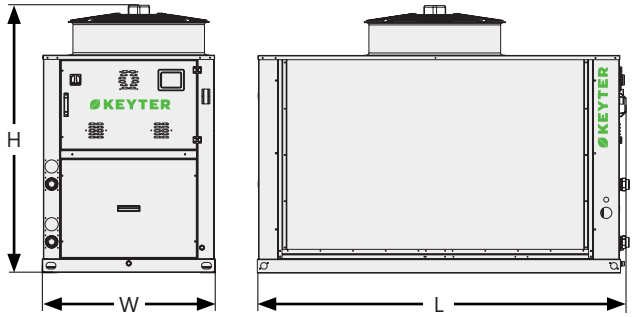


Series 2 H



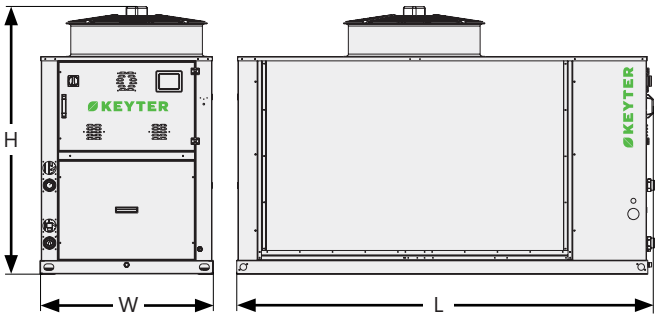
Series 3 S/P

3052 / 3060 / 3070 models



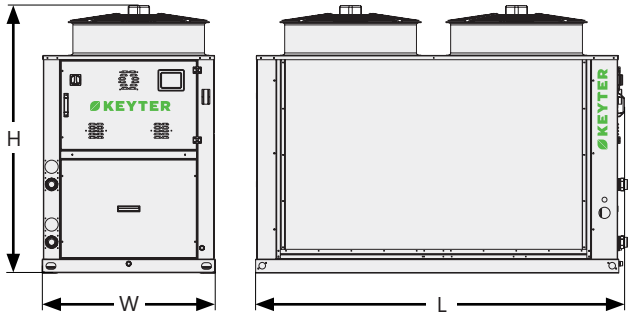
Series 3 H

3052 / 3060 / 3070 models



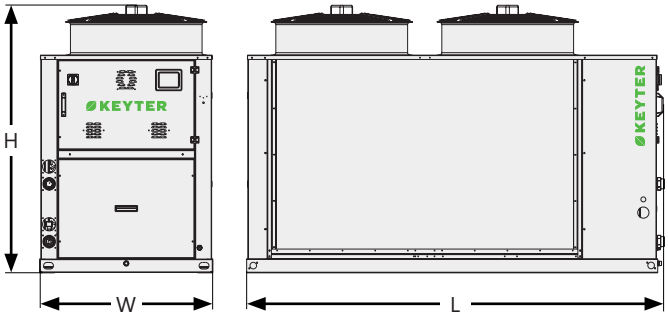
Series 3 S/P

3080 / 3090 / 3100 / 3120 models



Series 3 H

3080 / 3090 / 3100 / 3120 models



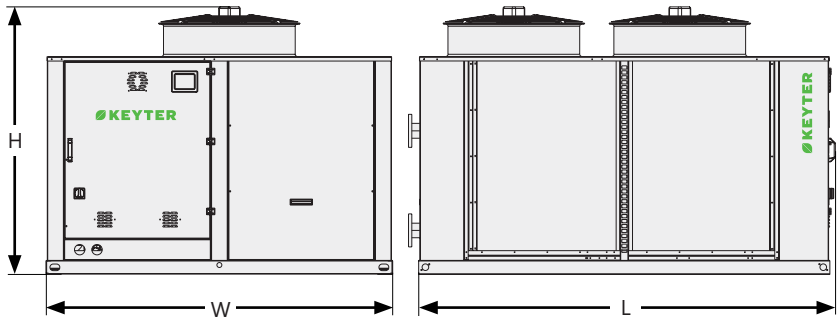
Dimensions versions S and P (mm)	Series 1	Series 2	Series 3	Series 4
L	1235	1350	2235	2525
W	1050	1100	1050	2100
H	1620	2025	1695	1695

adriatica

dimensions

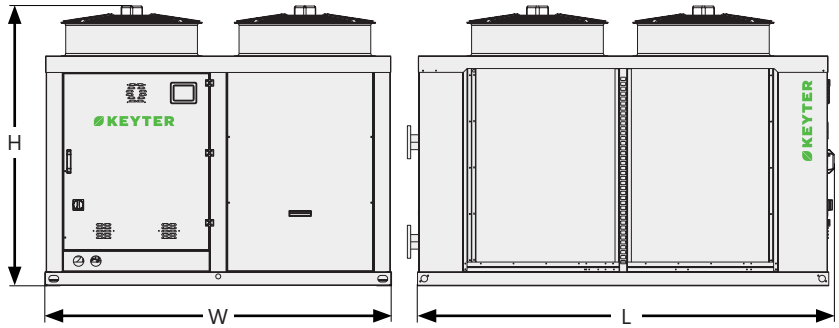
Series 4 S/P/H

4130 / 4140 models



Series 4 S/P/H

4150 / 4180 / 4210 / 4240 models



Dimensions Versions H (mm)	Series 1	Series 2	Series 3	Series 4
L	1735	1850	2525	2525
W	1050	1100	1050	2100
H	1620	2025	1695	1695

qu4tro

Multipurpose air-to-water heat pumps for mild to medium climate

68-285 kW 80-358 kW

Multi-Scroll EC

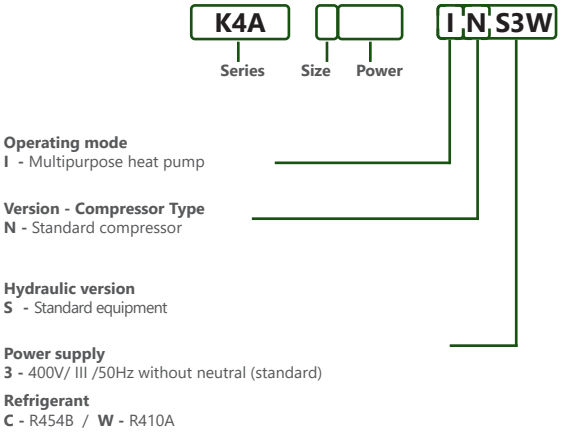
Adaptation and Environment

- Reduced refrigerant charge with low GWP R-454B, minimizing the CO_2 footprint (-77% lower GWP than R-410A and -31% lower than R-32).
- Maximum comfort: simultaneous heating and cooling with a single, simple HVAC unit.
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Optimized defrosting management.

Energy Efficiency

- Very high seasonal energy efficiency thanks to multi-scroll technology and the versatile K4Smart management system.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption.
- Great versatility and efficiency as they maximize the recovery of condensation heat.
- Year-round hot water production.
- Maximum reliability thanks to the multi-circuit system.

Codification:



K4 Simultaneous production of hot and cold water

Decarbonize today, breathe tomorrow

qu4tro

R454B technical data

KEYTER

R454B ErP 2021

K4A model			1070	1100	1120	1150	2210	2240	2295	2375
Cooling mode	Nominal cooling capacity (1)	kW	68,4	91,1	101,9	121,1	152,4	204,7	240,5	284,8
		TR	19,5	26,0	29,0	34,5	43,5	58,5	68,5	81,0
		kBTU/h	234	312	348	414	522	702	822	972
	Absorbed power (2)	kW	24,1	30,6	36,0	44,2	54,5	72,1	88,4	117,4
	EER (3)	kW/kW	2,84	2,98	2,83	2,74	2,80	2,84	2,72	2,43
		kBTU/kW·h	9,68	10,16	9,66	9,35	9,54	9,69	9,29	8,28
	Water flow rate	m^3/h	11,8	15,7	17,6	20,9	26,2	35,3	41,4	49,1
	SEER (4)	kWh/kWh	4,72	4,65	4,58	4,48	4,88	4,81	4,72	4,65
	ηs,c (5)	%	185,9%	183,1%	180,0%	176,2%	192,2%	189,3%	185,8%	182,9%
	SEPR (7°C) (6)	kWh/kWh	6,20	6,20	6,10	6,10	6,50	6,40	6,40	6,30
	SEPR (-8°C) (6)	kWh/kWh	3,90	3,80	3,80	4,10	4,10	4,00	4,00	3,90
	IPLV (7)	kW/TR	0,57	0,58	0,59	0,60	0,55	0,56	0,57	0,58
	IPLV (7)	kBtu/kWh	20,54	20,20	19,86	19,40	21,23	20,89	20,54	20,20
Heating mode	Heating power (8)	kW	80,3	107,6	121,4	147,1	178,3	244,6	294,7	357,8
	Absorbed power (2)	kW	24,5	31,8	36,4	42,9	52,7	70,3	85,3	103,4
	COP (3)	kW/kW	3,28	3,38	3,34	3,43	3,38	3,48	3,46	3,46
	Water flow rate	m^3/h	13,8	18,5	20,9	25,3	30,7	42,1	50,8	61,6
	SCOP average climate (4)	kWh/kWh	3,58	3,56	3,55	3,52	3,88	3,78	3,75	3,68
	ηs,h average climate (5)	%	140,0%	139,2%	138,8%	137,8%	152,0%	148,1%	147,1%	144,3%
Recovery Mode	Nominal cooling capacity (9)	kW	65,3	85,5	97,8	120,0	152,5	203,6	243,8	299,8
		TR	19,0	24,5	28,0	34,5	43,5	58,0	69,5	85,5
		kBTU/h	228	294	336	414	522	696	834	1026
	Heating power (9)	kW	86,6	113,6	130,2	158,9	198,4	265,3	318,1	396,4
	Absorbed power (9)	kW	21,3	28,1	32,4	38,9	45,9	61,7	74,4	96,6
	EER (3)	kW/kW	3,07	3,04	3,02	3,09	3,33	3,30	3,28	3,10
		kBTU/kW·h	10,47	10,39	10,30	10,53	11,35	11,26	11,19	10,59
	COP (3)	kW/kW	4,07	4,04	4,02	4,09	4,33	4,30	4,28	4,10
	Evaporator water flow rate	m^3/h	18,7	24,6	28,1	34,5	43,8	58,5	70,0	86,1
	Condenser water flow rate	m^3/h	14,9	19,6	22,4	27,4	34,2	45,7	54,8	68,3
	TER (10)	kW/kW	7,13	7,09	7,03	7,17	7,65	7,60	7,56	7,20
TECHNICAL SPECIFICATIONS										
Power supply			400V / III / 50HZ without neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466							
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	2/4	2/4	2/4	2/4
	No. power stages		2	3	2	2	4	4	4	4
Evaporator	Type of heat exchanger	m^3/h	brazed stainless steel plate heat exchanger							
	Hydraulic connections Ø		VICTAULIC 2"	VICTAULIC 3"	VICTAULIC 3"	VICTAULIC 3"	DN80	DN80	DN80	DN100
Condenser	Type of heat exchanger		brazed stainless steel plate heat exchanger							
	Hydraulic connections Ø	liters	VICTAULIC 2"	VICTAULIC 3"	VICTAULIC 3"	VICTAULIC 3"	DN80	DN80	DN80	DN100
Fans	Outdoor air flow rate	m^3/h	45000	45000	45000	45000	90000	90000	90000	90000
	Number of fans		2	2	2	2	4	4	4	4
	Ø and Type of fan		Axial 800 EC							
Sound pressure level of the equipment (Lp10) (11)		dB(A)	49	53	54	54	54	57	57	63
Weights (S version)	Empty weight	kg	979	1132	1222	1242	1910	2188	2493	2691
	In-service weight	kg	1013	1170	1265	1290	1979	2289	2629	2859

(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and outdoor air temperature of 35°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m2 · K / W).

(2) Nominal power absorbed by compressors and outdoor fans.

(3) EER and COP calculated according to the EN 14511:2022 standard.

(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the Seasonal Coefficient of Performance (SCOP) and the Seasonal Energy Efficiency (ηs,h) are calculated for intermediate temperature applications and moderate climate conditions.

(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.

(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7°C) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium temperature process chillers (-2/-8°C) in compliance with EU Ecodesign Regulation 2015/1095.

(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.

(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2 · K / W).

(9) Power ratings calculated for water at 10/7°C in the evaporator and 40/45°C in the condenser. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2 · K / W).

(10) Total Efficiency Ratio.

(11) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

qu4tro
range specification

General characteristics

		K4A
Refrigerant	R454B	✓
	Equipment with refrigerant charge	✓
	R452B or R410A refrigerants	●
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Equipment without paneling	✓
	Perimeter enclosure of the unit (1)	●
	Perimeter enclosure insulation	●
	Anti-vibration supplements	●
Compressors	Multiscroll technology in tandem	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
Expansion valves	Electronic expansion valves	✓

Fans

Outdoor fans	EC technology axial fans	✓
	Condensing pressure control	✓
	Internal nozzles	✓
	Straight external nozzles / Curved external nozzles (Silent ring)	●
	AxiTop diffusers for axial fans	●
	High-performance EC axial fans	●
	EC plug-fan radial fans	●

Heat exchangers

Coils	Cu tube and Al fin coils	✓
	Al / Al microchannel batteries	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength Cu tubes / Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Refrigerant-water heat exchangers (evaporator / heat recovery), AISI 316L stainless steel plates, copper-welded, and thermally insulated	✓
	Heat exchangers (evaporator/heat recovery) in stainless steel SS AISI 304 / SS AISI 316 / Sealix	●

Hydraulic

Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment	●

✓ Standard manufacturing
● Optional manufacturing available
- Not available

(1) This option can only be supplied factory-installed.

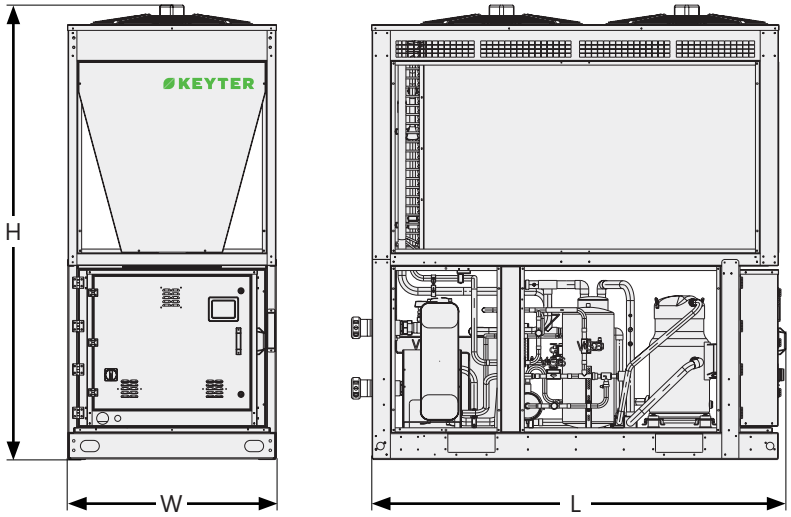
Installation

Control

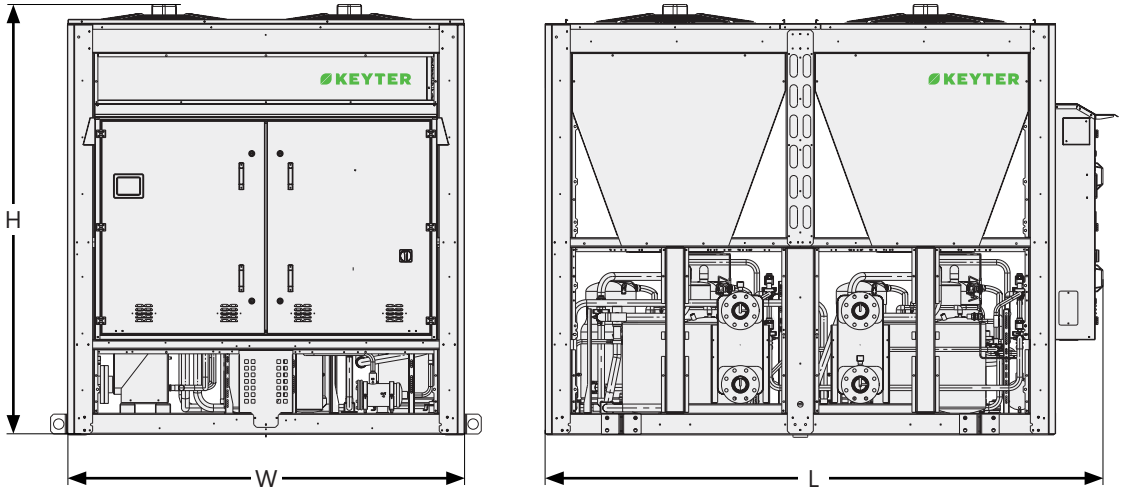
		K4A
Protection grilles	Coil protection grille	●
	Bird-proof protection grille at the base of the equipment	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz without neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Electronic control and communication	Programmable electronic control Aquamanager	✓
	User and maintenance terminal pGD1 for AQUAMANAGER control (standard maximum distance between terminal and controller: 50 m)	✓
	TCONN cards (for distances between terminal and controller greater than 50 m) (consult technical manual)	●
	Condensing pressure control and evaporation with transducers	✓
	Management of up to two pumps in the evaporator	✓
	Master-Slave management	●
	RS485 card for Modbus communication	●
	BOSS / tERA monitoring systems	●
	BACNET / LONWORKS/ KNX communication	●
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

qu4tro
dimensions

Series 1



Series 2



Dimensions (mm)		
	Series 1	Series 2
L	2190	2980
W	1100	2100
H	2400	2280

If a hydraulic group is required, a separate hydraulic module is necessary.

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Air-to-water heat pumps for mild | moderate climates

121-582 kW 130-624 kW

Multi-Scroll EC heat recovery

Plate heat exchanger **KWP-C**

Shell and tube exchanger **KWP-M**

heat recovery Partial heat recovery system from hot gases for domestic hot water (DHW)

Water Free Cooling System for Free Cooling

Adaptation and Environment

- Reduced refrigerant charge with low-GWP R-454B, minimizing the CO_2 footprint (-77% lower GWP than R-410A and -31% lower than R-32).
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Versions with hydraulic group and built-in buffer tank to reduce the frequency of compressor stops and starts.

Energy Efficiency

- High energy efficiency at partial and full loads, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption.
- Units with a hydraulic group can incorporate high-performance electronic pumps.

Codification:

KWPC / KWPM | ** ** | **I N S3C**

Series | Size | Power

Operating mode
I - Reversible heat pump

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment / **P -** Version with hydraulic group / **H -** Version with hydraulic group and buffer tank

Power supply
3 - 400V/III/50Hz without neutral

Refrigerant
C - R454B / **W -** R410A / **B -** R452B

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range specification

General characteristics

		KWP-C	KWP-M
Refrigerant	Refrigerant R454B	✓	✓
	Equipment with refrigerant charge	✓	✓
	Refrigerants R452B o R410A	●	●
	Leak detection	●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓	✓
	Customized color to suit the needs of the installation	●	●
	Equipment without paneling	✓	✓
	Perimeter enclosure of the equipment (series 1)	●	-
	Hydraulic enclosure (P/H version) (series 1)	●	-
	Insulation paneles (serie 1)	●	-
	Enclosed compartment for compressors (1) (series 2-4)	●	●
	Perimeter enclosure of the unit + Enclosed compartment for compressors (1) (series 2-4)	●	●
	Insulation panels for the compressor compartment (series 2-4)	●	●
	Lower hydraulic enclosure (H version) (series 2-4)	●	●
	Upper hydraulic enclosure (H version) (series 2-4)	●	●
	Insulation panels for perimeter enclosure and hydraulic section panels (H version) (series 2-4)	●	●
	Anti-vibration supplements	●	●
Compressors	Multiscroll technology in tandem	✓	✓
	Compressor anti-vibration mounts	✓	✓
	Soft starter	●	●
	Acoustic insulation jacket	●	●
	Original high-performance acoustic insulation jacket from the manufacturer	●	●
Expansion valves	Electronic expansion valves	✓	✓
	Thermostatic expansion valves (con R410A)	●	●

Fans

Outdoor fans	EC-Z axial fans with integrated curved nozzle	✓	✓
	Condensing pressure control	✓	✓
	High-performance EC axial fans	●	●
	EC plug-fan radial fans	●	●
	Inner nozzles (only with enhanced fans)	●	●
	Curved outer nozzles (Silent Ring) (only possible with enhanced fans)	●	●
	AxiTop diffusers for axial fans	●	●

Heat exchangers

Coils	Cu tube and Al fin coils	✓	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●	●
	ALUCOAST: high-strength Cu tubes / Al fins	●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●	●
	COPPERFIN: Cu tubes / Cu fins	●	●
Heat exchangers	Refrigerant-water heat exchanger, stainless steel AISI 316L plates, brazed with copper and thermally insulated	✓	-
	Shell-and-tube heat exchanger	-	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix	●	-

Energy (2)

Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●	●
	Pump in the condensation heat recovery circuit	●	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	●	●

✓ Included as standard
● Optional
- Not applicable

(1) This option can only be supplied factory-installed.
(2) Some options may require a chassis change; please contact us for details.

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range specification

KEYTER

		KWP-C	KWP-M
Hydraulic (2)			
Pumps (en versions P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓	✓
	Single pump with high pressure available (15-20 mH_2O)	●	●
	Single pump, very high available pressure (25-30 mH_2O)	●	●
	Pump with variable speed drive	●	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	●
	Electronic pump	●	●
	Electronic backup pump	●	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●	●
	Low outdoor temperature kit	●	●
	Flexible water inlet and outlet connections	●	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with buffer tank available in 200 liters / 375 liters / 725 liters + electric heaters	●	●
Installation			
Protection grilles	Coil protection grille	●	●
	Bird-proof protection grille at the base of the equipment	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz without neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●
Control			
Electronic control and communication	Programmable electronic control AQUAMATIX	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓
	RS485 communication interface for ModBus communication	✓	✓
	Modbus TCP/IP and BACnet IP communication	✓	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓	✓
Additional control and safety components	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors, fans and pumps	✓	✓
	Differential switches	●	●
	Low pressure switch for pump protection	●	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓	✓
	Energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Forced ventilation of the electrical panel	✓	✓
	Design of electrical switchgear for high temperatures	✓	✓
	Tropicalised electrical panel	●	●
	Socket for common use	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

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R454B technical data

KWP-C model			**1140**	**1170**	**2200**	**2250**	**2280**	**2310**	**2330**
KWP-M model			**-**	**-**	**2200**	**2250**	**2280**	**2310**	**2330**
HEAT PUMP VERSION (I)									
Cooling mode	Nominal cooling capacity (1)	kW	121,3	145,6	194,3	242,7	267,0	291,2	323,6
		TR	35,0	41,5	55,5	69,0	76,0	83,0	92,5
		kBTU/h	420	498	666	828	912	996	1110
	Absorbed power (2)	kW	36,5	47,3	57,3	73,6	84,6	95,2	111,5
	EER (3)	kW/kW	3,32	3,08	3,39	3,30	3,16	3,06	2,90
		kBTU/kW·h	11,33	10,52	11,58	11,25	10,77	10,44	9,90
	SEER (4)	kWh/kWh	4,7	4.6	5.0	4.9	4.8	4.7	4.5
	ηs,c (5)	%	186,9%	179,8%	197,0%	194,9%	190,9%	185,8%	176,8%
	SEPR (7ºC) (6)	kWh/kWh	6,36	6,26	6,67	6,57	6,46	6,36	6,06
	SEPR (-8ºC) (6)	kWh/kWh	3,94	3,84	4,24	4,14	4,04	3,84	3,54
	IPLV	kW/TR	20,85	20,03	22,01	21,78	21,31	20,73	19,68
	IPLV	kBtu/kWh	0,56	0,58	0,53	0,54	0,55	0,56	0,59
Heating mode	Heating power (8)	kW	130,3	156,0	207,0	261,4	286,4	312,0	354,5
	Absorbed power (2)	kW	36,4	44,5	58,3	73,4	81,7	89,9	103,1
	COP (3)	kW/kW	3,58	3,50	3,55	3,56	3,51	3,47	3,44
	SCOP average (4)	kWh/kWh	3,7	3,7	3,9	3,8	3,8	3,7	3,6
	ηs,h average (5)	%	145,4%	143,4%	152,5%	150,5%	148,5%	146,5%	141,4%
TECHNICAL SPECIFICATIONS									
Power supply			400V / III / 50HZ without neutral						
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466						
	No. of refrig. circuits / compressors		1/2	1/2	2/4	2/4	2/4	2/4	2/4
	No. power stages		3	3	6	6	6	6	6
Hydraulic circuit	Indoor water flow rate	m^3/h	20,9	25,1	33,4	41,8	46,0	50,1	55,7
	Type of heat exchanger KWP-C		brazed stainless steel plate heat exchanger						
	Type of heat exchanger KWP-M		Shell and tube heat exchanger						
	Hydraulic connections Ø KWP-C series		VICTAULIC 3"	VICTAULIC 3"	DN 80	DN 80	DN 80	DN 100	DN 100
	Hydraulic connections Ø KWP-M series		-	-	DN 100	DN 100	DN 100	DN 100	DN 100
	Buffer tank capacity (H)	liters	375	375	725	725	725	725	725
Outdoor fan	Outdoor air flow rate in cooling mode	m^3/h	42500	42500	85000	85000	85000	85000	85000
	Outdoor air flow rate in heating mode	m^3/h	40000	40000	80000	80000	80000	80000	80000
	Number of fans		2	2	4	4	4	4	4
	Ø and Type of fan		Axial 800 EC-Z						
Sound pressure level of the equipment (Lp10) (9)		dB(A)	53	57	55	56	59	60	61
Weights (S version)	Empty weight	kg	1351	1421	2183	2301	2372	2424	2468
	In-service weight	kg	1391	1463	2264	2383	2457	2512	2559

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a plate heat exchanger fouling factor of $0.43 \cdot 10^{-4}$ ($m^2 \cdot K/W$).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EEER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022. In heating, seasonal coefficient of performance (SCOP) and seasonal heating energy efficiency (ηs,h) calculated for medium temperature applications and moderate climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.

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R454B technical data

KEYTER

R454B ErP 2021

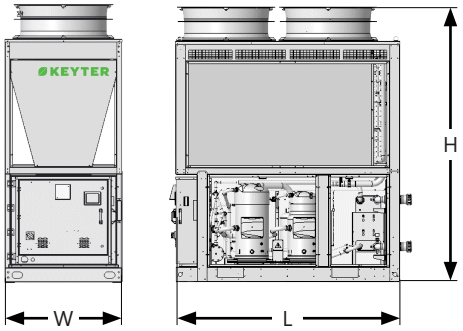
KWP-C model			**3350**	**3400**	**3470**	**3500**	**4500**	**4550**	**4650**
KWP-M model			**3350**	**3400**	**3470**	**3500**	**4500**	**4550**	**4650**
HEAT PUMP VERSION (I)									
Cooling mode	Nominal cooling capacity (1)	kW	363,9	388,2	436,8	485,4	485,2	533,8	582,4
		TR	103,5	110,5	124,5	138,5	138,0	152,0	166,0
		kBTU/h	1242	1326	1494	1662	1656	1824	1992
	Absorbed power (2)	kW	110,6	121,3	142,7	167,2	147,4	168,8	190,3
	EER (3)	kW/kW	3,29	3,20	3,06	2,90	3,29	3,16	3,06
		kBTU/kW·h	11,23	10,92	10,44	9,90	11,23	10,79	10,44
	SEER (4)	kWh/kWh	5.0	4.9	4.7	4.7	5.0	4.8	4.7
	ηs,c (5)	%	195,9%	191,9%	186,9%	183,8%	195,9%	190,9%	186,9%
	SEPR (7ºC) (6)	kWh/kWh	6,77	6,67	6,57	6,46	6,97	6,87	6,77
	SEPR (-8ºC) (6)	kWh/kWh	4,24	4,24	4,04	3,94	4,34	4,24	4,14
	IPLV	kW/TR	21,90	21,43	20,85	20,50	21,90	21,31	20,85
	IPLV	kBtu/kWh	0,53	0,55	0,56	0,57	0,53	0,55	0,56
Heating mode	Heating power (8)	kW	390,9	416,7	467,9	531,8	521,3	572,7	624,0
	Absorbed power (2)	kW	110,1	118,2	134,7	154,6	146,7	163,1	179,5
	COP (3)	kW/kW	3,55	3,52	3,47	3,44	3,55	3,51	3,48
	SCOP average (4)	kWh/kWh	3,9	3,8	3,8	3,8	3,9	3,9	3,8
	ηs,h average (5)	%	152,5%	149,5%	148,5%	148,5%	154,5%	151,5%	150,5%
TECHNICAL SPECIFICATIONS									
Power supply			400V / III / 50HZ without neutral						
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466						
	No. of refrig. circuits / compressors		3/6	3/6	3/6	3/6	4/8	4/8	4/8
	No. power stages		9	9	9	9	12	12	12
Hydraulic circuit	Indoor water flow rate	m^3/h	62,7	66,8	75,2	83,6	83,5	91,9	100,3
	Type of heat exchanger KWP-C		brazed stainless steel plate heat exchanger						
	Type of heat exchanger KWP-M		Shell and tube heat exchanger						
	Hydraulic connections Ø KWP-C series		DN 100	DN 100	DN 100	DN 125	DN 125	DN 125	DN 125
	Hydraulic connections Ø KWP-M series		DN 100	DN 100	DN 100	DN 125	DN 125	DN 125	DN 125
	Buffer tank capacity (H)	liters	725	725	725	725	725	725	725
Outdoor fan	Outdoor air flow rate in cooling mode	m^3/h	127500	127500	127500	127500	170000	170000	170000
	Outdoor air flow rate in heating mode	m^3/h	120000	120000	120000	120000	160000	160000	160000
	Number of fans		6	6	6	6	8	8	8
	Ø and Type of fan		Axial 800 EC-Z						
Sound pressure level of the equipment (Lp10) (9)		dB(A)	58	60	62	62	59	62	63
Weights (S version)	Empty weight	kg	3417	3487	3626	3723	4418	4551	4737
	In-service weight	kg	3540	3613	3758	3858	4582	4721	4913

(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7ºC) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8ºC) in compliance with EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45ºC and an outdoor air temperature of 7ºC DB/6ºC WB. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

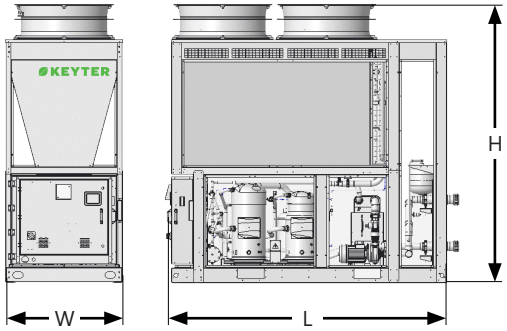
ventia

dimensions

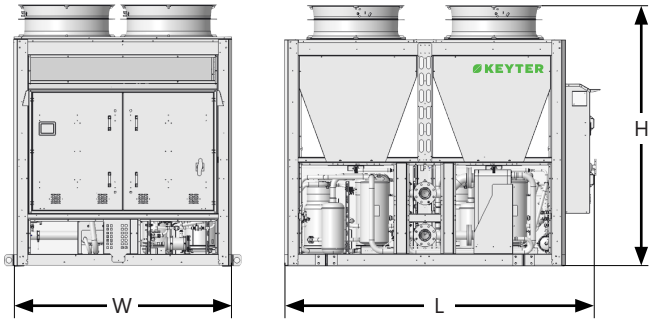
Series 1 S



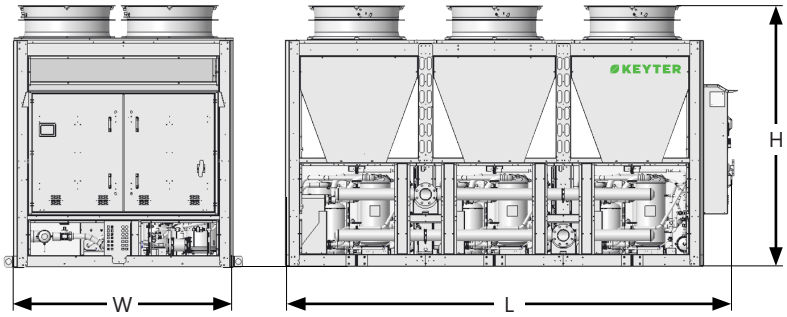
Series 1 P



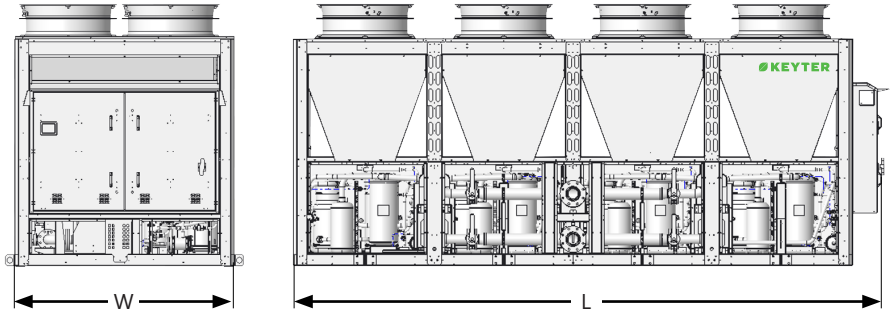
Series 2 S/P



Series 3 S/P



Series 4 S/P

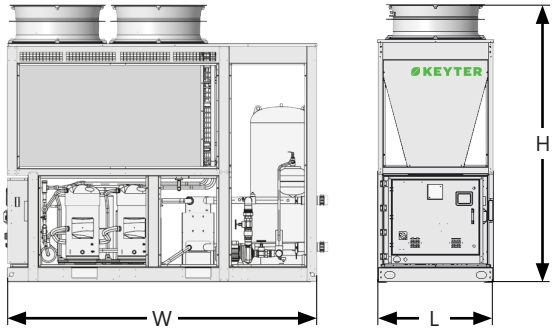


Dimensions KWP-C / KWP-M (Bodywork S/P) (mm)					
	Series 1		Series 2	Series 3	Series 4
Bodywork	S	P	S/P	S/P	S/P
L	2190	2640	2980	4300	5770
W	1100	1100	2100	2100	2100
H	2650	2650	2530	2530	2530

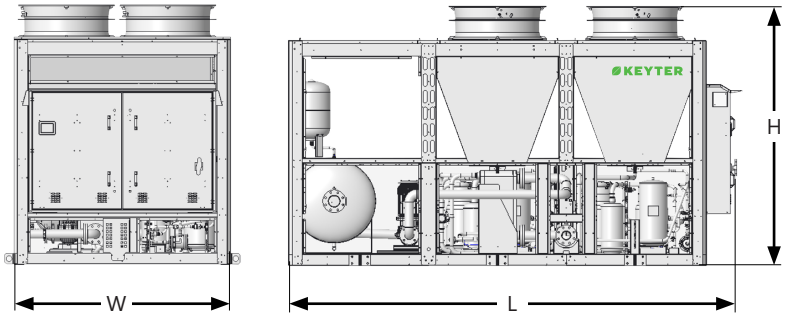
ventia

dimensions

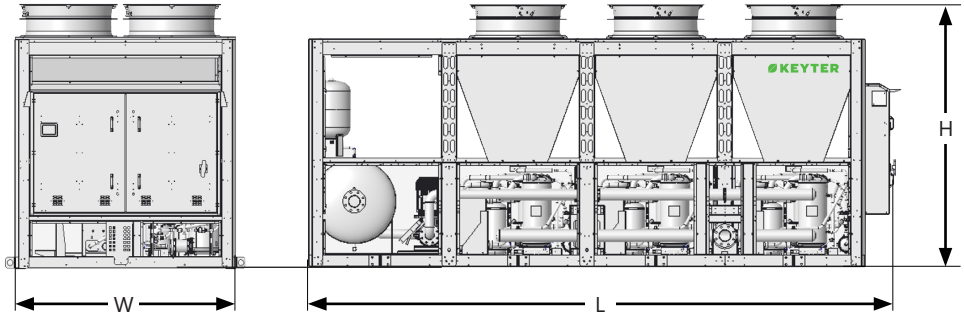
Series 1 H



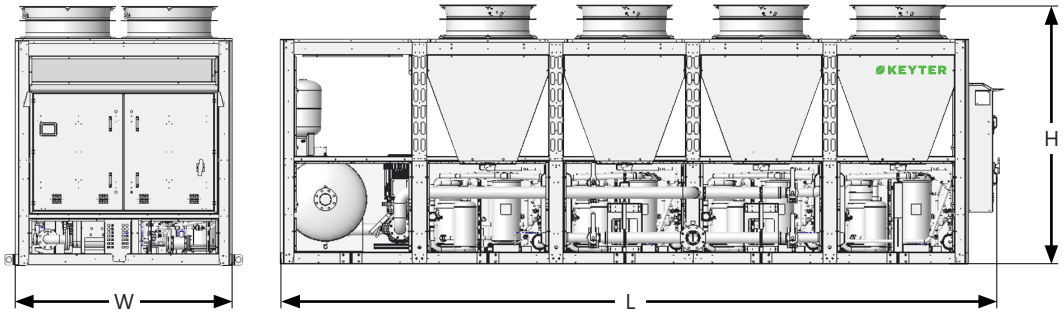
Series 2 H



Series 3 H



Series 4 H



Dimensions KWP-C / KWP-M (Bodywork H) (mm)				
	Series 1	**Series 2**	**Series 3**	**Series 4**
Bodywork	**H**	**H**	**H**	**H**
L	3830	4300	5630	7095
W	1100	2100	2100	2100
H	2650	2530	2530	2530

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Air-to-water heat pumps for cold climates

227-583 kW 239-611 kW

Multi-Scroll EC heat recovery

HEAT PUMP FOR COLD CLIMATES UNTIL -15°C FULLY OPERATIVE

Wide operating range with high efficiency and extended operating limits, functioning down to -15ºC outdoor temperature at full load.

Partial heat recovery systems to support domestic hot water (DHW) production.

Water Free Cooling System for Free Cooling

Adaptation and Environment

- Reduced refrigerant charge with low GWP R-454B, minimizing the CO_2 footprint (77% lower GWP than R-410A and 31% lower than R-32).
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Versions with a hydraulic group and integrated buffer tank to reduce the frequency of compressor start-ups and shutdowns.

Energy Efficiency

- High energy efficiency at partial and full loads, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption.
- Units with a hydraulic group can incorporate high-performance electronic pumps.

Codification:

KWNA | | R N S3C

Series | Size | Power

Operating mode
I - **Reversible heat pump**

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment / **P** - Version with hydraulic group / **H** - Version with hydraulic group and buffer tank

Power supply
3 - 400V/III/50Hz without neutral

Refrigerant
C - R454B / **W** - R410A / **B** - R452B

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R454B technical data

KWN-A model			**4250**	**4300**	**4350**	**4400**	**4450**	**6500**	**6550**	**6600**	**6650**
HEAT PUMP VERSION (I)											
Cooling mode	Nominal cooling capacity (1)	kW	227,2	251,8	329,3	359,2	388,8	493,7	523,8	553,0	582,7
		TR	65,0	72,0	94,0	102,5	111,0	140,5	149,0	157,5	166,0
		kBTU/h	780	864	1128	1230	1332	1686	1788	1890	1992
	Absorbed power (2)	kW	60,3	68,5	98,2	109,7	121,5	147,5	159,1	171,0	182,4
	EER (3)	kW/kW	3,77	3,68	3,35	3,28	3,20	3,35	3,29	3,23	3,20
			12,86	12,55	11,44	11,17	10,92	11,42	11,23	11,04	10,90
	SEER (4)	kWh/kWh	5,7	5,6	5,4	5,4	5,3	5,5	5,4	5,4	5,4
	ηs,c (5)	%	223,1%	219,4%	214,9%	212,2%	209,2%	216,0%	213,9%	212,9%	212,0%
	SEPR (7°C) (6)	kWh/kWh	8,31	7,89	7,55	7,32	7,10	7,58	7,38	7,19	7,10
	SEPR (-8°C) (6)	kWh/kWh	5,54	5,26	5,05	4,77	4,66	5,15	5,06	4,83	4,64
	IPLV	kW/TR	0,47	0,48	0,49	0,50	0,50	0,49	0,49	0,50	0,50
	IPLV	kBtu/kWh	24,78	24,36	23,85	23,54	23,19	23,97	23,73	23,62	23,51
Heating mode	Heating power (8)	kW	238,6	265,7	353,5	387,0	420,6	530,2	563,8	597,3	630,9
	Absorbed power (2)	kW	66,4	73,7	99,3	108,5	117,5	149,0	158,4	167,4	176,2
	COP (3)	kW/kW	3,60	3,61	3,56	3,57	3,58	3,56	3,56	3,57	3,58
	SCOP average (4)	kWh/kWh	4,2	4,1	4,1	4,0	3,9	4,1	4,1	4,0	4,0
	ηs,h average (5)	%	163,0%	162,1%	159,1%	157,3%	154,8%	161,1%	160,0%	158,2%	157,0%
TECHNICAL SPECIFICATIONS											
Power supply			400V / III / 50Hz without neutral								
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 531								
	No. of refrig. circuits / compressors		2/6	2/6	2/6	2/6	2/6	3/9	3/9	3/9	3/9
	No. power stages		6	6	6	6	6	9	9	9	9
Hydraulic circuit	Indoor water flow rate	m^3/h	39,1	43,4	56,7	61,9	67,0	85,0	90,2	95,3	100,4
	Type of heat exchanger		Stainless steel plate heat exchanger								
	Hydraulic connections Ø		DN 80	DN 80	DN100	DN100	DN 100	DN 125	DN 125	DN 125	DN 125
	Buffer tank capacity (H)	liters	725	725	725	725	725	725	725	725	725
Outdoor fan	Outdoor air flow rate	m^3/h	120000	120000	140000	140000	140000	210000	210000	210000	210000
	Number of fans		8	8	8	8	8	12	12	12	12
	Ø and Type of fan		Axial 800 EC								
Sound pressure level of the equipment (Lp10) (9)		dB(A)	53	55	59	59	59	61	61	61	61
Weights (S version)	Empty weight	kg	4023	4038	4293	4302	4311	6440	6449	6458	6467
	In-service weight	kg	4054	4078	4344	4366	4388	6516	6538	6561	6583

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7°C and an outdoor air temperature of 35°C. Capacities calculated with a plate heat exchanger fouling factor of 0.43·10^{-4} (m^2·K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the Seasonal Coefficient of Performance (SCOP) and the Seasonal Energy Efficiency (ηs,h) are calculated for intermediate temperature applications and moderate climate conditions.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7°C) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8°C) in compliance with EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Nominal heating power for an inlet/outlet water temperature of 40/45°C and an outdoor air temperature of 7°C DB/6°C WB. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2 · K / W).
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

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range specification

General characteristics

		KWNA
Refrigerant	Refrigerant R454B	✓
	Equipment with refrigerant charge	✓
	R452B or R410A refrigerants	●
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Equipment without paneling	✓
	Compressor encapsulation (1)	●
	Perimeter enclosure of the unit	●
	Closure of the lower panels of the hydraulic version (H) (H version)	●
	Top enclosure for the hydraulic version H (H version)	●
	Anti-vibration supplements	●
Compressors	Trio multiscroll technology	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
Expansion valves	Electronic expansion valves	✓

Fans

Outdoor fans	EC technology axial fans	✓
	Condensing pressure control	✓
	Internal nozzles	✓
	Curved external nozzles (Silent ring)	●
	AxiTop diffusers for axial fans	●
	High-performance EC axial fans	●
	EC plug-fan radial fans	●

Heat exchangers

Coils	Cu tube and Al fin coils	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength Cu tubes / Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Refrigerant-to-water heat exchanger, AISI 316L stainless steel plates, brazed with copper and thermally insulated	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix	●

Energy (2)

Energy recovery	Partial or total recovery of condensation energy for domestic hot water (DHW) (total recovery in KWN-A is only possible in series 2)	●
	Pump in the condensation heat recovery circuit	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	●

✓ Included as standard
● Optional
- Not applicable

(1) Option also available with insulation.
(2) Some options may require a chassis change; please contact us for details.

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range specification

KEYTER

Hydraulic (2)

		KWNA
Pumps (versions P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓
	Single pump with high pressure available (15-20 mH_2O)	●
	Single pump with very high pressure available (25-30 mH_2O)	●
	Pump with variable speed drive	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●
	Independent module with 200 liters / 375 liters / 725 liters + buffer tank available Electrical resistances	●

Installation

Protection grilles	Coil protection grille	●
	Bird-proof protection grille at the base of the equipment	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz without neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-freeze protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

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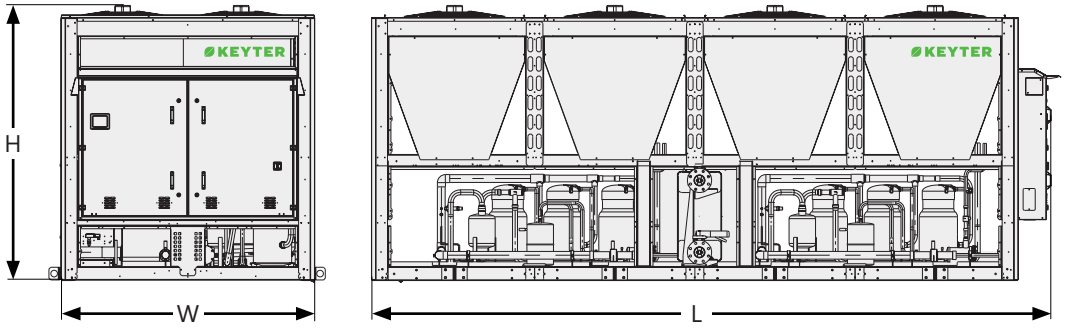
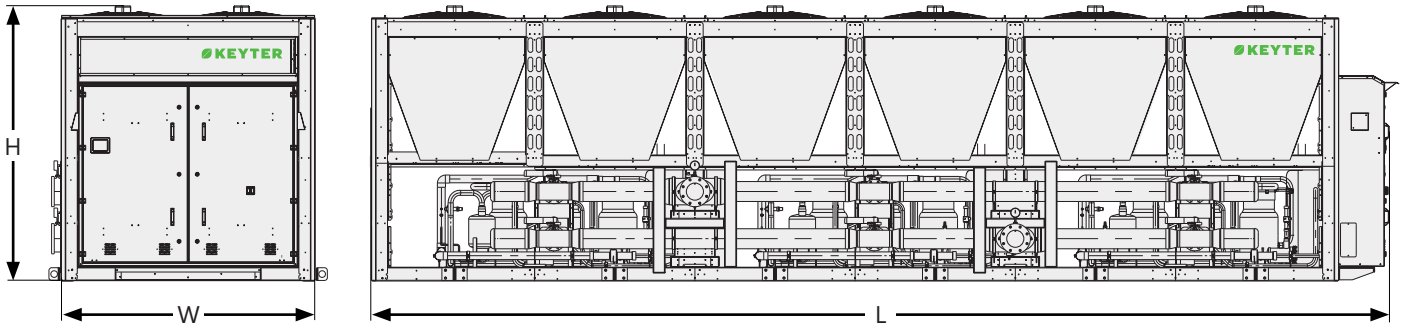
dimensions

Series 4XXX S



Series 6XXX S



Dimensions for Version (S) and version with Hydraulic Group (P) (mm)		
	Series 4	**Series 6**
L	5630	8420
W	2100	2100
H	2280	2280

Dimensions for Version with Hydraulic Group and Buffer Tank (H) (mm)		
	Series 4	**Series 6**
L	6955	9605
W	2100	2100
H	2280	2280

Some options require changes to the equipment dimensions. To know the dimensions of each series with the different available options, please contact us.

argia

Air-to-water heat pumps
for mild climates

27-107 kW 29-116 kW

Multi-Scroll EC heat recovery HT

Adaptation and Environment

- Optimized design of high-performance air-to-water heat pump for warm climates and moderate conditions.
- Equipment with operating range for supplying water at high temperatures up to +70 °C.
- Hot water supply at temperatures above 60°C with outdoor temperatures down to 5°C.
- Available with plate heat exchangers or with shell and tube heat exchangers.

Energy Efficiency

- High energy efficiency at both partial and full loads, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic fans and electronic expansion valve for minimal energy consumption.
- Partial recovery system that utilizes residual condensing heat to warm water for domestic hot water (DHW) or industrial applications.

Codification:

KWHA | | | I H S4Y
Series | Size | Power

Operating mode
I - Reversible heat pump
Q - Heating only

Version - Compressor Type
H - High-temperature scroll compressor

Hydraulic version
S - Standard equipment
P - Version with hydraulic group
H - Version with hydraulic group and buffer tank

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
B - R513A / **Y -** R134a

Decarbonize today, breathe tomorrow

argia

range specification

		KWHA
General characteristics		
Refrigerants	Refrigerant R134a	✓
	Refrigerant R513A	●
	Equipment with refrigerant charge	✓
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Fully enclosed lower sheet metal compartment	✓
	Anti-vibration supplements	●
Compressors	Tandem Multiscroll technology	✓
	Compressor anti-vibration mounts	✓
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
Expansion valves	Electronic expansion valves	✓
Fans		
Outdoor fans	EC technology axial fans	✓
	Curved external nozzles (silent ring)	✓
	AC axial fans with variable speed drive	●
	AxiTop diffusers for axial fans (Only available with EC fans)	●
	High-performance EC axial fans	●
	EC plug-fan radial fans	●
Heat exchangers (*)		
Coils	Cu tube and Al fin coils	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength Cu tubes / Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Freon-water heat exchanger, stainless steel AISI 316L plates, copper-welded and thermally insulated	✓
	Shell-and-tube heat exchanger	●
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix	●
Energy (*)		
Energy recovery	Partial or total condensation energy recovery for domestic hot water (DHW) (availability depending on model and chassis)	●
	Pump in the condensation heat recovery circuit	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	●
Hydraulic (*)		
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓
	Single pump with high pressure available (15-20 mH_2O)	●
	Single pump, very high available pressure (25-30 mH_2O)	●
	Pump with variable speed drive	●
	Reserve pump (standard available pressure, high pressure, and very high pressure)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low-temperature kit for operation with water outlet temperature < 0ºC	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the unit (S version)	●
	Independent module with available buffer tank of 200 liters / 375 liters / 725 liters + electric heaters	●

✓ Standard manufacturing
● Optional manufacturing available
- Not available

(*) Some options may require changes to the equipment dimensions; please consult us.

Installation

Control

		KWHA
Outdoor coil	Coils protection grille	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Electronic control and communication	Programmable AQUAMATIX electronic control	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-freeze protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	●
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

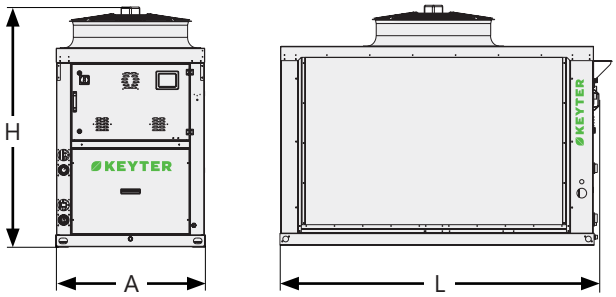
argia
technical data

Model KWHA			**1035**	**1045**	**1055**	**2080**	**2090**	**2105**
Mode Q								
R513A	Heating power (8)	kW	36,9	44,9	51,8	79,6	89,8	103,4
	Absorbed power (2)	kW	13,4	16,4	18,8	27,7	32,8	37,7
Heating Mode	COP (3)	kW/kW	2,5	2,47	2,52	2,55	2,46	2,50
	SCOP average (5)	kWh/kWh	3,20	3,2	3,2	3,2	3,1	3,1
	ηs,h average (5)(6)	%	125,0%	123,5%	123,1%	124,8%	122,6%	121,2%
Mode I								
	Nominal cooling capacity (1)	kW	33,3	39,7	47,3	70,5	83,5	98,6
Cooling mode	Absorbed power (2)	kW	13,0	15,3	18,7	26,1	31,0	37,8
	EER (3)	kW/kW	2,56	2,60	2,53	2,70	2,69	2,61
	Heating power (8)	kW	38,4	47,3	53,1	87,2	94,5	106,4
	Absorbed power (2)	kW	10,3	12,3	15,0	21,3	24,5	29,9
"Heating Mode 30/35"	COP (3)	kW/kW	3,2	3,36	3,17	3,51	3,36	3,18
	SCOP average (4)	kWh/kWh	3,60	3,7	3,4	3,7	3,7	3,4
	ηs,h average (4)(6)	%	139,3%	143,4%	134,3%	143,7%	143,4%	132,9%
	Heating power (8)	kW	36,6	45,0	51,6	78,3	89,9	103,3
	Absorbed power (2)	kW	14,2	17,2	20,0	29,2	34,4	40,1
"Heating Mode 47/55"	COP (3)	kW/kW	2,3	2,37	2,36	2,39	2,37	2,37
	SCOP average (5)	kWh/kWh	2,90	3,0	2,9	3,1	3,0	2,9
	ηs,h average (5)(6)	%	113,4%	115,2%	113,5%	119,2%	118,2%	114,6%
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50Hz with neutral					
	Refrigerant fluid / GWP	kg CO_2	R513A/573					
Refrigeration circuit	No. of refrig. circuits / compressors		1/2	1/2	1/2	2/4	2/4	2/4
	No. power stages		2	2	2	4	4	4
	Indoor water flow rate (9)	m^3/h	4,0	4,9	5,6	8,5	9,8	11,3
Hydraulic circuit	Type of heat exchanger		Stainless steel plate heat exchanger					
	Hydraulic connections Ø		1 1/2"	2"	2"	DN80	DN80	DN80
	Outdoor air flow rate	m^3/h	21000	21000	21000	42000	42000	42000
Outdoor fan	Number of fans		1	1	1	2	2	2
	Ø and Type of fan	mm	Axial 800 EC					
Sound pressure level of the equipment (Lp10) (9)		dB(A)	51	51	54	54	54	57
Weights	Empty weight (S version)	kg	502	595	640	1299	1492	1643

Modelo KWHA			**1035**	**1045**	**1055**	**2080**	**2090**	**2105**
Modo Q								
R134a	Heating power (8)	kW	34,7	42,3	48,9	74,7	84,7	97,8
	Absorbed power (2)	kW	13,1	15,8	18,5	26,9	31,4	36,9
Heating mode	COP (3)	kW/kW	2,4	2,41	2,41	2,45	2,42	2,41
	SCOP average (4)	kWh/kWh	3,00	3,0	3,0	3,1	3,0	3,0
	ηs,h average (4)(6)	%	118,4%	118,5%	117,9%	119,0%	118,7%	116,9%
Mode I								
	Nominal cooling capacity (1)	kW	30,1	36,2	43,2	63,7	76,7	90,5
Cooling mode	Absorbed power (2)	kW	12,7	14,7	18,1	25,3	29,8	36,5
	EER (3)	kW/kW	2,38	2,46	2,38	2,52	2,58	2,48
	Heating power (8)	kW	34,7	42,8	48,0	79,3	85,5	95,9
	Absorbed power (2)	kW	9,9	11,9	14,2	20,4	23,6	28,2
"Heating Mode 30/35"	COP (3)	kW/kW	3,0	3,13	3,01	3,31	3,14	3,02
	SCOP average (4)	kWh/kWh	3,30	3,4	3,2	3,5	3,4	3,2
	ηs,h average (4)(6)	%	130,2%	133,5%	126,5%	136,5%	134,9%	125,9%
	Heating power (8)	kW	34,5	42,3	49,0	74,1	84,6	97,8
	Absorbed power (2)	kW	14,0	16,8	19,8	28,5	33,5	39,5
"Heating Mode 47/55"	COP (3)	kW/kW	2,2	2,28	2,26	2,31	2,28	2,27
	SCOP average (4)	kWh/kWh	2,80	2,8	2,8	2,9	2,9	2,8
		%	107,3%	108,7%	108,6%	114,0%	112,1%	109,9%
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50Hz with neutral					
	Refrigerant fluid / GWP	kg CO_2	R134a/1345					
Refrigeration circuit	No. of refrig. circuits / compressors		1/2	1/2	1/2	2/4	2/4	2/4
	No. power stages		2	2	2	4	4	4
	Indoor water flow rate (9)	m^3/h	3,8	4,6	5,3	8,1	9,2	10,7
Hydraulic circuit	Type of heat exchanger		Stainless steel plate heat exchanger					
	Hydraulic connections Ø		1 1/2"	2"	2"	DN80	DN80	DN80
	Outdoor air flow rate	m^3/h	21000	21000	21000	42000	42000	42000
Outdoor fan	Number of fans		1	1	1	2	2	2
	Ø and Type of fan	mm	Axial 800 EC					
Presión sonora del equipo (Lp10) (10)		dB(A)	51	51	54	54	54	57
Weights	Empty weight (S version)	kg	614	619	660	1523	1540	1683

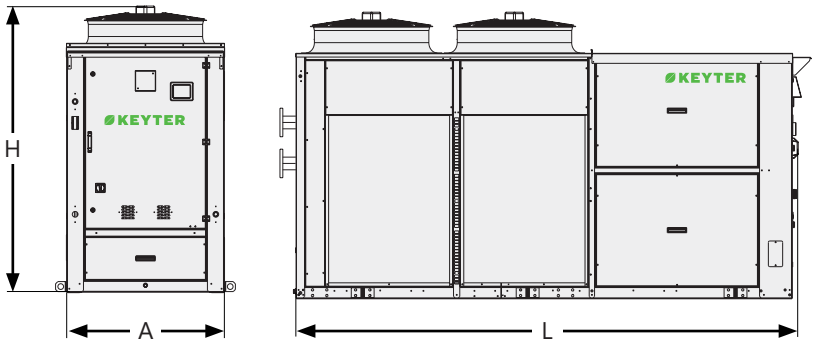
argia
dimensions

Serie 1 S/P

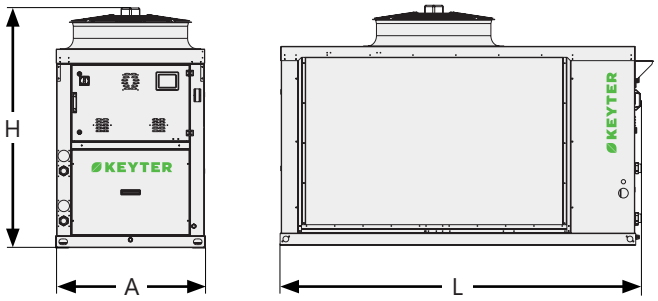


Dimensions Versions S and P (mm)	Series 1	Series 2
L	2235	3515
W	1050	1100
H	1695	2020

Serie 2 S/P

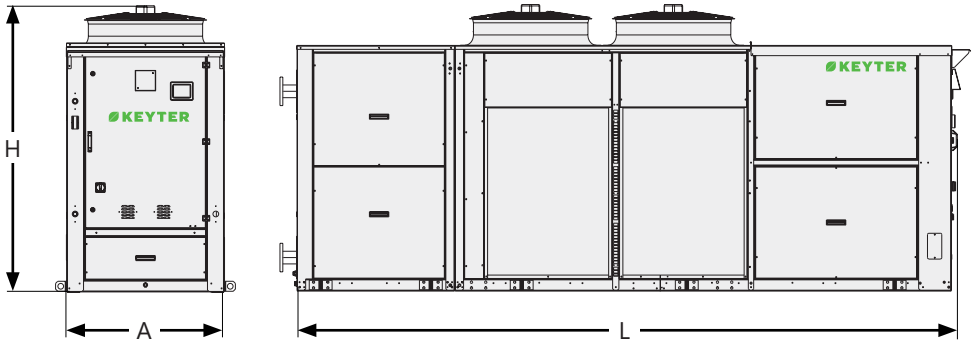


Serie 1 H



Dimensions Version H (mm)	Series 1	Series 2
L	2525	4625
W	1050	1100
H	1695	2020

Serie 2 H



(1) Nominal cooling capacity for water inlet/outlet temperatures of 12/7°C and outdoor air temperature of 35°C. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).

(2) Nominal power input by compressors and outdoor fans.

(3) EER and COP calculated according to standard EN 14511:2022.

(4) Seasonal efficiencies calculated according to EN 14825:2022. In heating mode, Seasonal Coefficient of Performance (SCOP) and Seasonal space heating energy efficiency (ηs,h) calculated for low-temperature applications in a medium climate.

(5) Seasonal efficiencies calculated according to EN 14825:2022. In heating mode, Seasonal Coefficient of Performance (SCOP) and Seasonal space heating energy efficiency (ηs,h) calculated for medium-temperature applications in a medium climate.

(6) ηs,c values in compliance with Ecodesign Regulation EU 2016/2281 for comfort applications. ηs,h values in accordance with Ecodesign Regulation EU 813/2013 for heat pump applications.

(7) Nominal heating capacity for water inlet/outlet temperatures of 30/35°C and outdoor air temperature of 7°C DB / 6°C WB. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).

(8) Nominal heating capacity for water inlet/outlet temperatures of 47/55°C and outdoor air temperature of 7°C DB / 6°C WB. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2·K/W).

(9) Flow rate calculated using heating capacity (6).

(10) Sound pressure level in dB(A) measured in free field conditions, at 10 m distance from the source with directivity factor 1.

oneida eco q

High-temp water-to-water heat pumps (up to 85 °C)

283-1683 kW

Screw · Inverter · heat recovery · HT

Adaptation and Environment

- High-performance units equipped with multi-tube heat exchangers that allow flexible configuration for centralized installations with a closed-loop water system and geothermal energy.
- Reduced refrigerant charge with low-GWP HFO R-1234ze, minimizing the CO_2 footprint (99.9% lower GWP than R-410A and 99.5% lower than R-32).
- Available versions with hydraulic group.
- Water production up to 85ºC.
- Maximum accessibility and easy maintenance through removable panels.

Energy Efficiency

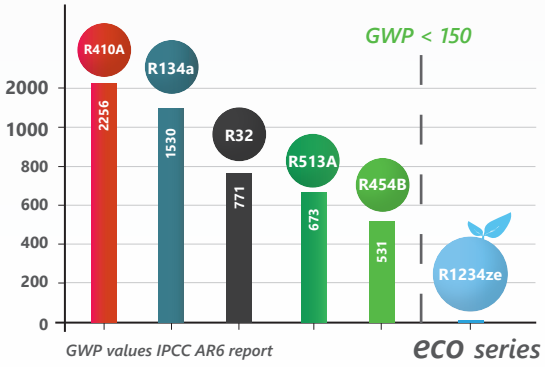
- High energy efficiency in both partial and full load, reducing operating costs.
- Inverter screw compressor for maximum energy efficiency.
- Electronic expansion valve for minimum energy consumption.
- Units with a hydraulic group can incorporate high-efficiency electronic pumps.

Decarbonize today, breathe tomorrow

Reduction of fossil fuels and CO_2 emissions with efficient renewable solutions.

HT Heating-only version for supplying water at high temperatures up to 85ºC.

Refrigerants - GWP



Scan the QR code

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Water-to-water chillers and heat pumps

26-302 kW 30-353 kW

Multi-Scroll

heat recovery

Adaptation and Environment

- High-performance units equipped with plate heat exchangers that allow flexible configuration for centralized installations with a closed water loop and geothermal systems.
- Reduced refrigerant charge of low-GWP R-454B, minimizing the CO_2 footprint (-77% less GWP than R-410A and -31% less than R-32).
- Available versions with hydraulic group.
- Water production up to 60ºC
- Maximum accessibility and easy maintenance through removable panels.

Energy Efficiency

- High energy efficiency in both partial and full load, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Units available with inverter compressors as an option for maximum energy efficiency.
- Electronic expansion valve for minimum energy consumption.
- Units with a hydraulic group can incorporate high-efficiency electronic pumps.

Codification:

KZV | | **C N S4C**

Series | Size | Power

Operating mode
I - Reversible heat pump
R - Cooling only
Q - Heating only
C - Reversible in the water circuit, not reversible in refrigeration.

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment
P - Hydraulic group in the indoor unit (evaporator)
W - Hydraulic group in the outdoor unit (condenser)
B - Hydraulic group in the indoor unit (evaporator) and in the outdoor unit (condenser)

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
W - R410A / **B -** R452B / **C -** R454B

KNV | | **R N S4W**

Series | Size | Power

Operating mode
R - Cooling only

KNV series without condenser for split version with remote condenser.

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R454B technical data

KZV model			1025	1030	1035	1040	1045	2035	2040	2045	2050	2060	2070
COOLING MODE													
Cooling capacities	Nominal cooling capacity (1)	kW	26,3	30,0	34,2	38,4	45,0	34,3	38,4	45,0	52,9	60,9	68,5
		TR	7,5	9,0	10,0	11,0	13,0	10,0	11,0	13,0	15,5	17,5	19,5
		kBTU/h	90	108	120	132	156	120	132	156	186	210	234
	Absorbed power (2)	kW	5,4	6,1	6,9	7,8	8,9	6,9	7,8	8,9	10,8	12,1	14,2
	EER (3)	kW/kW	4,92	4,92	4,92	4,93	5,04	4,94	4,93	5,04	4,90	5,03	4,83
		BTU/(h*W)	16,82	17,71	17,28	16,94	17,49	17,28	16,94	17,49	17,23	17,34	16,51
	SEER (4)	kWh/kWh	5,6	5,6	5,6	5,6	5,7	5,6	5,6	5,8	5,5	5,7	5,5
	ηs,c (5)	%	214,3%	215,1%	217,1%	214,8%	221,0%	217,7%	217,3%	223,5%	212,9%	219,5%	212,7%
HEATING MODE													
Heating mode	Heating power (6)	kW	30,8	35,1	39,9	44,8	52,3	40,1	44,8	52,3	61,8	70,9	80,3
	Absorbed power (2)	kW	5,3	6,1	6,9	7,8	8,9	6,9	7,8	8,9	10,8	12,1	14,2
	COP (3)	kW/kW	5,76	5,76	5,75	5,77	5,89	5,78	5,77	5,87	5,74	5,86	5,67
	SCOP average climate, 30-35°C (4)	kWh/kWh	4,7	4,7	4,7	4,8	4,9	5,7	5,7	5,8	5,7	5,9	5,7
	ηs,h average climate, 30-35°C (5)	%	178,4%	180,4%	180,4%	182,4%	187,3%	218,2%	219,2%	224,1%	220,2%	226,1%	219,2%
TECHNICAL SPECIFICATIONS													
Power supply			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	Compressor type		Hermetic Scroll in Single					Hermetic Scroll in Tandem					
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2	1/2	1/2
	No. power stages		1	1	1	1	1	2	2	2	2	2	2
Hydraulic circuit evaporator side	Water flow rate	m^3/h	4,5	5,2	5,9	6,6	7,7	5,9	6,6	7,7	9,1	10,5	11,8
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Hydraulic circuit condenser side	Water flow rate	m^3/h	5,3	6,0	6,9	7,7	9,0	6,9	7,7	9,0	10,6	12,2	13,8
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Sound pressure level of the equipment (Lp10) (7)		dB(A)	37	37	37	39	41	38,1	39,8	41,8	39,1	38,9	40,3
Empty weight		kg	273	273	276	282	288	425	429	474	486	490	502

(1) Nominal cooling capacity for an evaporator inlet/outlet temperature of 12/7°C and a condenser inlet/outlet temperature of 30/35°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Rated power absorbed by compressors.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for low-temperature applications and average climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Nominal heating capacity for a condenser inlet/outlet temperature of 30/35°C and an evaporator inlet/outlet temperature of 10/7°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(7) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

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R454B technical data

KEYTER

R454B

ErP 2021

KZV model			2080	2090	2105	2120	2135	2150	3160	3180	3210	3240	3300
COOLING MODE													
Cooling capacities	Nominal cooling capacity (1)	kW	81,3	90,4	103,4	118,0	129,1	147,1	158,3	181,0	201,3	233,6	301,1
		TR	23,5	26,0	29,5	34,0	37,0	42,0	45,5	51,5	57,5	66,5	86,0
		kBTU/h	282	312	354	408	444	504	546	618	690	798	1032
	Absorbed power (2)	kW	15,3	18,1	20,7	23,6	26,4	29,7	32,9	37,2	42,7	48,3	62,1
	EER (3)	kW/kW	5,31	4,99	4,98	5,01	4,90	4,96	4,81	4,87	4,71	4,84	4,85
		BTU/(h*W)	18,43	17,22	17,07	17,32	16,83	16,99	16,57	16,63	16,14	16,51	16,63
	SEER (4)	kWh/kWh	6,0	5,7	5,6	5,6	5,5	5,6	5,5	5,5	5,5	5,5	5,5
	ηs,c (5)	%	232,1%	218,2%	217,2%	217,7%	212,5%	215,2%	213,9%	212,6%	210,8%	212,9%	211,8%
MODO CALEFACCIÓN													
Heating mode	Heating power (6)	kW	93,8	105,4	120,5	137,3	151,0	171,6	185,8	211,9	237,0	273,6	352,7
	Absorbed power (2)	kW	15,3	18,1	20,7	23,5	26,3	29,6	32,8	37,1	42,6	48,2	61,9
	COP (3)	kW/kW	6,15	5,83	5,82	5,85	5,74	5,80	5,66	5,72	5,56	5,68	5,70
	SCOP average climate, 30-35ºC (4)	kWh/kWh	6,0	5,7	5,7	5,8	5,7	5,7	6,1	6,2	6,0	6,2	6,2
	ηs,h average climate, 30-35ºC (5)	%	232,0%	221,1%	221,1%	222,1%	218,2%	221,2%	237,1%	240,0%	233,1%	238,1%	240,1%
TECHNICAL SPECIFICATIONS													
Power supply			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	Compressor type		Hermetic Scroll in Tandem		Hermetic Scroll in Single				Hermetic Scroll in Tandem				
	No. of refrig. circuits / compressors		1/2	1/2	2/2	2/2	2/2	2/2	2/4	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	2	2	2	4	4	4	4	4
Hydraulic circuit evaporator side	Water flow rate	m^3/h	14,0	15,6	17,8	20,3	22,2	25,3	27,3	31,2	34,7	40,2	51,9
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VITAULIC 3"				
Hydraulic circuit condenser side	Water flow rate	m^3/h	16,2	18,1	20,8	23,7	26,0	29,6	32,0	36,5	40,8	47,1	60,7
	Type of heat exchanger		brazed stainless steel plate heat exchanger										
	Ø hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VITAULIC 3"				
Sound pressure level of the equipment (Lp10) (7)		dB(A)	40,0	44,7	44,9	46,0	45,8	47,5	46,5	48,6	50,9	51,8	52,7
Empty weight		kg	512	569	591	626	644	661	1053	1065	1143	1226	1240

(1) Nominal cooling capacity for an evaporator inlet/outlet temperature of 12/7ºC and a condenser inlet/outlet temperature of 30/35ºC. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Rated power absorbed by compressors.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated in accordance with EN 14825:2022. For heating, the seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) are calculated for low-temperature applications and average climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Nominal heating capacity for a condenser inlet/outlet temperature of 30/35ºC and an evaporator inlet/outlet temperature of 10/7ºC. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(7) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

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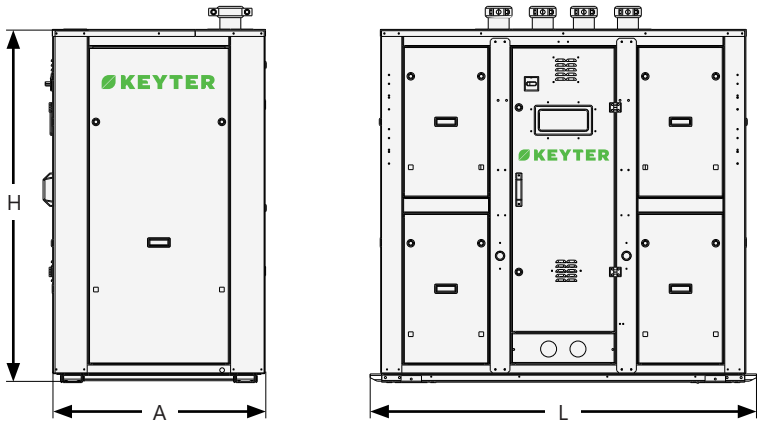
range specification

		KZV
General characteristics		
Refrigerant	R454B	✓
	Equipment with refrigerant charge	✓
	Refrigerants R452B or R410A	●
	Leak detection	●
Bodywork	Self-supporting chassis/cabinet in galvanized steel with a polyester thermosetting paint finish cured in an oven, without paneling	✓
	Custom color to meet installation requirements	●
	Perimeter enclosure of the equipment with panels	✓
	Acoustic insulation of panels (10 mm)	●
	Acoustic insulation of panels (20 mm)	●
	Anti-vibration mounts	●
Compressors	Multiscroll technology in single/tandem configuration	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	High-performance original manufacturer acoustic insulation jacket	●
Expansion valves	Electronic expansion valve	✓
	Thermostatic expansion valve (for R410A only)	●
Exchangers		
Exchangers	Stainless steel plate heat exchanger	✓
Hydraulic		
Hydraulic components	Flexible inlet and outlet water connections	●
	VICTAULIC connections (standard in chassis 3)	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment	●
Installation		
Electrical power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (check available options)	●
Packaging	Packaging for sea transport	●
Control		
Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety elements	Main switch in the electrical panel	✓
	Thermomagnetic protections for compressors	✓
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓
	Triple protection for the plate heat exchanger with water flow switch and antifreeze protections for water and refrigerant	✓
	Residual current circuit breakers	●
	EXCELLENT phase control relay, adds phase imbalance detection, overvoltage, and undervoltage protection	●
	Electric energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Electrical equipment design for high temperature	✓
	Forced ventilation of the electrical panel	●
	Tropicalized electrical panel	●
	Socket for general use	●
	Anti-freeze electrical heater in the electrical panel for low outdoor temperatures	●

✓ Standard manufacturing
● Optional manufacturing available
- Not available

Medea KZV dimensions:



Dimensions (mm) Versions S / P / W / B	Series 1	Series 2		Series 3
KZV models **KZVH models**	**All**	**KZV2035-KZV2120** **KZVH2035-KZVH2100**	**KZV2135-KZV2150** **-**	**All**
L	900	1554	1554	2550
W	800	800	900	800
H	1267	1500	1500	1500

* Dimensions valid for models below 2090 with hydraulic versions P, W, and B.

Electronic control:

MEDEA units are equipped as standard with the SIEMENS programmable electronic controller AQUAMATIX, specifically developed for managing air-to-water and water-to-water units, with a Climatix HMI user terminal.

Hydraulic versions:

KZV - Standard Version (S)
Unit without hydraulic group.

The KZV units feature triple protection for the plate heat exchanger, including a flow switch, water anti-freeze protection, and freon anti-freeze protection as standard.

KZV - Version with hydraulic group (P)

Hydraulic group composed of a circulation pump suitable for water or glycolized water down to 0°C, expansion tank, purge and shut-off valves, pressure gauges, and flow switch.

For temperatures below 0°C, the low-temperature kit is required, which includes a pump replacement and adds electric heaters to the hydraulic components for operation with water down to -10°C.

The hydraulic group is integrated into the same chassis as the standard version for all units up to model 2090. For higher models, the hydraulic group is supplied as a separate module.

langia

Water-to-water chillers and heat pumps

183-713 kW 202-806 kW

Multi-Scroll

heat recovery

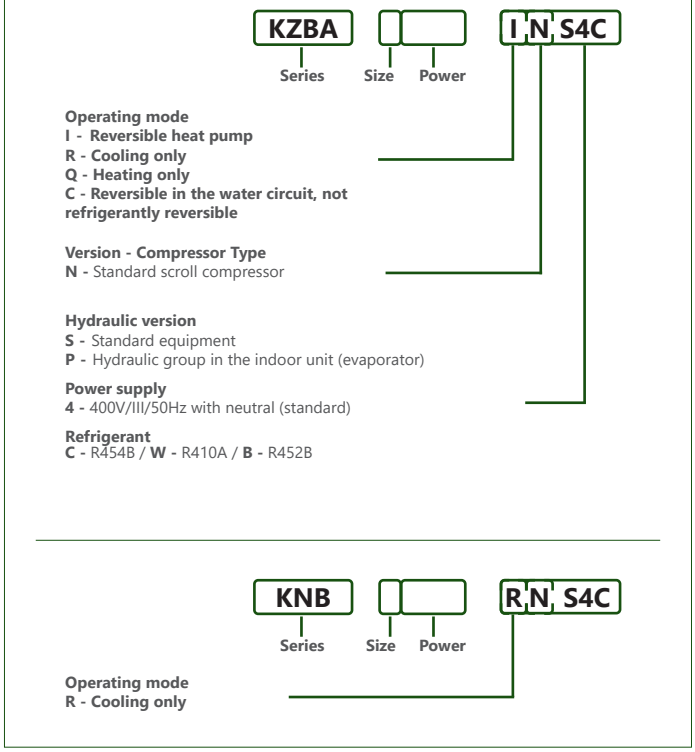
Adaptation and Environment

- High-performance units equipped with plate heat exchangers that allow for flexible configurations for centralized installations with closed water loops and geothermal systems.
- Reduced refrigerant charge with low-GWP R-454B, minimizing the CO_2 footprint (-77% lower GWP than R-410A and -31% lower than R-32).
- Available versions with hydraulic group.
- Water production up to 60ºC.
- Maximum accessibility and easy maintenance through removable panels.

Energy Efficiency

- High energy efficiency in both partial and full load, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Units available with inverter compressors as an option for maximum energy efficiency.
- Electronic expansion valve for minimum energy consumption.
- Units with a hydraulic group can incorporate high-efficiency electronic pumps.

Codification:



langia

R454B technical data

KEYTER

R454B | ErP 2021

KZBA model			1180	1225	2240	2270	2300	2340	2380	3440	3480	4510	4570	4640	4720
COOLING MODE															
Cooling	Nominal cooling capacity (1)	kW	183,4	221,4	249,2	276,1	302,4	336,9	371,5	438,2	491,2	508,9	560,4	636,6	712,4
		TR	52,5	63,0	71,0	79,0	86,0	96,0	106,0	125,0	140,0	145,0	159,5	181,5	203,0
		kBTU/h	630	756	852	948	1032	1152	1272	1500	1680	1740	1914	2178	2436
	Absorbed power (2)	kW	36,4	44,3	46,6	51,4	56,5	65,0	73,4	80,1	89,6	96,5	108,9	124,2	139,5
	EER (3)	kW/kW	4,87	4,80	5,21	5,22	5,20	5,02	4,89	5,33	5,33	5,13	4,99	4,94	4,89
		BTU/(h*W)	17,32	17,07	18,29	18,43	18,28	17,71	17,32	18,73	18,74	18,04	17,57	17,54	17,46
	SEER (4)	kWh/kWh	7,3	6,8	7,4	7,5	7,1	7,0	6,7	7,8	7,6	7,7	7,8	6,9	6,8
	ηs,c (5)	%	285,8	264,6	288,9	293,9	277,8	271,7	260,6	303,0	294,9	299,0	304,0	269,7	264,6
HEATING MODE															
Heating	Heating power (6)	kW	201,6	245,8	272,7	302,6	333,1	374,9	416,8	477,7	538,3	566,6	625,4	719,7	805,5
	Absorbed power (2)	kW	37,1	45,9	48,8	53,6	58,4	66,4	74,4	83,9	93,5	104,4	111,5	126,3	141,2
	COP (3)	kW/kW	5,17	5,05	5,40	5,44	5,47	5,39	5,31	5,49	5,52	5,21	5,34	5,37	5,32
	SCOP average climate, 30-35ºC (4)	kWh/kWh	5,9	5,8	6,3	6,5	6,4	6,2	6,3	6,7	6,6	6,9	6,9	6,7	6,7
	ηs,h average climate, 30-35ºC (5)	%	229,3	223,2	243,4	252,5	247,5	240,4	245,4	261,6	257,6	268,7	266,6	261,6	258,6
TECHNICAL SPECIFICATIONS															
Power supply			400V / III / 50HZ with neutral												
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466												
	Compressor type		Hermetic Scroll in Tandem												
	No. of refrig. circuits / compressors		1/3	1/3	2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/6	2/6	2/6	2/6
	No. power stages		3	3	4	4	4	4	4	4	4	6	6	6	6
Hydraulic circuit evaporator side	Water flow rate	m³/h	31,6	38,1	42,9	47,6	52,1	58,0	64,0	75,5	84,6	87,7	96,5	109,7	122,7
	Type of heat exchanger		stainless steel plate heat exchanger												
	Pressure losses	kPa	26,5	31,7	32,3	35,8	39,6	45,0	51,0	30,1	33,4	34,5	38,0	43,8	50,1
	Hydraulic connections Ø		DN80		DN100			DN125				DN150			
Hydraulic circuit condenser side	Water flow rate	m³/h	34,7	42,3	47,0	52,1	57,4	64,6	71,8	82,3	92,7	97,6	107,7	124,0	138,8
	Type of heat exchanger		stainless steel plate heat exchanger												
	Pressure losses	kPa	28,7	35,3	33,5	37,4	41,7	48,2	55,4	32,0	35,8	37,7	41,9	49,3	56,8
	Hydraulic connections Ø		DN80		DN100			DN125				DN150			
Sound pressure level of the equipment (Lp10) (7)		dB(A)	55	55	56	56	56	61	63	63	63	63	65	65	65
Weights	Empty weight I version	kg	1030	1039	1459	1478	1485	1624	1727	2109	2140	2545	2701	2747	2793

(1) Nominal cooling capacity for an evaporator inlet/outlet temperature of 12/7ºC and a condenser inlet/outlet temperature of 30/35ºC. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Rated power absorbed by compressors.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal Efficiencies calculated according to EN 14825:2020. In heating, seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (ηs,h) calculated for low-temperature applications and medium climate.
(5) ηs,c values in compliance with the Ecodesign Regulation EU 2016/2281 for Comfort applications. ηs,h values conform to ecodesign according to Regulation EU 813/2013 for heat pump applications.
(6) Nominal heating capacity for a condenser inlet/outlet temperature of 30/35ºC and an evaporator inlet/outlet temperature of 10/7ºC. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(7) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

Electronic control:

LANGIA units are equipped as standard with the SIEMENS programmable electronic controller AQUAMATIX, specifically developed for managing air-to-water and water-to-water units, with a Climatix HMI user terminal.

Hydraulic versions:

KZBA - Standard Version (S)
Unit without hydraulic group.

KZBA feature triple protection for the plate heat exchanger, as they come standard with a flow switch, anti-freeze protection for water, and anti-freeze protection for refrigerant.

KZBA - Version with hydraulic group (P)

Integrated hydraulic group consisting of a circulation pump suitable for water or glycol-water mixtures down to 0ºC, expansion vessel, purge and shut-off valves, pressure gauges, and a flow switch.

For water temperatures below 0ºC, a low-temperature kit is required. This kit involves changing the pump and adding electric heaters to hydraulic components for operation with water down to -10ºC.

langia

range specification

		KZBA
General characteristics		
Refrigerants	R454B	✓
	Equipment with refrigerant charge	✓
	Refrigerants R452B or R410A	●
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Perimeter enclosure of the equipment with panels	●
	Acoustic insulation of panels (10 mm)	●
	Acoustic insulation of panels (20 mm)	●
	Anti-vibration supplements	●
Compressors	Multiscroll technology in tandem or trio	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
Expansion valves	Electronic expansion valve	✓
	Thermostatic expansion valve (for R410A only)	●
Heat exchangers		
Heat exchangers	Stainless steel plate heat exchanger	✓
Hydraulic		
Hydraulic components	Flexible water inlet and outlet connections	●
	VICTAULIC connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment	●
Installation		
Power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●
Control		
Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety elements	Main switch in the electrical panel	✓
	Magnetic thermal protection for compressors	✓
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓
	Triple protection of the plate heat exchanger with water flow switch and anti-freeze protection for water and refrigerant	✓
	Differential switches	●
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Electric energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Design of electrical switchgear for high temperatures	✓
	Forced ventilation of the electrical panel	●
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

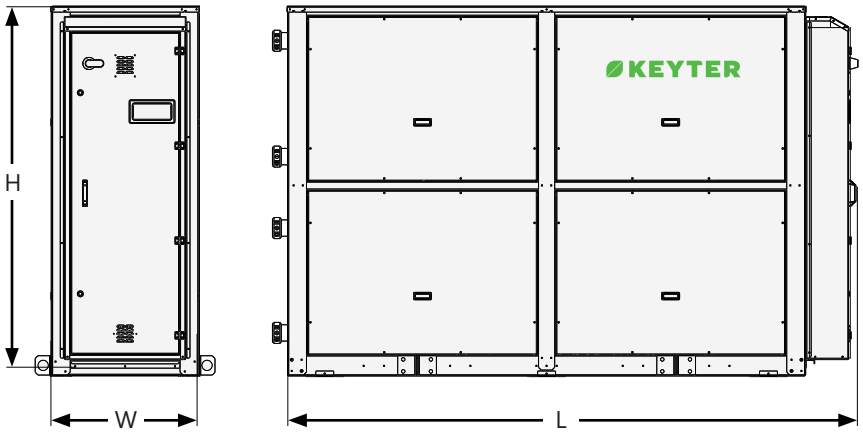
✓ Standard manufacturing
● Optional manufacturing available
- Not available

Standard unit without paneling

Options:

- Panelized equipment.
- Acoustic insulation jacket for compressors.
- Panels with acoustic insulation.
- Electrical panel on the long side of the unit (consult dimensions).
- Partial recovery of hot gases

Dimensions:



Dimensions Version S (mm)	Series 1	Series 2	Series 3		Series 4	
			R / Q	I	R / Q	I
L	2100	2800	3200	3200	3950	3950
W	800	800	800	1100	950	1300
H	1750	2000	2000	2000	2000	2000

medea maxima

High-temperature water-to-water heat pumps

74-289 kW

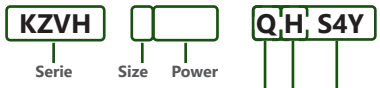
Adaptation and Environment

- High-performance units equipped with plate heat exchangers that allow a flexible configuration for heat recovery.
- Optimized design of high-performance water to water heat pumps for indoor installation.
- Production of high-temperature water up to 78ºC.
- Heating compressors designed to ensure maximum reliability and operation for producing hot water.
- Versions available with a hydraulic group.
- Maximum accessibility and easy maintenance through removable panels

Energy Efficiency

- High energy efficiency in both partial and full load, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic expansion valve for minimum energy consumption.
- Units with a hydraulic group can incorporate high-efficiency electronic pumps.

Codification:



Operating mode
Q - Heating only

Version - Compressor Type
H - High-temperature scroll compressor

Hydraulic version
S - Standard equipment
P - Hydraulic group in the indoor unit (evaporator)
W - Hydraulic group in the outdoor unit (condenser)
B - Hydraulic group in the indoor unit (evaporator) and in the outdoor unit (condenser)

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
T - R513A / **Y -** R134a

Decarbonize today, breathe tomorrow

Reduction of fossil fuels and CO_2 emissions with efficient renewable solutions.

medea maxima

R134a technical data

KZVH model			2035	2040	2050	2060	2080	2100	3120	3150
HEATING-ONLY VERSION (Q)										
Heating	Heating power (1)	kW	74,8	84,8	98,2	122,9	146,5	186,9	232,2	288,4
	Absorbed power (2)	kW	16,7	17,9	21,0	27,8	33,9	44,4	54,1	66,4
	COP (3)	kW/kW	4,5	4,7	4,7	4,4	4,3	4,2	4,3	4,3
	Heating power (4)	kW	31,5	37,8	43,4	53,8	65,2	85,4	106,0	131,1
	Absorbed power (5)	kW	11,5	12,4	14,4	18,7	22,9	29,4	36,6	43,7
	COP (3)	kW/kW	2,7	3,0	3,0	2,9	2,8	2,9	2,9	3,0
	SCOP (6)	kWh/kWh	4,2	4,6	4,5	4,5	4,4	4,5	4,5	4,5
	ηs,h (6) (7)	%	162%	174%	173%	170%	168%	172%	172%	173%
TECHNICAL SPECIFICATIONS										
Power supply			400 V/III/50 HZ with neutral							
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R134a/1300							
	Compressor type		Hermetic scroll							
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	1/2	1/2	2/2	2/2
	No. power stages		2	2	2	2	2	2	2	2
Hydraulic circuit condenser side	Water flow rate	m³/h	8,1	9,1	10,6	13,2	15,8	20,1	25,0	31,1
	Type of heat exchanger		brazed stainless steel plate heat exchanger							
	Ø hydraulic connections		1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	VICTAULIC 3"	
Sound pressure level of the equipment (Lp10) (8)		dB(A)	45	46	46	48	49	54	56	57
Empty weight		kg	486	512	522	526	540	724	1363	1449

(1) Heating capacity for an evaporator inlet/outlet temperature of 45/40°C and a condenser inlet/outlet temperature of 70/78°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(2) Power absorbed by compressors for an evaporator inlet/outlet temperature of 45/40°C and a condenser inlet/outlet temperature of 70/78°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(3) COP calculated according to standard EN 14511:2022.
(4) Heating capacity for an evaporator inlet/outlet temperature of 10/7°C and a condenser inlet/outlet temperature of 55/65°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(5) Power absorbed by compressors for an evaporator inlet/outlet temperature of 10/7°C and a condenser inlet/outlet temperature of 55/65°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K / W$).
(6) Seasonal efficiencies calculated according to EN 14825:2022. Seasonal coefficient of performance (SCOP) and seasonal energy efficiency of heating (Πs,h) calculated for medium-temperature applications (47/55°C) and medium climate.
(7) Values of Πs,h in accordance with eco-design requirements under Regulation (EU) 813/2013 for heat pump applications.
(8) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

Electronic Control:

MEDEA MAXIMA units are equipped as standard with the SIEMENS programmable electronic controller AQUAMATIX, specifically developed for managing air-to-water and water-to-water units, with a Climatix HMI user terminal.

Hydraulic Versions:

KZVH - Standard Version (S)
Unit without a hydraulic group.

KZVH units feature triple protection for the plate heat exchanger, as they include a flow switch, water anti-freeze protection, and Freon anti-freeze protection as standard.

KZVH - Version with Hydraulic Group (P)

Hydraulic group includes a circulation pump suitable for water or glycol-water mixtures down to 0°C, an expansion vessel, purge and shut-off valves, pressure gauges, and a flow switch.

For temperatures below 0°C, the low-temperature kit is required, which includes a pump replacement and adds electric heaters to hydraulic components for operation with water down to -10°C.

The hydraulic group is integrated into the same chassis as the standard version for all units up to model 2090. For larger models, the hydraulic group is supplied as a separate module.

medea maxima

range specifications

General characteristics

		KZVH
Refrigerant	R134a	✓
	Equipment with refrigerant charge	✓
	Leak detection	●
Bodywork	Self-supporting chassis/cabinet in galvanized steel with a polyester thermosetting paint finish cured in an oven, without paneling	✓
	Custom color to meet installation requirements	●
	Perimeter enclosure of the equipment with panels	✓
	Acoustic insulation of panels (10 mm)	●
	Acoustic insulation of panels (20 mm)	●
	Anti-vibration mounts	●
Compressors	Multiscroll technology in tandem or trio configuration	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	High-performance original manufacturer acoustic insulation jacket	●
Expansion valves	Electronic expansion valve	✓

Exchangers

Exchangers	Stainless steel plate heat exchanger	✓

Hydraulic

Hydraulic components	Flexible inlet and outlet water connections	●
	VICTAULIC connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment	●

Installation

Electrical power supply	400 V / III ph / 50 Hz with neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (check available options)	●
Packaging	Packaging for sea transport	●

Control

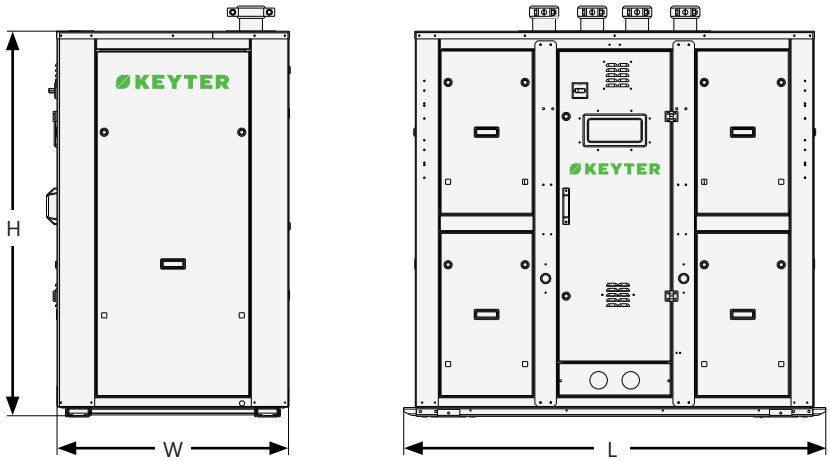
Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety elements	Main switch in the electrical panel	✓
	Thermomagnetic protections for compressors	✓
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓
	Triple protection for the plate heat exchanger with water flow switch and antifreeze protections for water and refrigerant	✓
	Residual current circuit breakers	●
	EXCELLENT phase control relay, adds phase imbalance detection, overvoltage, and undervoltage protection	●
	Electric energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Electrical equipment design for high temperature	✓
	Forced ventilation of the electrical panel	●
	Tropicalized electrical panel	●
	Socket for general use	●
	Anti-freeze electrical heater in the electrical panel for low outdoor temperatures	●

✓ Standard manufacturing
● Optional manufacturing available
- Not available

medea maxima

dimensions

Medea Maxima KZVH dimensions:



Dimensions (mm) Versions S / P / W / B	Series 1	Series 2		Series 3
KZV models **KZVH models**	**Todos**	**KZV2035-KZV2120** **KZVH2035-KZVH2100**	**KZV2035-KZV2120** **-**	**Todos**
L	900	1554	1554	2550
W	800	800	900	800
H	1267	1500	1500	1500

* Dimensions valid for models below 2090 with hydraulic versions P, W, and B.

Chillers

Air-to-water chillers

93	*atlantia*	*KWA | KWM*	R454B	*Air-to-water chillers multiscroll*
99	*atlantia power*	*KWP | KWB*	R454B	*Air-to-water chillers multiscroll*
104	*nemesis modular*	*KWS*	R454B	*Modular air-to-water chillers*
109	*helvetia*	*KWZE*	HFO R1234ze Low GWP	*Modular air-to-water chillers*
116	*pangea eco inverter*	*KWT*	HFO R1234ze Low GWP	*Screw air-to-water chillers*
121	*pangea inverter*	*KWT*	R513A	*Screw air-to-water chillers*

Water-to-water chillers

125	*oneida eco inverter*	*KZT*	HFO R1234ze Low GWP	*Screw water-to-water chillers*

atlantia

Multiscroll air-to-water chillers

185-648 kW

Multi-Scroll

heat recovery

Plate heat exchanger KWA

Shell and tube exchanger KWM

heat recovery

Partial and total heat recovery system from hot gases for domestic hot water (DHW)

Water Free Cooling System for Free Cooling

Adaptation and Environment

- Reduced refrigerant charge with low GWP R-454B, minimizing the CO_2 footprint (77% lower GWP than R-410A and 31% lower than R-32).
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Maximum accessibility and easy maintenance through removable panels.
- Versions with hydraulic group and integrated buffer tank to reduce compressor start-stop frequency.

Energy Efficiency

- High energy efficiency at partial and full loads, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Fans electrónicos y Electronic expansion valve for minimum energy consumption.
- Units with a hydraulic group can incorporate high-performance electronic pumps.

nemesis modular

Modular assembly option with NEMESIS
Version designed for modular assembly with Victaulic tubular connections for easy and quick interconnection.
Up to 8 modules ->101-1664 kW

Codification:

KWA / KWM — Series

Size — Power

R N S3C

Operating mode
R - Cooling only

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment / **P** - Version with hydraulic group / **H** - Version with hydraulic group and buffer tank

Power supply
3 - 400V/III/50Hz without neutral (standard)

Refrigerant
C - R454B / **W** - R410A

atlantia

range specification

		KWA	KWM
General characteristics			
Refrigerant	R454B	✓	✓
	Equipment with refrigerant charge	✓	✓
	Refrigerants R452B o R410A	●	●
	Leak detection	●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓	✓
	Customized color to suit the needs of the installation	●	●
	Equipment without paneling	✓	✓
	Enclosed compartment for compressors (1)	●	●
	Perimeter enclosure of the unit + Enclosed compartment for compressors (1)	●	●
	Insulation panels for the compressor compartment	●	●
	Lower hydraulic enclosure (H version)	●	●
	Upper hydraulic enclosure (H version)	●	●
	Insulation panels for perimeter enclosure and hydraulic section panels (H version)	●	●
	Anti-vibration supplements	●	●
Compressors	Multiscroll technology in tandem	✓	✓
	Compressor anti-vibration mounts	✓	✓
	Soft starter	●	●
	Acoustic insulation jacket	●	●
	Original high-performance acoustic insulation jacket from the manufacturer	●	●
Expansion valves	Electronic expansion valves	✓	✓
	Thermostatic expansion valves (available only with R410A)	●	●
Fans			
Outdoor fans	AC axial fans with variable speed drive	✓	✓
	AC technology axial fans	●	-
	Condensing pressure control	✓	✓
	EC technology axial fans	●	●
	Curved external nozzles (Silent Ring)	✓	✓
	Internal nozzles (available only with EC fans)	●	●
	AxiTop diffusers for axial fans (available only with EC fans)	●	●
	High-performance EC axial fans	●	●
	EC plug-fan radial fans	●	●
Heat exchangers			
Coils	Cu tube and Al fin coils	✓	✓
	Al / Al microchannel batteries	●	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●	●
	ALUCOAST: high-strength Cu tubes / Al fins	●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●	●
	COPPERFIN: Cu tubes / Cu fins	●	●
Heat exchangers	Refrigerant-water heat exchanger, AISI 316L stainless steel plates, copper-welded, and thermally insulated	✓	-
	Shell-and-tube heat exchanger	-	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix	●	-
Energy (2)			
Energy recovery	Partial or total condensation energy recovery for domestic hot water (DHW) (* total recovery in KWA is only possible in series 2) (** Total recovery circuit heat exchanger: plate type in KWA and multitube type in KWM)	●	●
	Pump in the condensation heat recovery circuit	●	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	●	●

✓ Included as standard
● Optional
- Not applicable

(1) This option can only be supplied factory-installed.
(2) Some options may require changes to dimensions (please consult us)

atlantia
range specification

KEYTER

Hydraulic (2)

		KWA	KWM
Pumps (P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓	✓
	Single pump with high pressure available (15-20 mH_2O)	●	●
	Single pump, very high available pressure (25-30 mH_2O)	●	●
	Pump with variable speed drive	●	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	●
	Electronic pump	●	●
	Electronic backup pump	●	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 °C	●	●
	Low outdoor temperature kit	●	●
	Flexible water inlet and outlet connections	●	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with 200 liters / 375 liters / 725 liters + buffer tank available Electrical resistances	●	●

Installation

Protection grilles	Coil protection grille	●	●
	Bird-proof protection grille at the base of the equipment	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz without neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓
	RS485 communication interface for ModBus communication	✓	✓
	Modbus TCP/IP and BACnet IP communication	✓	✓
Additional control and safety components	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors, fans and pumps	✓	✓
	Differential switches	●	●
	Low pressure switch for pump protection	●	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●	●
	Triple protection for the plate heat exchanger with water flow switch and anti-freeze protections for both water and refrigerant	✓	✓
	Energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Forced ventilation of the electrical panel	✓	✓
	Design of electrical switchgear for high temperatures	✓	✓
	Tropicalised electrical panel	●	●
	Socket for common use	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

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R454B technical data

Model KWA			**2225**	**2240**	**2270**	**2300**	**2340**	**2380**	**3420**	**3490**	**3570**	**4600**	**4680**	**4760**
Model KWM			**2225**	**2240**	**2270**	**2300**	**2340**	**2380**	**3420**	**3490**	**3570**	**4600**	**4680**	**4760**
COOLING-ONLY VERSION (R)														
Cooling	Nominal cooling capacity (1)	kW	185,3	212,7	236,1	259,4	291,7	324,1	365,7	421,4	486,1	518,7	583,4	648,1
		TR	53,0	60,5	67,5	74,0	83,0	92,5	104,0	120,0	138,5	147,5	166,0	184,5
		kBTU/h	636	726	810	888	996	1110	1248	1440	1662	1770	1992	2214
	Absorbed power (2)	kW	58,8	68,2	78,8	89,4	97,1	108,8	123,4	141,7	164,8	178,7	195,7	217,5
	EER (3)	kW/kW	3,15	3,12	3,00	2,90	3,01	2,98	2,96	2,97	2,95	2,90	2,98	2,98
		BTU/(h*W)	10,81	10,65	10,28	9,94	10,26	10,21	10,11	10,16	10,09	9,90	10,18	10,18
	SEER (4)	kWh/kWh	5,0	5,0	4,9	4,7	4,7	4,7	4,9	4,8	4,7	4,8	4,7	4,7
	ηs,c (5)	%	197,4%	195,9%	192,3%	186,0%	185,4%	184,0%	191,2%	189,5%	185,0%	187,1%	184,2%	183,8%
	SEPR (7ºC) (6)	kWh/kWh	5,91	5,85	5,61	5,42	5,63	5,66	5,54	5,58	5,62	5,52	5,61	5,67
	SEPR (-8ºC) (6)	kWh/kWh	3,50	3,45	3,35	3,26	3,39	3,40	3,32	3,36	3,37	3,26	3,38	3,40
	IPLV (7)	kW/TR	0,53	0,53	0,54	0,55	0,56	0,56	0,54	0,54	0,55	0,55	0,56	0,56
		BTU/(h*W)	22,28	22,06	21,76	21,10	20,99	20,96	21,69	21,51	21,18	21,27	20,97	20,98
TECHNICAL SPECIFICATIONS														
Power supply			400V / III / 50Hz without neutral											
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466											
	No. of refrig. circuits / compressors		2/4	2/4	2/4	2/4	2/4	2/4	3/6	3/6	3/6	4/8	4/8	4/8
	No. power stages		4	4	4	4	4	4	6	6	6	8	8	8
Hydraulic circuit	Indoor water flow rate	m^3/h	31,9	36,6	40,7	44,7	50,2	55,8	63,0	72,6	83,7	89,4	100,5	111,6
	Type of heat exchanger KWA		Stainless steel plate heat exchanger											
	Type of heat exchanger KWM		Shell and tube heat exchanger											
	Hydraulic connections Ø		DN 80				DN 100				DN 125			DN 150
	Buffer tank capacity (H)	liters	725	725	725	725	725	725	725	725	725	725	725	725
Outdoor fan	Outdoor air flow rate	m^3/h	81000	81000	81000	81000	81000	81000	121500	121500	121500	162000	162000	162000
	Number of fans		4	4	4	4	4	4	6	6	6	8	8	8
	Ø and Type of fan	mm	800-6 AC VFD											
Sound pressure level of the equipment (Lp10) (8)		dB(A)	62	62	61	62	62	63	64	64	65	65	67	67
Weights (S version)	Empty weight	kg	1875	2023	2100	2141	2257	2374	3079	3240	3490	4337	4570	4803
	In-service weight	kg	1905	2053	2142	2187	2306	2423	3135	3317	3568	4436	4673	4910

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a plate heat exchanger fouling factor of $0.43 \cdot 10^{-4}$ (m^2·K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Seasonal energy efficiencies (ηs,c) in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7ºC) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8ºC) in compliance with EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

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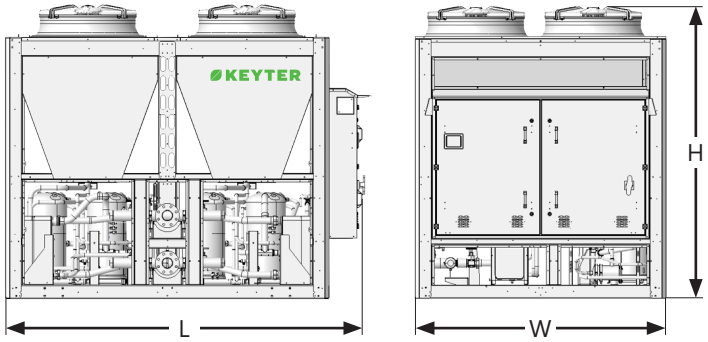
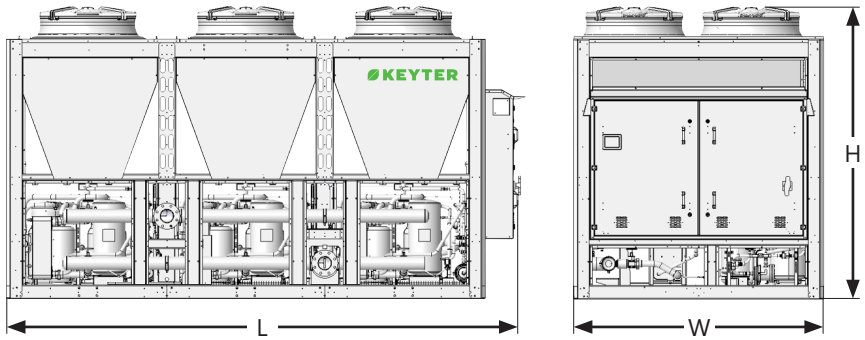
range specification

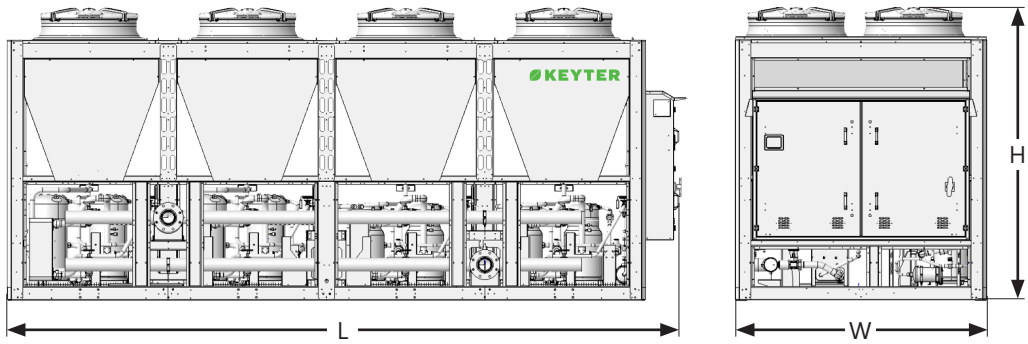
Series 2 S/P



Series 3 S/P



Series 4 S/P

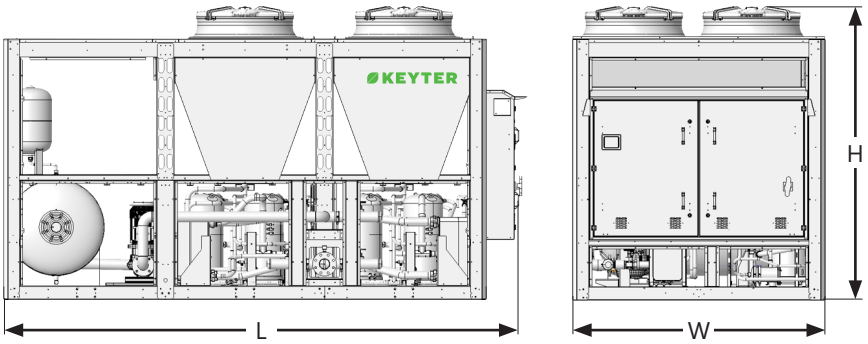


Dimensions (mm)						
	Series 2		Series 3		Series 4	
Bodywork	S/P	H	S/P	H	S/P	H
L	2980	4305	4305	5630	5630	6955
W	2100	2100	2100	2100	2100	2100
H	2480	2480	2480	2480	2480	2480

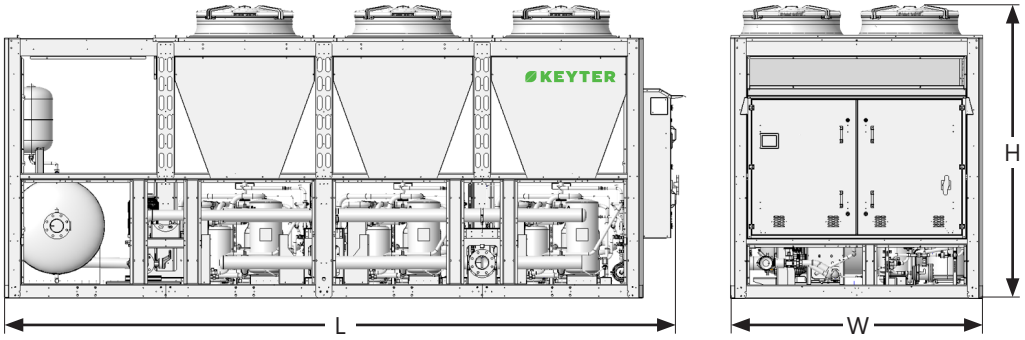
atlantia

dimensions

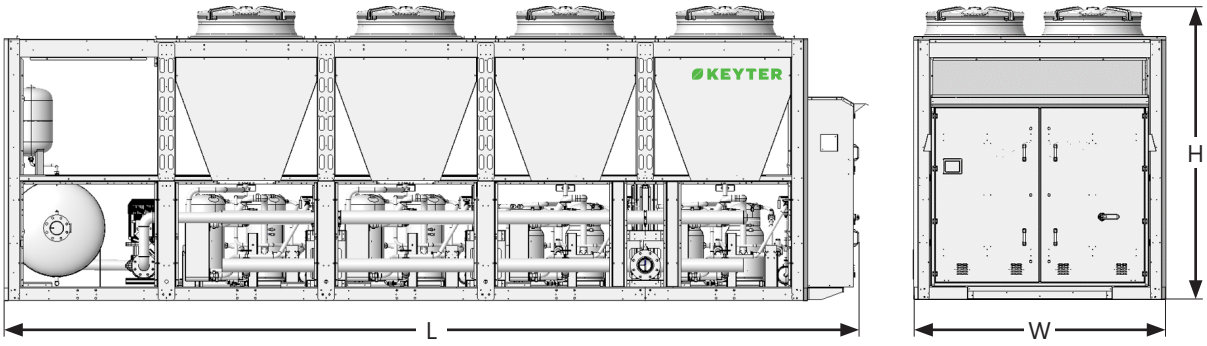
Series 2 H



Series 3 H



Series 4 H



atlantia power

Multiscroll air-to-water chillers

358-831 kW

Multi-Scroll

heat recovery

Plate heat exchanger **KWP**

Shell and tube exchanger **KWB**

heat recovery

Partial and total heat recovery system from hot gases for domestic hot water (DHW).

Water Free Cooling System for Free Cooling

Adaptation and Environment

- Reduced charge of low GWP refrigerant R-454B, minimizing the CO_2 footprint (-77% less GWP than R-410A and -31% less than R-32).
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Maximum accessibility and easy maintenance through removable panels.
- Versions with a hydraulic group and integrated buffer tank to reduce the frequency of compressor start-ups and shutdowns.

Energy Efficiency

- High energy efficiency at partial and full loads, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic fans with AxiTop and electronic expansion valve as standard for minimal energy consumption.
- Units with a hydraulic group can incorporate high-performance electronic pumps.

***Greater power** in a smaller footprint, optimized dimensions.*

Codification:

KWP / KWB — Serie

Size Power

R N S3C

Operating mode
R - Cooling only

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment / **P** - Version with hydraulic group / **H** - Version with hydraulic group and buffer tank

Power supply
3 - 400V/III/50Hz without neutral (standard)

Refrigerant
C - R454B / **W** - R410A

atlantia power

range specification

		KWB	KWP
General characteristics			
Refrigerant	R454B	✓	✓
	Equipment with refrigerant charge	✓	✓
	R452B or R410A refrigerants (Check availability according to model)	●	●
	Leak detection	●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓	✓
	Customized color to suit the needs of the installation	●	●
	Equipment without paneling	✓	✓
	Enclosed compartment for compressors (1)	●	●
	Perimeter enclosure of the unit + Enclosed compartment for compressors (1)	●	●
	Insulation panels for the compressor compartment	●	●
	Lower hydraulic enclosure (H version)	●	●
	Upper hydraulic enclosure (H version)	●	●
	Insulation panels for perimeter enclosure and hydraulic section panels (H version)	●	●
	Anti-vibration supplements	●	●
Compressors	Multiscroll technology in tandem	●	●
	Compressor anti-vibration mounts	✓	✓
	Soft starter	●	●
	Acoustic insulation jacket	●	●
	Original high-performance acoustic insulation jacket from the manufacturer	●	●
	Electronic expansion valves	✓	✓
Fans			
Outdoor fans	Axial fans enhanced with EC technology	✓	✓
	Curved external nozzles (Silent ring)	✓	✓
	AxiTop diffusers for axial fans	●	●
Heat exchangers			
Coils	Cu tube and Al fin coils	✓	✓
	Al / Al microchannel batteries	●	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●	●
	ALUCOAST: high-strength Cu tubes / Al fins	●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●	●
	COPPERFIN: Cu tubes / Cu fins	●	●
Heat exchangers	Refrigerant-water heat exchanger, AISI 316L stainless steel plates, copper-welded, and thermally insulated	-	✓
	Shell-and-tube heat exchanger	✓	-
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix	-	●
Energy (2)			
Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●	●
	Total recovery of condensation energy for domestic hot water (DHW) (* In KWP, only possible in series 2) (** Heat exchanger in total recovery circuit: plate in KWP and multitube in KWB)	●	●
	Pump in the condensation heat recovery circuit	●	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●	●
Free-cooling	Integrated free-cooling, via additional V-shaped coils, external sensor, and three-way valve	●	●

✓ Included as standard
● Optional
- Not applicable

(1) This option can only be supplied factory-installed.
(2) Some options may require changes to dimensions (please consult us)

atlantia power

range specification

KEYTER

Hydraulic (2)

		KWB	KWP
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓	✓
	Single pump with high pressure available (15-20 mH_2O)	●	●
	Single pump, very high available pressure (25-30 mH_2O)	●	●
	Pump with variable speed drive	●	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	●
	Electronic pump	●	●
	Electronic backup pump	●	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 °C	●	●
	Low outdoor temperature kit	●	●
	Flexible water inlet and outlet connections	●	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with 200 liters / 375 liters / 725 liters + buffer tank available Electrical resistances	●	●

Installation

Protection grilles	Coil protection grille	●	●
	Bird-proof protection grille at the base of the equipment	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz without neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓
	RS485 communication interface for ModBus communication	✓	✓
	Modbus TCP/IP and BACnet IP communication	✓	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓	✓
Additional control and safety components	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors, fans and pumps	✓	✓
	Differential switches	●	●
	Low pressure switch for pump protection	●	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-freeze protections for both water and refrigerant	✓	✓
	Energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Forced ventilation of the electrical panel	✓	✓
	Design of electrical switchgear for high temperatures	✓	✓
	Tropicalised electrical panel	●	●
	Socket for common use	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

atlantia power

R454B technical data

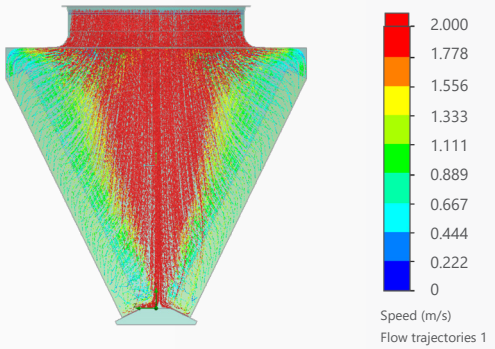
KWP model			2400	2420	2480	3620	3670	3720	4810	4860	4910	4960
KWB model			**2400**	**2420**	**2480**	**3620**	**3670**	**3720**	**4810**	**4860**	**4910**	**4960**
HEAT PUMP VERSION (I)												
Cooling mode	Nominal cooling capacity (1)	kW	331,6	352,9	391,6	510,0	548,7	587,4	667,1	705,8	744,5	783,3
		TR	94,5	100,5	111,5	145,5	156,5	167,5	190,0	201,0	212,0	223,0
		kBTU/h	1134	1206	1338	1746	1878	2010	2280	2412	2544	2676
	Absorbed power (2)	kW	108,2	124,5	141,2	178,5	195,2	211,9	232,4	249,1	265,8	282,5
	EER (3)	kW/kW	3,06	2,83	2,77	2,86	2,81	2,77	2,87	2,83	2,80	2,77
		BTU/W*h	10,46	9,67	9,46	9,75	9,59	9,46	9,79	9,67	9,56	9,46
	SEER (4)	kWh/kWh	5,1	5,1	5,0	5,2	5,0	4,8	5,2	5,1	5,0	4,9
	ηs,c (5)	%	201,0%	203,0%	197,6%	203,0%	197,0%	187,8%	204,0%	199,7%	197,4%	193,3%
	SEPR (7ºC) (6)	kWh/kWh	5,79	5,42	5,45	5,46	5,44	5,45	5,49	5,41	5,45	5,44
	SEPR (-8ºC) (6)	kWh/kWh	3,55	3,32	3,32	3,32	3,32	3,31	3,32	3,32	3,32	3,32
	IPLV (7)	kW/TR	0,56	0,58	0,60	0,58	0,60	0,62	0,57	0,59	0,60	0,61
		BTU/W*h	20,75	20,10	19,46	20,24	19,65	18,92	20,36	19,92	19,61	19,23
TECHNICAL SPECIFICATIONS												
Power supply			400V/ III /50HZ without neutral									
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466									
	No. of refrig. circuits / compressors		2/4	2/4	2/4	3/6	3/6	3/6	4/8	4/8	4/8	4/8
	No. power stages		4	4	4	6	6	6	8	8	8	8
Hydraulic circuit	Indoor water flow rate	m^3/h	57,1	60,8	67,5	87,8	94,5	101,2	114,9	121,6	128,2	134,9
	Type of heat exchanger KWP		brazed stainless steel plate heat exchanger									
	Type of heat exchanger KWB		Shell and tube heat exchanger									
	Hydraulic connections Ø		DN 100	DN 100	DN 125	DN 150	DN 150	DN 150	DN 150	DN 150	DN 200	DN 200
	Buffer tank capacity (H)	liters	725	725	725	725	725	725	725	725	725	725
Outdoor fan	Outdoor air flow rate	m^3/h	98000	98000	98000	147000	147000	147000	196000	196000	196000	196000
	Number of fans		4	4	4	6	6	6	8	8	8	8
	Ø and Type of fan	mm	Axial EC HP									
Sound pressure level of the equipment (Lp10) (8)		dB(A)	51	52	51	55	54	54	54	57	56	57
Weights (S version)	Empty weight (serie KWP)	kg	2262	2318	2352	3380	3436	3476	4432	4488	4544	4578
	In-service weight (serie KWP)	kg	2321	2379	2414	3481	3541	3587	4568	4625	4682	4717
	Empty weight (serie KWB)	kg	2454	2488	2522	3435	3469	3698	4596	4630	4664	4744
	In-service weight (serie KWB)	kg	2513	2549	2584	3536	3574	3809	4732	4767	4802	4883

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a plate heat exchanger fouling factor of $0.43 \cdot 10^{-4}$ (m^2·K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Seasonal energy efficiencies (ηs,c) in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7ºC) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8ºC) in compliance with EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

Innovation and cutting-edge technology

KEYTER develops its products by researching and incorporating trends and new developments to improve the product and its energy efficiency.

To achieve this, and as part of the ongoing R&D efforts carried out in collaboration with technological centers and universities, studies have been implemented using dynamic simulation tools. These tools allow for detailed and in-depth analysis during the equipment design phase, resulting in an optimized design in terms of performance and energy efficiency.



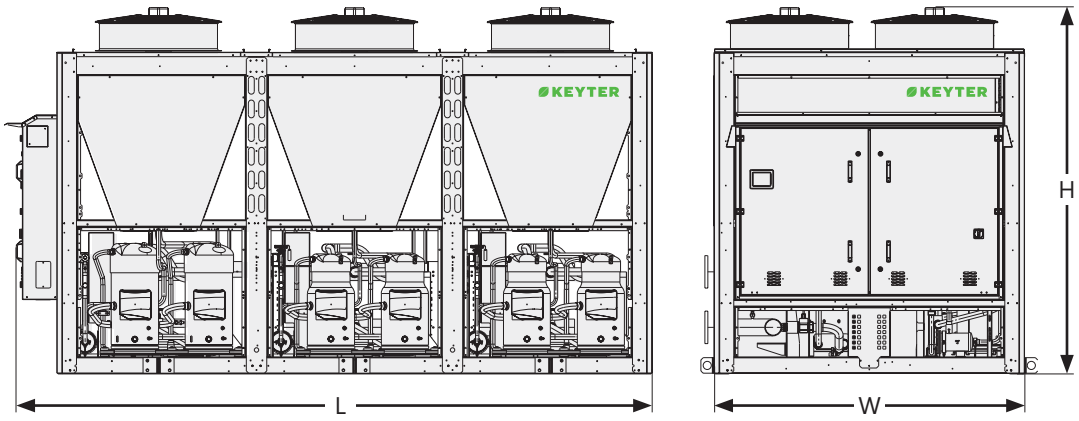
Analysis of air velocity across the equipment's coil

atlantia power

dimensions

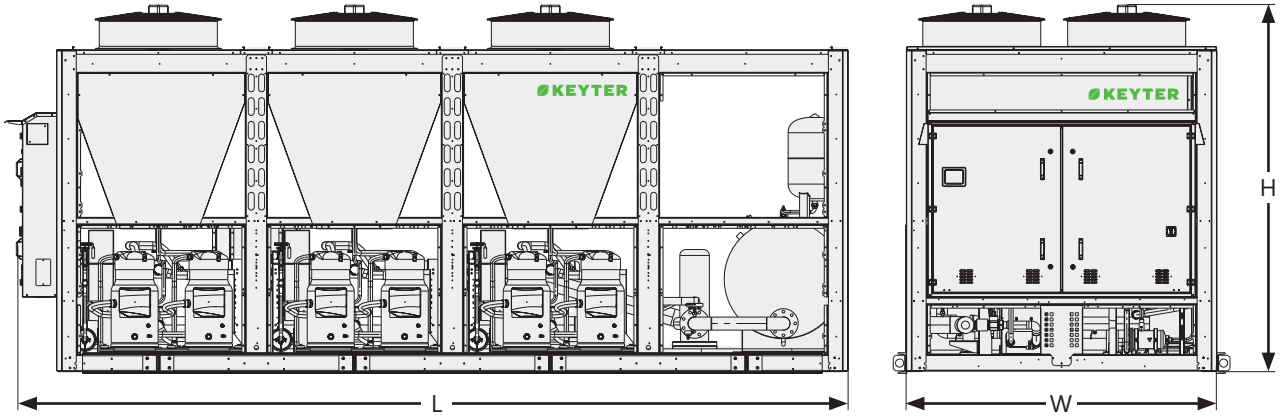
Series 2-4:

KWP S version / KWB versions S and P



The number of views for the equipment depends on the series; the views in this image correspond to series 3.

KWP versions P y H / KWB H version



Dimensions KWB / KWP (mm)			
Series KWP - S version	**KWP-2**	**KWP-3**	**KWP-4**
Series KWB - versions S and P	**KWB-2**	**KWB-3**	**KWB-4**
L	2980	4305	5800
W	2100	2100	2100
H	2480	2480	2480

Dimensions KWB / KWP (mm)			
Series KWP - versions P y H	**KWP-2**	**KWP-3**	**KWP-4**
Series KWB - H version	**KWB-2**	**KWB-3**	**KWB-4**
		Versions P/H	
L	4305	5630	7125
W	2100	2100	2100
H	2480	2480	2480

• Some options require a chassis change for the equipment. To know the dimensions of each series with the different available options, please contact us.

nemesis

Modular air-to-water chillers

101-1664 kW (up to 8 modules)

Multi-Scroll · EC · 50 Hz 60 Hz · heat recovery

modular

Version designed for modular installation with Victaulic pipe connections for easy and quick interconnection.

Up to 8 modules ->101-1664 kW

Adaptation and Environment

- Modular chillers to facilitate installation adaptation, allowing module access through doors and elevators.
- Series condensing pressure control for year-round operation.
- Adaptability to the installation with a wide range of models.
- Maximum accessibility and easy maintenance through removable panels.

Energy Efficiency

- High energy efficiency at partial and full load, reducing operating costs.
- Tandem multiscroll for improved seasonal energy efficiency.
- Electronic fans and electronic expansion valve for minimal energy consumption.
- Units with a hydraulic group can incorporate high-performance electronic pumps.

Codification:

KWS | | | M N S3C

Series · Size · Power

Operating mode
M - Version Modular
U - Version Single

Version - Compressor Type
N - Standard scroll compressor

Hydraulic version
S - Standard equipment
P - Version with hydraulic group
H - Version with hydraulic group and buffer tank (Only U version)

Power supply
3 - 400V/ III /50Hz without neutral (standard)

Refrigerant
C - R454B / **W -** R410A

nemesis

R454B technical data

R454B

KWS model			1100	1120	1150	1190	1240
COOLING-ONLY VERSION (R)							
Cooling	Nominal cooling capacity (1)	kW	98,2	107,9	131,6	164,6	201,6
		TR	28,0	31,0	37,5	47,0	57,5
		kBTU/h	336	372	450	564	690
	Absorbed power (2)	kW	30,4	34,1	44,8	52,5	70,6
	EER (3)	kW/kW	3,23	3,17	2,94	3,14	2,86
		BTU/(h*W)	11,02	10,81	10,02	10,70	9,74
	SEER (4)	kWh/kWh	4,2	4,2	4,2	4,2	4,4
	ηs,c (5)	%	166,7%	164,6%	164,6%	163,6%	171,7%
	SEPR (7ºC) (6)	kWh/kWh	5,96	5,86	5,96	5,96	6,06
	SEPR (-8ºC) (6)	kWh/kWh	3,84	3,74	3,74	3,74	3,94
	IPLV (7)	kW/TR	0,69	0,70	0,70	0,70	0,61
		BTU/(h*W)	17,00	16,79	16,79	16,68	19,29
TECHNICAL SPECIFICATIONS							
Power supply			400V / III / 50Hz without neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466				
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	1/2
	No. power stages		2	2	2	2	2
Hydraulic circuit	Indoor water flow rate	m^3/h	16,9	18,6	22,7	28,3	34,7
	Type of heat exchanger		Stainless steel plate heat exchanger				
	Ø MODULAR hydraulic connections (8)		VICTAULIC 5"	VICTAULIC 5"	VICTAULIC 5"	VICTAULIC 6"	VICTAULIC 6"
	Ø SINGLE hydraulic connections		VICTAULIC 2 1/2"	VICTAULIC 2 1/2"	VICTAULIC 3"	VICTAULIC 3"	VICTAULIC 4"
Outdoor fan	Outdoor air flow rate	m^3/h	40500	40500	40500	40500	49000
	Number of fans		2	2	2	2	2
	Ø and Type of fan	mm	800 Axial AC				800 Axial EC HP
Sound pressure level of the equipment (Lp10) (9)		dB(A)	52	54	54	60	59
Weights (S version)	Empty weight	kg	1134	1181	1240	1347	1376
	In-service weight	kg	1160	1207	1267	1373	1432

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7ºC and an outdoor air temperature of 35ºC. Capacities calculated with a plate heat exchanger fouling factor of 0.43·10^{-4} (m^2·K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Seasonal energy efficiencies (ηs,c) in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7ºC) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8ºC) in compliance with EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(8) The diameter of the manifold may vary depending on the number of units supplied.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

modular version

Modular assembly with easy and quick interconnection via Victaulic coupling, making it an effective and straightforward solution for installations requiring compact, lightweight, easily transportable equipment with high power.

Additionally, they provide a significant solution for continuous operation without interruption, thanks to their independent electrical connections. If one of the modules fails, it can be easily repaired without halting the operation of the entire modular installation.

Wide range of capacities due to its modulation, with each module reaching a cooling capacity of 124 kW and the possibility of up to 8 modules. For 2 or more NEMESIS modules, an optional electronic board is required for unit rotation, allowing operation with up to 8 modules.

nemesis

range specification

General characteristics

			SINGLE	MODULAR
Refrigerant	R454B		✓	✓
	Equipment with refrigerant charge		✓	✓
	R452B or R410A refrigerants		●	●
	Leak detection		●	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment		✓	✓
	Customized color to suit the needs of the installation		●	●
	Lower compartment without paneling		✓	✓
	Fully enclosed lower sheet metal compartment (1)		●	●
	Fully enclosed sheet metal compartment of the hydraulic versions P/B/H		●	-
	Anti-vibration supplements		●	●
Compressors	Multiscroll technology in tandem		✓	✓
	Compressor anti-vibration mounts		✓	✓
	Soft starter		●	●
	Acoustic insulation jacket		●	●
	Original high-performance acoustic insulation jacket from the manufacturer		●	●
Expansion valves	Electronic expansion valves		✓	✓
	Thermostatic expansion valves		●	●

Fans

Outdoor fans	Axial fans with AC technology (available only for 11xx models)		✓	✓
	AC axial fans with variable speed drive (available only for 11xx models)		●	●
	EC axial fans (available only for 11xx models)		●	●
	High-performance EC axial fans	Models 11xx	●	●
		Model 1240	✓	✓
	Curved external nozzles (Silent ring)		✓	✓
	AxiTop diffusers for axial fans (sólo disponible con ventiladores EC)		●	●
	EC plug-fan radial fans		●	●

Heat exchangers

Coils	Cu tube and Al fin coils		✓	✓
	Al / Al microchannel batteries		●	●
	Cu tube bundle / polyurethane pre-lacquered Al fins		●	●
	ALUCOAST: high-strength Cu tubes / Al fins		●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating		●	●
	COPPERFIN: Cu tubes / Cu fins		●	●
Heat exchangers	Refrigerant-water heat exchanger, AISI 316L stainless steel plates, copper-welded, and thermally insulated		✓	✓
	Stainless steel heat exchanger SS AISI 304 / SS AISI 316 / Sealix		●	●

Energy (2)

Energy recovery	Partial or total recovery of condensation energy for DHW (domestic hot water)		●	-
	Pump in the condensation heat recovery circuit		●	-
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery		●	-
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.		●	-

✓ Included as standard
● Optional
- Not applicable

(1) Option also available with insulation.
(2) Some options may require changes to the equipment dimensions; please consult us.

nemesis

range specification

KEYTER

Hydraulic (2)

		SINGLE	MODULAR
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓	-
	Single pump with high pressure available (15-20 mH_2O)	●	-
	Single pump, very high available pressure (25-30 mH_2O)	●	-
	Pump with variable speed drive	●	-
	Backup pump (standard pressure, high pressure, and very high pressure available)	●	-
	Electronic pump	●	-
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 ºC	●	●
	Low outdoor temperature kit	●	●
	Victaulic union adapter for hydraulic interconnection of modules	-	●
	Water filter	●	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●	●
	Independent module with 200 liters / 375 liters / 725 liters + buffer tank available Electrical resistances	●	-

Installation

Protection grilles	Coil protection grille	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●
Power supply	400 V / III ph / 50 Hz without neutral	✓	✓
	400 V / III ph / 60 Hz	●	●
	Other electrical voltages (see different options available)	●	●
Packaging	Packaging for maritime transport	●	●

Control

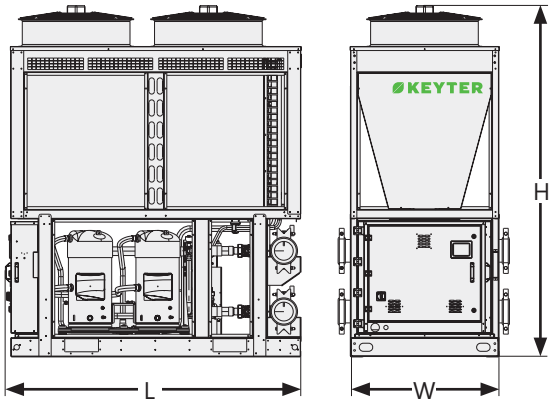
Electronic control and communication	Programmable AQUAMATIX electronic control	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓
	RS485 communication interface for ModBus communication	✓	✓
	Modbus TCP/IP and BACnet IP communication	✓	✓
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓	✓
Additional control and safety components	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors, fans and pumps	✓	✓
	Differential switches	●	●
	Low pressure switch for pump protection	●	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-freeze protections for both water and refrigerant	✓	✓
	Energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Forced ventilation of the electrical panel	✓	✓
	Design of electrical switchgear for high temperatures	✓	✓
	Tropicalised electrical panel	●	●
	Socket for common use	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

nemesis

dimensions

MODULAR VERSION:

Models KWS 1xxx



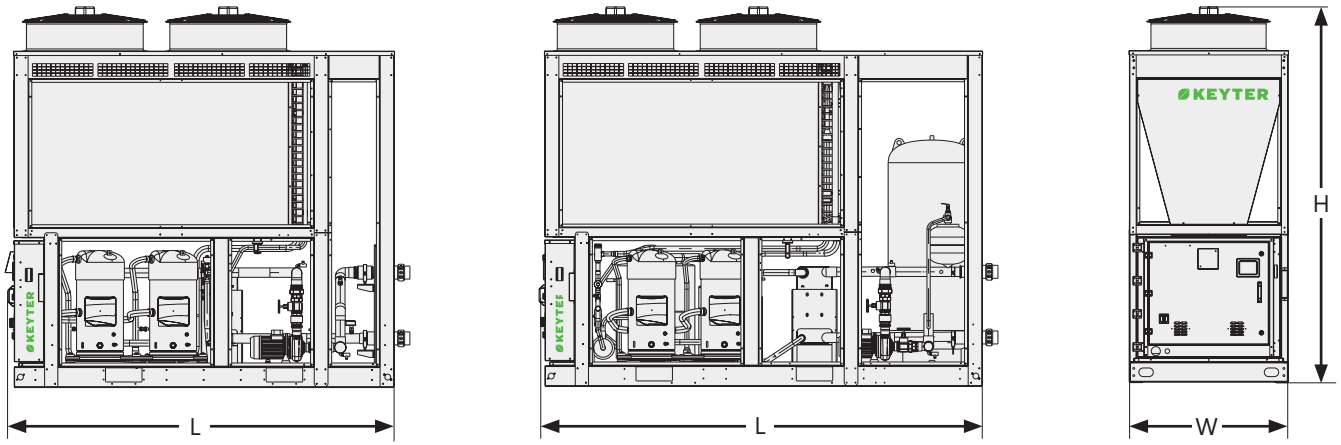
Dimensions KWS MODULAR (S version) (mm)	
	Models 1100-1240
L	2190
W	1100
H	2600

In the modular version, if a hydraulic group is required, a separate hydraulic module is necessary.

UNITARY VERSION (SINGLE):

Version S / P (modelos 1100-1240) / Version B (modelos 1100-1150)

Version H (models 1100-1240)



Dimensions KWS SINGLE (mm)						
	Models 1100-1150			Models 1190-1240		
	Versions S/P (*)	Version B (**)	Version H	Version S	Version P (***)	Version H
L	2190	2640	3830	2190	2640	3830
W	1100	1100	1100	1100	1100	1100
H	2600	2600	2600	2600	2600	2600

(*) Version P with standard pressure pump

(**) Version P with high-pressure and optional pumps

(***) Version P with all pumps

Some options require changes to the equipment dimensions. To know the dimensions of each model with the different available options, please contact us.

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Air-to-water multiscroll chillers

116-932 kW

Multi-Scroll | heat recovery | DHW

modular option

Version designed for modular assembly with Victaulic pipe connections for easy and quick interconnection

Up to 8 modules ->116-932 kW

Partial or total heat recovery systems to support the production of domestic hot water (DHW).

Free cooling water system

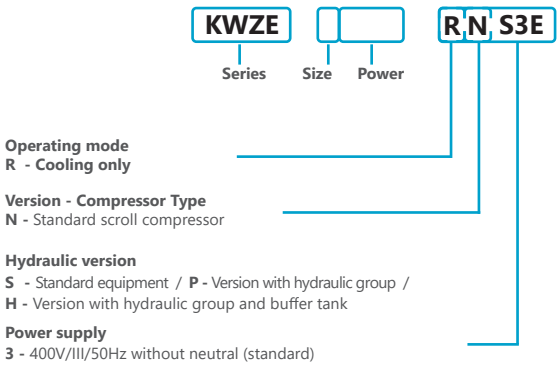
Adaptation and Environment

- Reduced refrigerant charge of low-GWP HFO R-1234ze, minimizing the CO_2 footprint (99.9% less GWP than R-410A and 99.5% less than R-32).
- Equipped with state-of-the-art hermetic scroll DSG compressors designed in tandem and state of-the-art plate heat exchangers, with an optional multitubular heat exchanger.
- Wide operating range for outdoor temperatures of the equipment.
- Equipped with the latest-generation modular programmable electronic control AQUAMATIX Siemens.

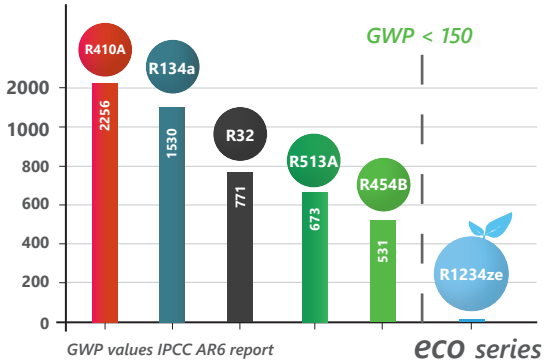
Energy Efficiency

- High energy efficiency at partial load, exceeding the seasonal efficiency requirements of the Ecodesign Regulation 2021 (EU 2016/2281) with up to 17% energy savings.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption and electronic condensation control.

Codification:



Refrigerants - GWP



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R1234ze technical data

KWZE model			1120	2200	4400	6600
Cooling mode	Cooling capacity (1)	kW	116,4	186,8	373,6	560,3
		TR	33,5	53,5	106,5	159,5
		kBTU/h	402	642	1278	1914
	Absorbed power (2)	kW	43,7	63,2	126,5	189,7
	EER (3)	kW/kW	2,67	2,95	2,95	2,95
		BTU/(h*W)	9,21	10,15	10,10	10,09
	SEER (4)	kWh/kWh	4,2	4,3	4,5	4,6
	ηs,c (4)(5)	%	166,5%	169,4%	178,4%	182,4%
	SEPR (7°C) (6)	kWh/kWh	6,23	6,81	6,90	6,95
	SEPR (-8°C) (6)	kWh/kWh	4,13	4,60	4,77	4,77
TECHNICAL SPECIFICATIONS						
Power supply			400 V / III / 50 Hz without neutral			
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R1234ze / 4			
	No. of refrig. circuits / compressors		1/2	1/2	2/4	3/6
	No. power stages		2	2	4	6
Hydraulic Circuit	Indoor water flow rate	m^3/h	20,0	32,2	64,3	96,5
	Type of heat exchanger		brazed stainless steel plate heat exchanger			
	Ø hydraulic connections	inch	VIC 3''	DN 80	DN 100	DN 125
	Ø hydraulic connections modular equipment (7)	inch	VIC 5''	-	-	-
Outdoor fan	Outdoor air flow rate	m^3/h	44000	88000	176000	264000
	Number of fans		2	4	8	12
	Ø and Type of fan	mm	800 EC	800 EC	800 EC	800 EC
Sound pressure level of the equipment (Lp10) (8)		dB(A)	57	60	63	66
Weights	Empty weight (S version)	kg	1059	1849	3503	5323

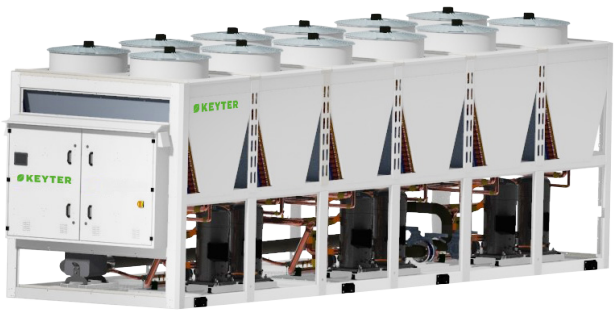
(1) Nominal cooling capacity for an inlet/outlet water temperature of 12/7°C and outdoor air temperature of 35°C. Power ratings calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 (m^2K / W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Seasonal energy efficiencies (ηs,c) in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Seasonal Energy Performance Ratio (SEPR) values for high-temperature process chillers (12/7°C) in compliance with EU Ecodesign Regulation 2016/2281. Seasonal Energy Performance Ratio (SEPR) values for medium-temperature process chillers (-2/-8°C) in compliance with EU Ecodesign Regulation 2015/1095.
(7) The diameter of the manifold may vary depending on the number of units supplied.
(8) Sound pressure level in dB(A) in open field conditions, at 10 m from the source, with a directivity of 1.

KWZE serie 1:

KWZE serie 2:

KWZE serie 4:

KWZE serie 6:



modular version

Optional modular version (from series 1) for modular installation with easy and quick interconnection, making it an effective and straightforward solution for installations requiring compact, lightweight, easily transportable equipment with high power.

Additionally, they provide a significant solution for continuous operation without interruption, thanks to their independent electrical connections. In the event of a module failure, it can be easily repaired without stopping the operation of the entire modular installation.

Wide range of capacities due to its modulation, with each module reaching a cooling capacity of 124 kW and the possibility of up to 8 modules.

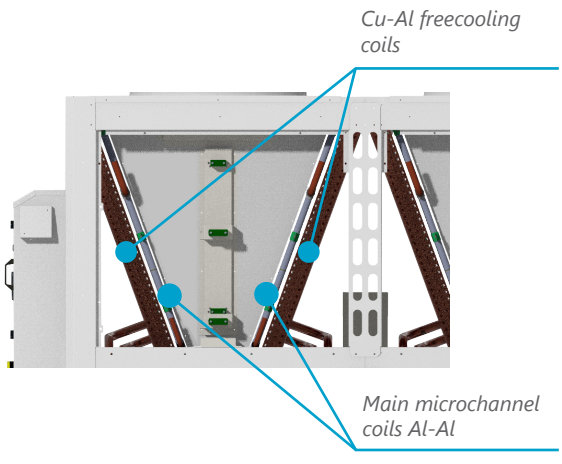
heat recovery

System that utilizes residual heat to heat water for both domestic hot water (DHW) and industrial applications.

- Recovery of up to 100% of condensation heat.
- Free production of high-temperature hot water with partial recovery of hot gases.
- Reduction of electricity consumption in the hot water production system.
- Reduction of fossil fuels and CO_2 emissions with an efficient and renewable solution.

integrated free-cooling

New optional additional free-cooling coils integrated into the unit in the same V-shaped configuration as the refrigeration circuit, allowing the use of external air energy when outdoor conditions are favorable for energy exchange with the system water.



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range specification

General characteristics

		KWZE
Refrigerant	R1234ze	✓
	Equipment with refrigerant charge	✓
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Customized color to suit the needs of the installation	●
	Equipment without paneling	✓
	Perimeter enclosure with panels (series 1) / panels + grille (series 2, 4, and 6)	●
	Panel insulation	●
	Enclosure with panel + grille for the lower panels of the chassis H (series 2, 4, and 6)	●
	Enclosure with panel on the top part of the chassis H (series 2, 4, and 6)	●
	Compressor encapsulation panel sandwich 20 mm (series 2, 4 and 6)	●
	Anti-vibration supplements	●
Compressors	Tandem Multiscroll technology	✓
	Compressor anti-vibration mounts	✓
	Soft starter	●
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
Expansion valves	Electronic expansion valves	✓

Fans

Outdoor fans	EC technology axial fans	✓
	AC axial fans with variable speed drive	●
	Condensing pressure control	✓
	Curved external nozzles (Silent ring)	✓
	Internal nozzles (Only with EC fans)	●
	AxiTop diffusers for axial fans (Only with EC fans)	●
	High-performance EC axial fans (de serie con opcional freecooling)	●
	EC plug-fan radial fans	●

Heat exchangers (*)

Coils	Al / Al microchannel batteries	✓
	Microchannel coils with polyurethane coating	●
	Cu tube and Al fin coils	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
Heat exchangers	Refrigerant-water heat exchanger, stainless steel AISI 316L plates, copper-welded, and thermally insulated	✓
	Shell-and-tube heat exchanger (2-4-6 series)	●

Energy

Energy recovery	Partial recovery of condensation energy for domestic hot water (DHW)	●
	Total condensation energy recovery for domestic hot water (DHW)	●
	Pump in the condensation heat recovery circuit	●
	Electric anti-icing heater in the plate heat exchanger for domestic hot water (DHW) recovery	●
Free-cooling	Integrated free cooling with additional external coil, external sensor, and three-way valve.	●

✓ Included as standard
● Optional
- Not applicable

* Some options may require changes to the equipment dimensions; please consult us.

helvetia

range specification

KEYTER

Hydraulic (*)

		KWZE
Pumps (version P/H)	Single pump, normal available pressure (7-12 mH_2O)	✓
	Single pump with high pressure available (15-20 mH_2O)	●
	Single pump, very high available pressure (25-30 mH_2O)	●
	Pump with variable speed drive	●
	Backup pump (standard pressure, high pressure, and very high pressure available)	●
	Electronic pump	●
	Electronic backup pump	●
Hydraulic components	Low temperature kit for operation with water outlet temperature < 0 °C	●
	Low outdoor temperature kit	●
	Flexible water inlet and outlet connections	●
	Water filter	●
	Installation of pressure gauges at the inlet and outlet of the equipment for S version	●
	Independent module with available buffer tank of 200 liters / 375 liters / 725 liters + electric heaters	●

Installation

Protection grilles	Coil protection grille	●
	Bird-proof protection grille at the base of the equipment	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz without neutral	✓
	400 V / III ph / 60 Hz	●
	Other electrical voltages (see different options available)	●
Packaging	Packaging for maritime transport	●

Control

Electronic control and communication	Programmable electronic control AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Modbus TCP/IP and BACnet IP communication	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors, fans and pumps	✓
	Differential switches	●
	Low pressure switch for pump protection	●
	PREMIUM phase control relay, with phase failure detection and direction of rotation protection	✓
	EXCELLENT phase monitoring relay, adds phase unbalance, overvoltage and undervoltage detection	●
	Triple protection for the plate heat exchanger with a water flow switch and anti-ice protections for both water and refrigerant	✓
	Energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Forced ventilation of the electrical panel	✓
	Design of electrical switchgear for high temperatures	✓
	Tropicalised electrical panel	●
	Socket for common use	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

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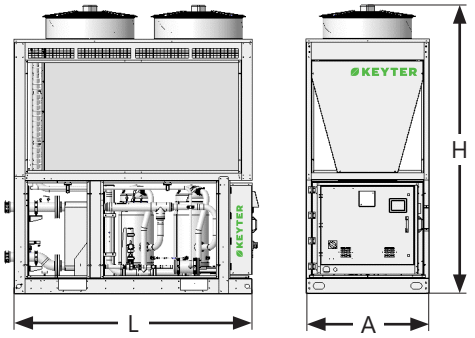
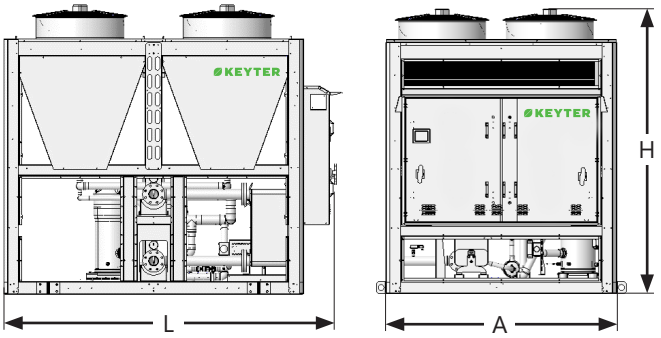
dimensions

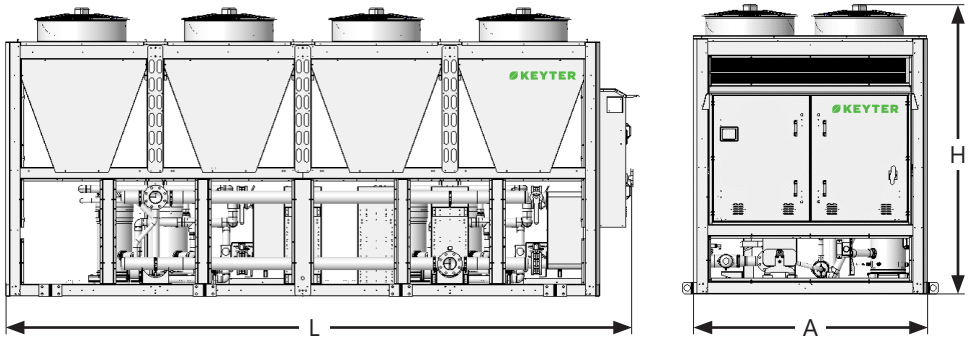
Series 1 S/P



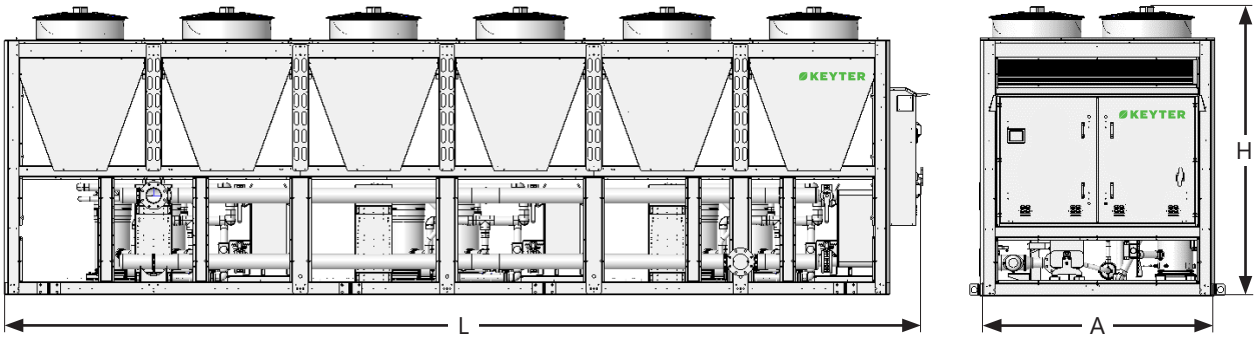
Series 2 S/P



Series 4 S/P



Series 6 S/P



Dimensions (mm)											
	Series 1					Series 2		Series 4		Series 6	
Bodywork	S/P	B	B*	H	H*	S/P	H	S/P	H	S/P	H
L	2190	2640	2640	3830	3830	2980	4305	5630	6955	8280	9605
A	1100	1100	1300	1100	1300	2100	2100	2100	2100	2100	2100
H	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600	2600

* Special width for integrated freecooling.

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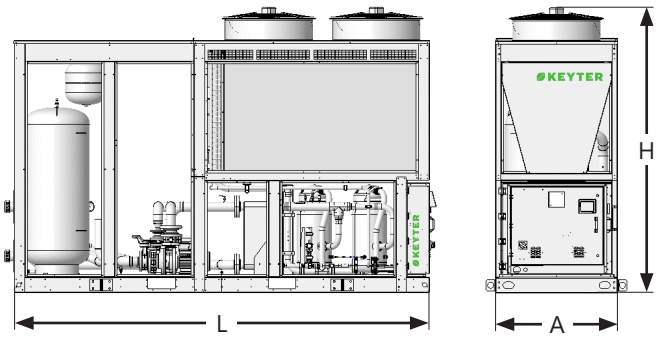
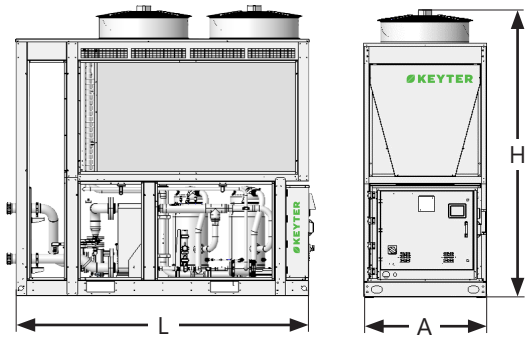
dimensions

Series 1 H

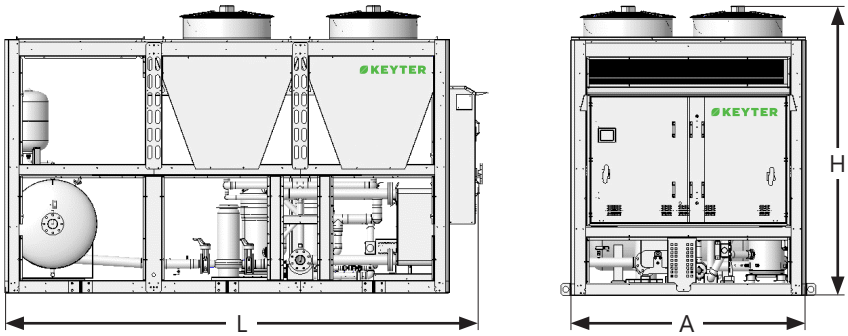


Series 1 B

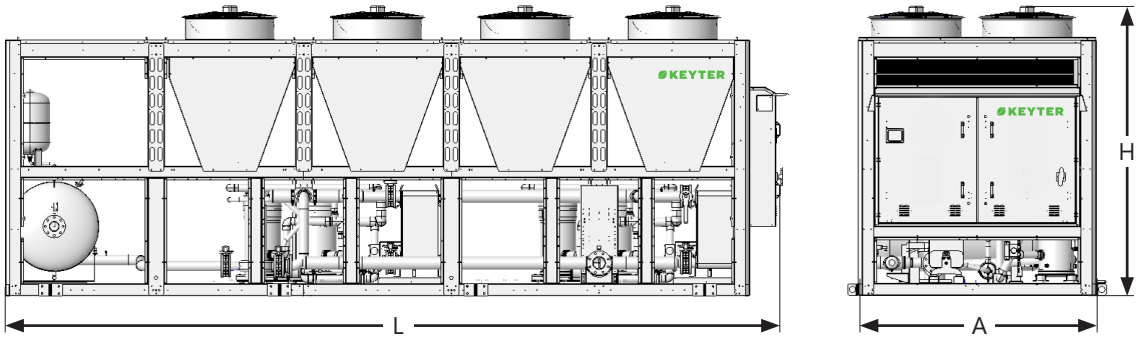


Series 1 B: Combination of optional features that require extending the S/P chassis.

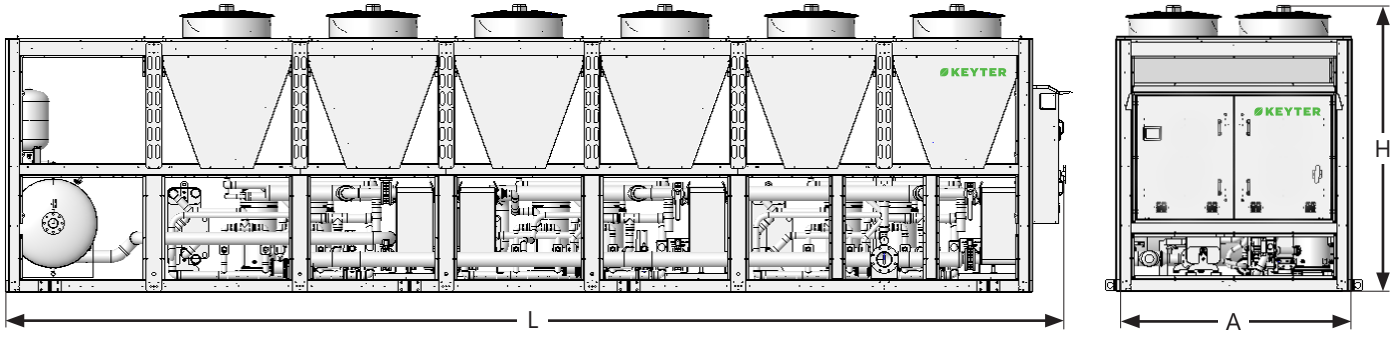
Series 2 H



Series 4 H



Series 6 H



pangea eco inverter

Screw air-to-water chillers

239-921 kW

Adaptation and Environment

- Reduced refrigerant charge of low-GWP HFO R-1234ze, minimizing the CO_2 footprint (99.5% less GWP than R-134a or R-32).
- Wide operating range of the equipment.
- Series condensing pressure control for year-round operation.
- They feature the latest generation AQUAMATIX Siemens modular programmable electronic control.
- Adaptability to the installation with a wide range of models and options.

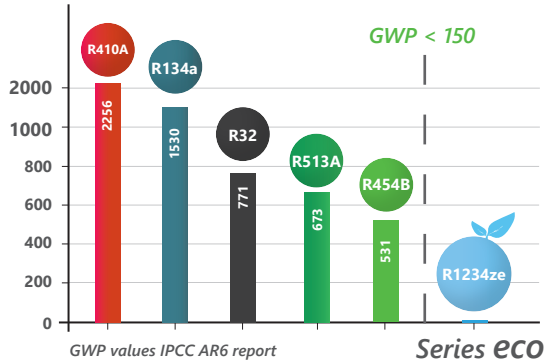
System that utilizes residual condensation heat from air to heat water for both domestic hot water (DHW) and industrial applications.

Decarbonize today, breathe tomorrow

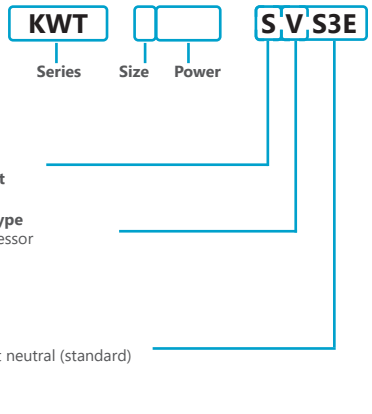
Energy Efficiency

- Units with inverter screw compressors with external frequency converters and state-of-the-art shell and tube heat exchangers.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption.
- PANGEA ECO offers very high energy efficiency at both partial and full load, reducing operating costs.

Refrigerants - GWP

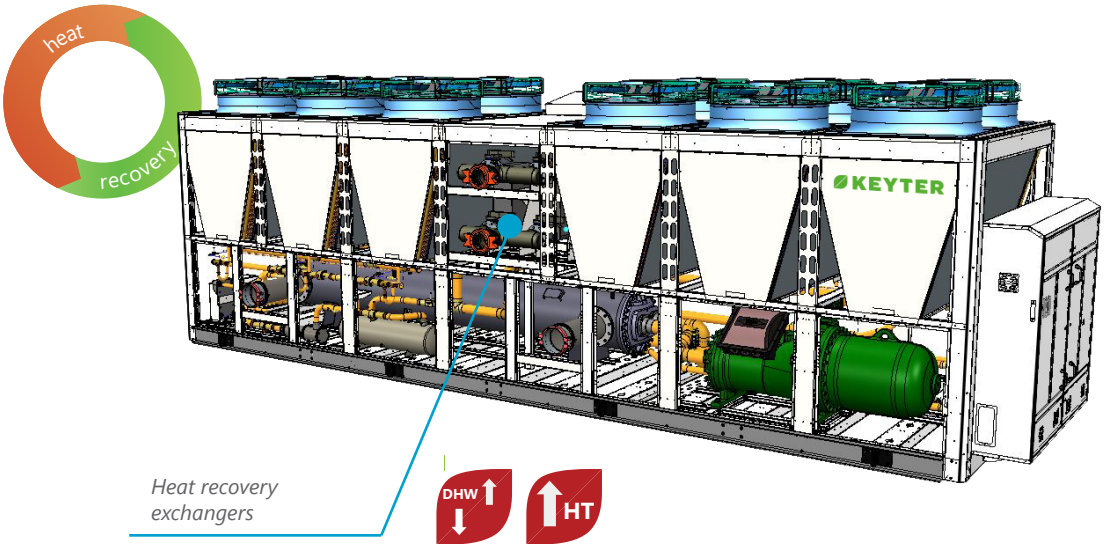


Codification:



heat recovery

System that utilizes the waste heat from air-cooled chillers to heat water for both domestic use and industrial applications through the integration of heat recovery exchangers in the refrigeration circuit.



- Recovery of up to 100% of the condensation heat.
- Free production of high-temperature hot water with partial recovery of hot gases.
- Reduction of electricity consumption in the hot water production system.
- Reduction of fossil fuels and CO_2 emissions with an efficient and renewable solution.

Reduction of fossil fuels and CO_2 emissions with an efficient and renewable solution

pangea eco *inverter*

range specification

		KWT
General characteristics		
Compressor	Semi-hermetic screw compressors with inverter technology	✓
Expansion valves	Electronic expansion valve	✓
Fans		
Outdoor fans	Condensing pressure control	✓
	EC axial fans	✓
	High-performance EC axial fans	●
	EC AxiBlade axial fans	●
	Curved external nozzles (Silent ring)	✓
	Internal nozzles	●
	Difusor AxiTop	●
Hydraulic		
Pumps (in module Hydraulic module)	Single pump with standard, high, or very high pressure options	●
	Pump with variable speed drive	●
	Standard, high pressure, and very high pressure backup pump	●
Intercambiador	Shell-and-tube heat exchanger	✓
Hydraulic components	Low-temperature kit for operation with water outlet temperature < 0ºC	●
	Low outdoor temperature kit	●
	Victaulic – Flange adapter	●
	Water filter	●
Energy		
Energy recovery	Partial/total recovery of condensate heat	●
Anticorrosion		
Coils	Copper tube / aluminum fin coil	✓
	Al / Al microchannel batteries	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength coil with Cu tubes / Al fins	●
	BLYGOLD: copper tube and aluminum fin coil with Blygold coating	●
	COPPERFIN: copper tube and fin coil	●
Installation		
Antivibratorios	Anti-vibration mounts	●
Electrical panel	Electrical panel ventilation	✓
Electrical supply	400 V / III ph / 50 Hz without neutral	✓
	Other electrical voltages (please inquire)	●
Insulation	Compressors in a fully enclosed sheet metal compartment (1)	●
	Acoustic insulation of the compressor compartment	●
	Thermal insulation	✓
	Insulation of all cold piping lines	●
	High-performance acoustic insulation jacket for compressors from the manufacturer (1)	●
Protection grilles	Coil protection grille	●
	Access protection grille around the equipment perimeter	●
Control		
	Control programable AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	BACNET/LONWORKS communication	●
	Electric energy meter	●

✓ Included as standard
● Optional
- Not applicable

(1) Both options are not compatible

pangea eco *inverter*

R1234ze technical data

KEYTER

KWT ECO Inverter model - Standard version			2075	3100	3125	4150	4160	6180
COOLING-ONLY VERSION (R)								
Cooling capacities	Nominal cooling capacity (1)	kW	239,4	330,5	425,9	460,2	478,8	526,4
		TR	68,5	94,0	121,5	131,0	136,5	150,0
		kBTU/h	822	1128	1458	1572	1638	1800
	Absorbed power (2)	kW	86,9	115,8	154,6	182,8	187,3	170,7
	EER (3)	kW/kW	2,8	2,9	2,8	2,5	2,6	3,1
		BTU/W*h	9,5	9,7	9,4	8,6	8,7	10,5
	SEER (4)	kWh/kWh	4,8	4,8	4,8	4,8	4,9	5,0
	ηs,c (5)	%	184%	183%	185%	184%	189%	193%
	SEPR (7°C) (6)	kWh/kWh	5,86	5,95	5,85	5,62	5,66	6,18
	SEPR (-8°C) (6)	kWh/kWh	3,73	3,90	3,73	3,59	3,53	4,03
	IPLV (7)	kW/TR	0,57	0,58	0,57	0,57	0,57	0,56
		kBtu/kWh	20,35	20,28	20,41	20,38	20,67	20,91
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50HZ without neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R1234ze / 4					
	Compressor type		Semi-hermetic screw compressor + VDF					
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	2/2	2/2
	No. power stages		25%-100%					
Hydraulic circuit	Indoor water flow rate	m³/h	41,2	56,9	73,4	79,3	82,5	90,7
	Type of heat exchanger		Shell and tube heat exchanger					
	Hydraulic connections Ø		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC
Outdoor fan	Outdoor air flow rate	m³/h	86000	129000	129000	172000	172000	258000
	Number of fans		4	6	6	8	8	12
	Ø and type of fan	mm	800 Axial EC HP					
Sound pressure level of the equipment (Lp10) (9)		dB(A)	67,0	67,4	67,5	67,9	68,1	67,6
Weights	Empty weight (S version)	kg	3042	4052	4072	5062	5092	6847
	In-service weight (S version)	kg	3138	4160	4216	5206	5284	7135

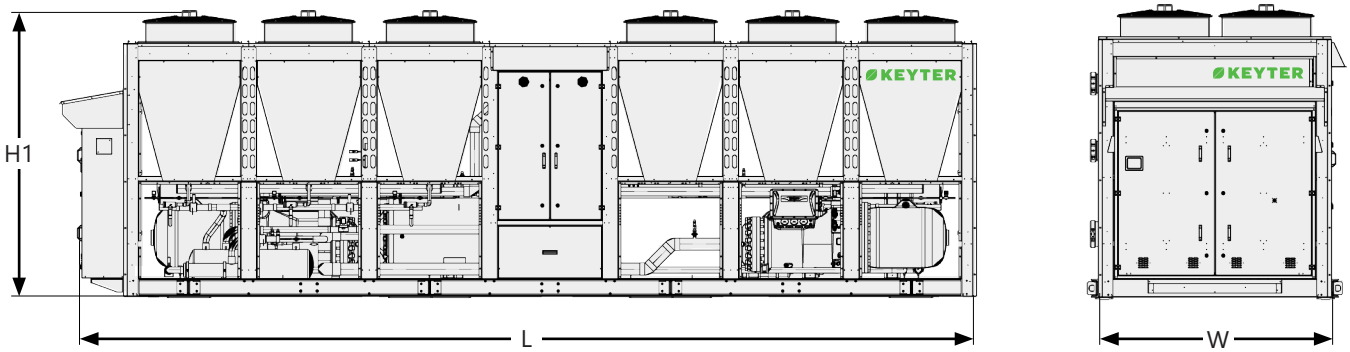
KWT ECO Inverter model - Standard version			6210	6240	6260	8250	8300
COOLING-ONLY VERSION (R)							
Cooling capacities	Nominal cooling capacity (1)	kW	661,0	756,2	852,1	837,7	920,7
		TR	188,0	215,5	242,5	238,5	262,0
		kBTU/h	2256	2586	2910	2862	3144
	Absorbed power (2)	kW	256,2	282,8	309,6	266,0	365,4
	EER (3)	kW/kW	2,6	2,7	2,8	3,1	2,5
		BTU/W*h	8,8	9,1	9,4	10,8	8,6
	SEER (4)	kWh/kWh	4,9	5,0	5,0	5,1	4,9
	ηs,c (5)	%	190%	191%	193%	194%	188%
	SEPR (7°C) (6)	kWh/kWh	5,68	5,77	5,85	6,25	5,62
	SEPR (-8°C) (6)	kWh/kWh	3,66	3,74	3,79	4,10	3,62
	IPLV (7)	kW/TR	0,56	0,56	0,56	0,56	0,57
		kBtu/kWh	20,71	20,82	20,89	21,01	20,62
TECHNICAL SPECIFICATIONS							
Power supply			400V / III / 50HZ without neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R1234ze / 4				
	Compressor type		Semi-hermetic screw compressor + VDF				
	No. of refrig. circuits / compressors		2/2	2/2	2/2	2/2	2/2
	No. power stages		25%-100%				
Hydraulic circuit	Indoor water flow rate	m³/h	113,9	130,3	146,8	144,3	158,6
	Type of heat exchanger		Shell and tube heat exchanger				
	Hydraulic connections Ø		DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC
Outdoor fan	Outdoor air flow rate	m³/h	258000	258000	258000	344000	344000
	Number of fans		12	12	12	16	16
	Ø and type of fan	mm	800 Axial EC HP				
Sound pressure level of the equipment (Lp10) (9)		dB(A)	68,9	69,0	69,2	69,0	70,2
Weights	Empty weight (S version)	kg	7157	7177	7192	9142	9237
	In-service weight (S version)	kg	7373	7429	7480	9478	9525

(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7°C and an outdoor air temperature of 35°C. Capacities calculated with a fouling factor for the heat exchanger of $0.43 \cdot 10^{-4}$ (m^2K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Values of ηs,c (Seasonal Energy Efficiency) in compliance with the EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Given values of the Seasonal Energy Performance Ratio (SEPR) for high-temperature process chillers (12/7°C) in compliance with the EU Ecodesign Regulation 2016/2281. Values of the Seasonal Energy Performance Ratio (SEPR) for medium-temperature process chillers (-2/-8°C) in compliance with the EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

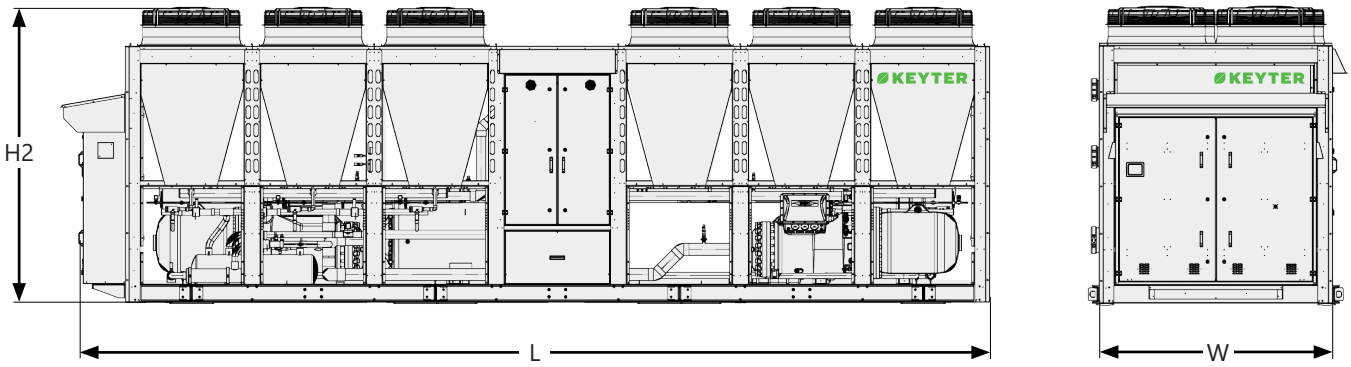
pangea eco inverter

dimensions

Standard version:



Version with optional Axiblade:



Dimensions KWT Inverter Version / Optional Total Recovery (mm)					
	Series 2	**Series 3**	**Series 4**	**Series 6**	**Series 8**
L	3810	4910	6010	8210	10410
W	2100	2100	2100	2100	2100
H1	2600	2600	2600	2600	2600
H2, with optional Axiblade	2650	2650	2650	2650	2650

For container transport, the external nozzles are shipped disassembled for subsequent installation on site. Optional internal nozzles are also available for container transport, with a total equipment height of 2400 mm.

With the optional AxiTop, the equipment height increases by 180 mm from the total equipment height. The AxiTop is a removable component that can be installed on site.

The optional hydraulic group with pump is supplied in a separate module (please refer to the technical documentation).

pangea inverter

Screw air-to-water chillers

316-1242 kW

Adaptation and Environment

- Reduced refrigerant charge with low GWP HFO R-513A, minimizing the CO_2 footprint (56% lower GWP compared to R-134a).
- Wide operating range of the equipment.
- Series condensing pressure control for year-round operation.
- They feature the latest generation AQUAMATIX Siemens modular programmable electronic control.
- Adaptability to the installation with a wide range of models and options.

Energy Efficiency

- Units with inverter screw compressors and external frequency drives, featuring state-of-the-art multitube heat exchangers.
- Electronic fans and electronic expansion valve as standard for minimal energy consumption.
- PANGEA offers very high energy efficiency both at partial and full load, reducing operating costs.

System that utilizes residual condensation heat from air to heat water for both domestic hot water (DHW) and industrial applications.

Decarbonize today, breathe tomorrow

Codification:

KWT | | | **S V S3E**

Series | Size | Power

Operating mode
S - Standard equipment

Version - Compressor Type
V - Inverter screw compressor

Hydraulic version
S - Standard equipment

Power supply
3 - 400V/III/50Hz without neutral (standard)

Refrigerant
Y - R134a / **T** - R513A / **E** - R1234ze (PANGEA ECO)

pangea inverter
range specification

		KWT
General characteristics		
Compressors	Semi-hermetic screw compressors with inverter technology	✓
Expansion valves	Electronic expansion valve	✓
Fans		
Outdoor fans	Condensing pressure control	✓
	EC axial fans	✓
	High-performance EC axial fans	●
	EC AxiBlade axial fans	●
	Straight external nozzles	✓
	Curved external nozzles (Silent ring)	●
	AxiTop diffuser	●
Hydraulic		
Pumps (in independent hydraulic module)	Single pump with standard, high, or very high pressure options	●
	Pump with variable speed drive	●
	Standard, high pressure, and very high pressure backup pump	●
Heat exchanger	Shell-and-tube heat exchanger	✓
Hydraulic components	Low-temperature kit for operation with water outlet temperature < 0ºC	●
	Low outdoor temperature kit	●
	Victaulic adapter - Flange	●
	Water filter	●
Energy		
Energy recovery	Partial/total recovery of condensate heat	●
Anticorrosion		
Coils	Copper tube / aluminum fin coil	✓
	Al / Al microchannel batteries	●
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength coil with Cu tubes / Al fins	●
	BLYGOLD: copper tube and aluminum fin coil with Blygold coating	●
	COPPERFIN: copper tube and fin coil	●
Installation		
Antivibratorios	Anti-vibration mounts	●
Electrical panel	Electrical panel ventilation	✓
Electrical supply	400 V / III ph / 50 Hz without neutral	✓
	Other electrical voltages (please inquire)	●
Insulation	Compressors in a fully enclosed sheet metal compartment (1)	●
	Acoustic insulation of the compressor compartment	●
	Thermal insulation	✓
	Insulation of all cold piping lines	●
	High-performance acoustic insulation jacket for compressors from the manufacturer (1)	●
Protection grilles	Coil protection grille	●
	Access protection grille around the equipment perimeter	●
Control		
	Control programable AQUAMATIX	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	BACNET/LONWORKS communication	●
	Electric energy meter	●

✓ Included as standard
● Optional
- Not applicable

(1) Both options are not compatible

pangea inverter

R513A technical data

KEYTER

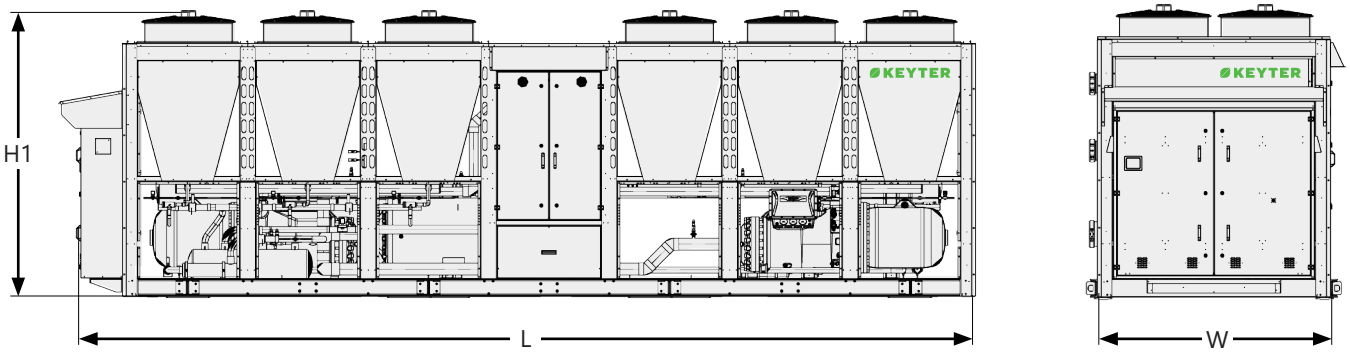
Model KWT - Standard version			2075	3100	3125	4150	4160	6180
COOLING-ONLY VERSION (R)								
Cooling capacities	Nominal cooling capacity (1)	kW	316,6	441,3	563,1	608,5	633,0	695,9
		TR	90,5	125,5	160,5	173,5	180,0	198,0
		kBTU/h	1086	1506	1926	2082	2160	2376
	Absorbed power (2)	kW	117,6	156,4	209,9	247,7	253,9	228,5
	EER (3)	kW/kW	2,7	2,8	2,7	2,5	2,5	3,0
		BTU/W*h	9,2	9,6	9,2	8,4	8,5	10,4
	SEER (4)	kWh/kWh	4,7	4,7	4,7	4,7	4,9	5,0
	ηs,c (5)	%	181%	182%	182%	182%	186%	191%
	SEPR (7°C) (6)	kWh/kWh	5,79	5,92	5,78	5,56	5,59	6,15
	SEPR (-8°C) (6)	kWh/kWh	3,67	3,87	3,66	3,53	3,47	4,00
	IPLV (7)	kW/TR	0,58	0,58	0,58	0,58	0,57	0,56
		kBtu/kWh	20,19	20,21	20,23	20,23	20,51	20,81
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50HZ without neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R513A / 573					
	Compressor type		Semi-hermetic screw compressor + VDF					
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	2/2	2/2
	No. power stages		25%-100%					
Hydraulic circuit	Indoor water flow rate	m^3/h	56,1	74,8	92,2	104,4	112,2	131,7
	Type of heat exchanger		Shell and tube heat exchanger					
	Hydraulic connections Ø		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC
Outdoor fan	Outdoor air flow rate	m^3/h	96000	144000	144000	192000	192000	288000
	Number of fans		4	6	6	8	8	12
	Ø and type of fan	mm	800 Axial EC HP					
Sound pressure level of the equipment (Lp10) (9)		dB(A)	65,0	65,4	65,5	65,9	66,1	65,6
Weights	Empty weight (S version)	kg	3042	4052	4072	5062	5092	6847
	In-service weight (S version)	kg	3138	4160	4216	5206	5284	7135

Model KWT - Standard version			6210	6240	6260	8250	8300
COOLING-ONLY VERSION (R)							
Cooling capacities	Nominal cooling capacity (1)	kW	873,9	999,8	1126,6	1107,5	1241,5
		TR	248,5	284,5	320,5	315,0	353,5
		kBTU/h	2982	3414	3846	3780	4242
	Absorbed power (2)	kW	346,7	383,4	420,4	357,7	495,0
	EER (3)	kW/kW	2,5	2,6	2,7	3,1	2,5
		BTU/W*h	8,6	8,9	9,1	10,6	8,6
	SEER (4)	kWh/kWh	4,9	4,9	4,9	5,0	4,9
	ηs,c (5)	%	187%	189%	190%	192%	188%
	SEPR (7°C) (6)	kWh/kWh	5,62	5,71	5,78	6,20	5,61
	SEPR (-8°C) (6)	kWh/kWh	3,60	3,67	3,72	4,05	3,61
	IPLV (7)	kW/TR	0,57	0,57	0,56	0,56	0,57
		kBtu/kWh	20,56	20,66	20,71	20,88	20,59
TECHNICAL SPECIFICATIONS							
Power supply			400V / III / 50HZ without neutral				
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R513A / 573				
	Compressor type		Semi-hermetic screw compressor + VDF				
	No. of refrig. circuits / compressors		2/2	2/2	2/2	2/2	2/2
	No. power stages		25%-100%				
Hydraulic circuit	Indoor water flow rate	m^3/h	150,5	172,2	194,0	190,8	213,9
	Type of heat exchanger		Shell and tube heat exchanger				
	Hydraulic connections Ø		DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
Outdoor fan	Outdoor air flow rate	m^3/h	258000	258000	258000	344000	344000
	Number of fans		12	12	12	16	16
	Ø and type of fan	mm	800 Axial EC HP				
Sound pressure level of the equipment (Lp10) (9)		dB(A)	68,9	69,0	69,2	69,0	70,2
Weights	Empty weight (S version)	kg	7157	7177	7192	9142	9237
	In-service weight (S version)	kg	7373	7429	7480	9478	9525

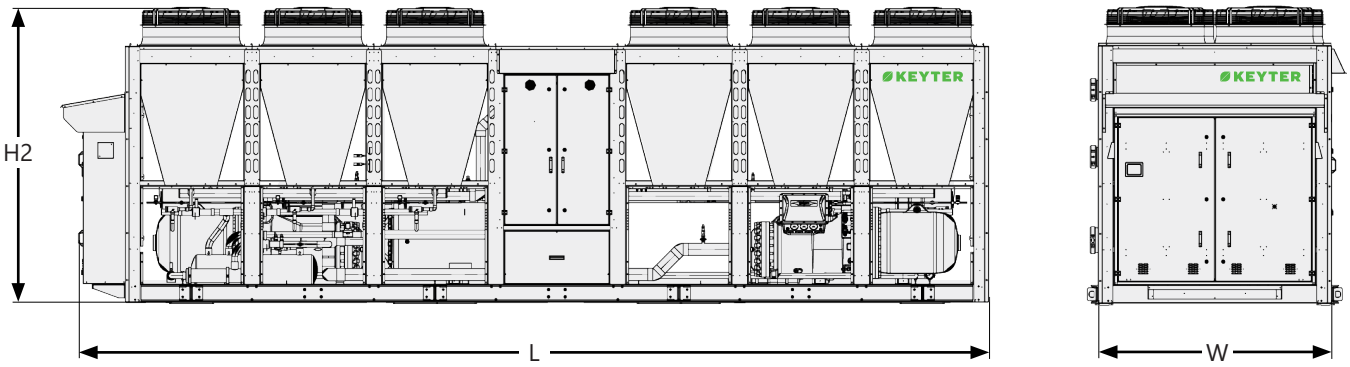
(1) Nominal cooling capacity for a water inlet/outlet temperature of 12/7°C and an outdoor air temperature of 35°C. Capacities calculated with a fouling factor for the heat exchanger of $0.43 \cdot 10^{-4}$ (m^2K/W).
(2) Nominal power absorbed by compressors and outdoor fans.
(3) EER calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Values of ηs,c (Seasonal Energy Efficiency) in compliance with the EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Given values of the Seasonal Energy Performance Ratio (SEPR) for high-temperature process chillers (12/7°C) in compliance with the EU Ecodesign Regulation 2016/2281. Values of the Seasonal Energy Performance Ratio (SEPR) for medium-temperature process chillers (-2/-8°C) in compliance with the EU Ecodesign Regulation 2015/1095.
(7) Seasonal Energy Efficiency Factor according to AHRI Standards 550/590.
(9) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

pangea inverter
dimensions

Standard version:



Version with optional Axiblade:



Dimensions KWT Inverter Version / Optional Total Recovery (mm)					
	Series 2	**Series 3**	**Series 4**	**Series 6**	**Series 8**
L	3810	4910	6010	8210	10410
W	2100	2100	2100	2100	2100
H1	2600	2600	2600	2600	2600
H2, version with Axiblade	2650	2650	2650	2650	2650

For container transport, the outer nozzles are shipped disassembled, for later assembly on site.
Optional inner nozzles are also available for container transport, with a total height of 2400 mm.
With the optional AxiTop, the height of the unit is increased by 180 mm in relation to the total height of the unit. The AxiTop is a removable element and can be assembled on site.
The optional Hydraulic unit with pump is supplied as a separate module (please refer to technical documentation).

oneida eco inverter

Water-to-water chillers
screw

232-1368 kW

Adaptation and Environment

- Reduced charge of low GWP HFO refrigerant R-1234ze, minimizing CO_2 footprint (99.5% lower GWP than R-134a or R-32).
- Incorporate the latest generation AQUAMATIX Siemens programmable modular electronic control.
- Optional condensing pressure control via a 3-way valve.
- Adaptability to the installation with a wide range of models.
- Maximum accessibility and easy maintenance.

Codification:

KZT | | RWS3E
Series | Size | Power

Operating mode
R - Cooling only

Version - Compressor Type
W - Inverter screw compressor

Hydraulic version
S - Standard equipment

Power supply
3 - 400V/III/50Hz without neutral (standard)

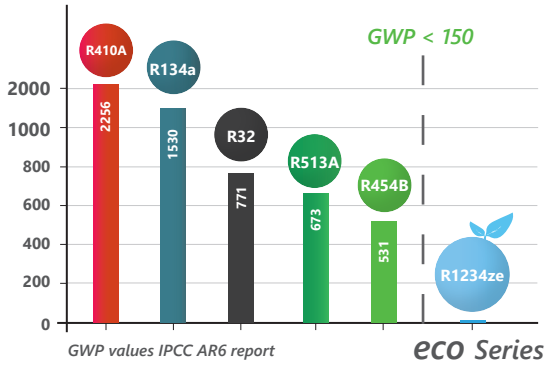
Refrigerant
E - R1234ze

Energy Efficiency

- High energy efficiency chillers equipped with INVERTER screw compressors and state-of-the-art Multitubular Heat Exchangers.
- High energy efficiency at partial and full loads, reducing operating costs.
- Electronic expansion valve for minimum energy consumption.
- Partial recovery system that uses waste heat from condensation to heat water for DHW or industrial applications.

HT Heat only version for high temperature water supply up to 85ºC.

Refrigerants - GWP



Decarbonize today, breathe tomorrow

oneida eco *inverter*

range specification

		KZT
General characteristics		
Refrigerant	Refrigerant R1234ze Low GWP	✓
	Refrigerant leak detector (recommended for equipment with R1234ze refrigerant)	●
Compressor	Semi-hermetic screw compressor with Inverter technology	✓
	Compressor anti-vibration mounts	✓
	Compressor port fitting for an economiser with a muffle (silencer) to absorb vibrations in the piping	●
Expansions valve	Electronic expansion valve	✓
	Compressor suction valve	●
Hydraulic		
Exchanger	Shell and tube heat exchangers in evaporator and condenser	✓
	Triple protection for the heat exchanger with a water flow switch, antifreeze protection for freon and antifreeze protection for water	✓
Hydraulic components	Glycol sweeping of the hydraulic circuit for negative temperatures	✓
	Low-temperature kit for operation with water outlet temp. < 0°C	●
	Hydraulic connections with flanges	●
	Hydraulic unit with water flow pump as an independent module	●
Installation		
Electrical panel	Main switch	●
	Numbering of cables in electrical panel	✓
Power supply	400 V / III / 50 Hz without neutral	✓
	Other electrical voltages (see other options)	●
Insulation	Sheet compartment for compressor protection	●
	Sheet compartment for compressors with acoustic insulation in panels	●
	Original manufacturer high-performance acoustic installation jacket	●
Transportation	Clamps for transportation	✓
	Skid for container transportation	●
Control		
	AQUAMATIX configurable electronic control	✓
	Climatix HMI user terminal for AQUAMATIX control	✓
	RS485 communication interface for ModBus communication	✓
	Bacnet/Lonworks communication	●
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓
	EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection	●
	Transformer for control system	✓
	Oil level switch	●
	Condensation pressure control for year-round operation	●
	Electricity meter	●

✓ Included as standard
● Optional
- Not applicable

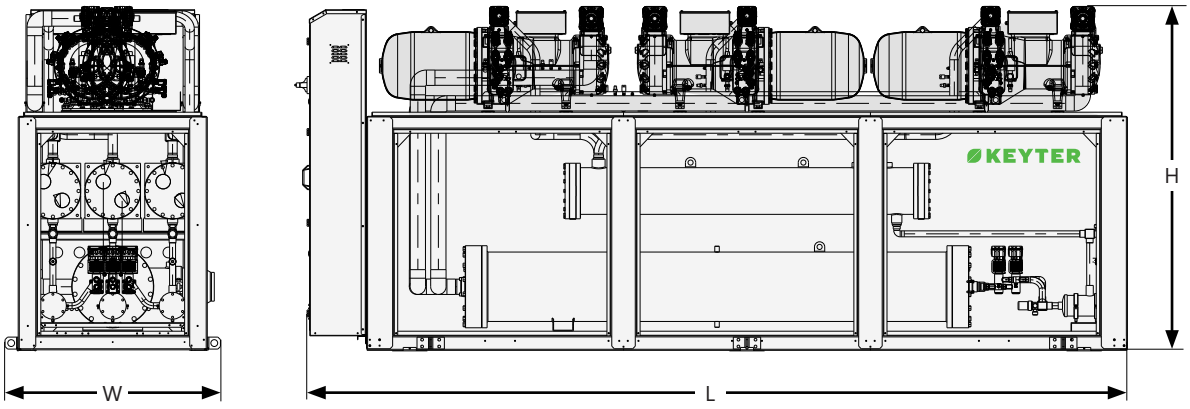
oneida eco inverter

R1234ze technical data

KZT model			1320	1460	1700	2M00	2M11	3M14	3M18
COOLING									
Cooling capacity	Nominal cooling capacity (1)	kW	232,0	332,0	474,0	698,0	814,0	948,0	1368,0
		TR	66,0	94,5	135,0	198,5	231,5	270,0	389,0
		kBTU/h	792	1134	1620	2382	2778	3240	4668
	Absorbed power (2)	kW	51,5	81,1	107,7	175,8	179,4	214,8	315,6
	Power in the condenser	kW	283,5	413,1	581,7	873,8	993,4	1162,8	1683,6
	EER (3)	kW/kW	4,5	4,1	4,4	4,0	4,5	4,4	4,3
		BTU/(h*W)	15,4	14,0	15,0	13,5	15,5	15,1	14,8
	SEER (4)	kWh/kWh	7,1	7,5	7,4	6,8	7,3	7,6	7,6
	ηs,c (5)	%	276%	290%	287%	262%	284%	295%	294%
TECHNICAL SPECIFICATIONS									
Power supply			400V / III / 50HZ without neutral						
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R1234ze / 4						
	Compressor type		screw compressors with Inverter technology						
	No. of refrig. circuits / compressors		1/1	1/1	1/1	2/2	2/2	2/2	3/3
	No. power stages			25-100%			12.5-100%		8.5-100%
Hydraulic circuit evaporator side	Water flow rate	m^3/h	40,0	57,2	81,6	120,2	140,2	163,3	235,6
	Type of heat exchanger		Shell and tube heat exchanger						
	Ø Hydraulic connections		VICTAULIC DN100	VICTAULIC DN125	VICTAULIC DN150	VICTAULIC DN200	VICTAULIC DN200	VICTAULIC DN200	VICTAULIC DN250
Hydraulic circuit condenser side	Water flow rate	m^3/h	48,8	71,2	100,2	150,5	171,1	200,3	290,0
	Type of heat exchanger		Shell and tube heat exchanger						
	Ø Hydraulic connections		VICTAULIC DN100	VICTAULIC DN125	VICTAULIC DN150	VICTAULIC DN150	VICTAULIC DN150	VICTAULIC DN150	VICTAULIC DN150
			-	-	-	VICTAULIC DN150	VICTAULIC DN150	VICTAULIC DN150	VICTAULIC DN150
			-	-	-	-	-	-	VICTAULIC DN150
Sound pressure level of the equipment (Lp10) (6)		dB(A)	66,1	68,1	72,1	72,9	72,9	72,9	74,8
Empty weight		kg	2253	3031	3367	4884	5732	5980	8444

(1) Nominal cooling capacity for a water inlet/outlet temp. of 12/7ºC in the evaporator. Capacities calculated with a fouling factor in the plate heat exchanger of 0.43·10E-4 ($m^2 \cdot K/W$).
(2) Nominal power input by compressors.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal efficiencies calculated according to EN 14825:2022.
(5) Seasonal energy efficiencies (ηs,c) in compliance with EU Ecodesign Regulation 2016/2281 for comfort applications.
(6) Sound pressure level in dB(A) in free field, at 10 m distance from the source, and directivity 1.

Dimensions of KZT Oneida ECO (standard equipment without hydraulic unit):



Dimensions S Version (mm)			
	KZT1 ON/OFF KZT1 INVERTER	KZT2 ON/OFF KZT2 INVERTER	KZT3 ON/OFF KZT3 INVERTER
L	3895	5135	6000
W	1500	1500	2100
H	2000	2350	2500

Hydraulic Pumping Group

KWC/Z pumping hydraulic groups for installations, created for plug & play solutions both electrically and hydraulically.

- Energy consumption reduction
- Easy installation and cost savings
- Integrated regulation, control, and supervision

This block-based plug & play solution for generation and distribution is optimized to have a minimal footprint, as it is designed in a compact form. KEYTER provides the most optimized solutions in terms of equipment and operation for these systems.

Plug & Play Electrical

- They feature a single connection that powers the entire pumping group, with an internal electrical panel for protection and control.
- The variable speed drives are supplied pre-configured to meet specific needs.
- Communication is established in block with Building Management.

Plug & Play Hydraulic

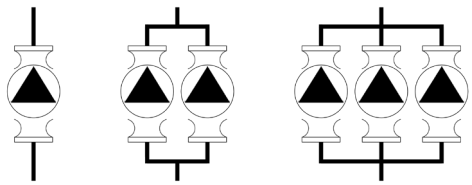
- It only requires connection to primary and secondary networks, which results in significant time and cost savings by greatly simplifying the installation.
- The field components of the hydraulic module are installed and tested at the factory.

Reduction in energy consumption

- The correct management of three pumps, each selected for one-third of the nominal flow rate, reduces consumption by 50% compared to a single pump operating at the nominal flow rate.
- The lifespan of the pumps in this configuration is significantly longer compared to a single pump. Service disruptions due to breakdowns are minimized.
- Insulation under the updated RD 1027/2007 regulation.

Pumping Module Configurations

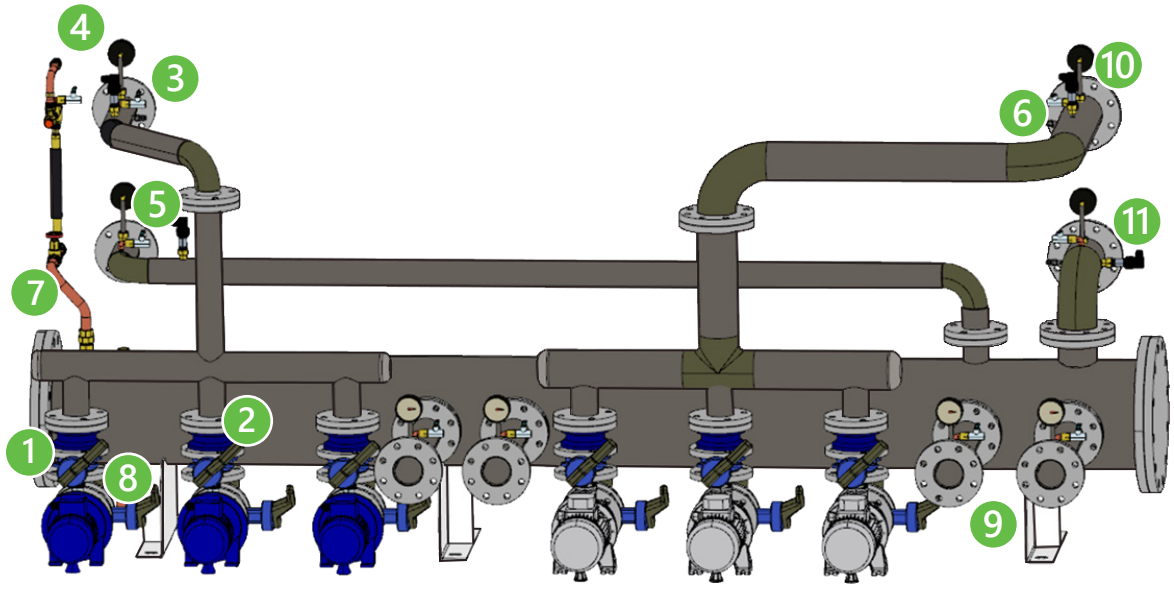
Add-on Modules in configurations:



Single pump | Double pump | Triple pump

pump hydraulic group
for installations

Pumping group component configuration



Pumps custom-equipped to meet the installation's needs.

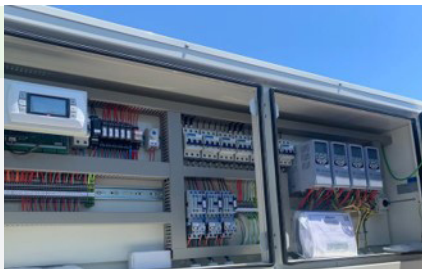
1	Shut-off valves	7	Filling
2	Anti-vibration mounts	8	Emptying
3	Purge	9	Connection to chillers
4	Pressure gauges	10	Distribution to zones
5	Safety valves	11	Return to zones
6	Probe inserted in well		Filters

Options:

- Expansion vessels
- Buffer tank
- Valves
- Field components

Protection and Control Panel

- Main switch
- Circuit breakers
- RCDs
- Phase detection relay
- Variable speed drives
- Motor protectors



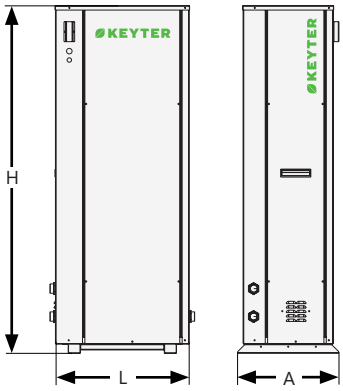
Supervision

- Network Pressure Regulation.
- Starting and stopping of the pumps both locally and remotely.
- Adjustment of operating setpoints and control variables.
- Access to frequency drive parameters via Modbus.
- Reading of pressure and temperature measurements.
- Reading of the pumping status.
- Pump rotation.
- Dry-Run protection
- Time-Based Control
- Incident Logging

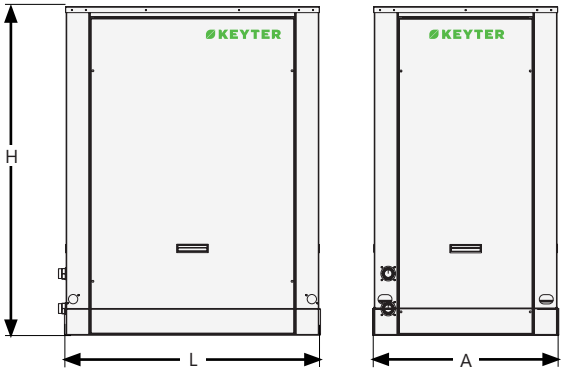
Independent hydraulic group
with inertia tank

Independent group with an inertia tank ranging from 100 liters to 725 liters of capacity, external to the units. Available version with integrated pumping group with one pump, two pumps, or a main pump plus a reserve pump. Optionally, they can include support electric heaters, an electrical panel with magnetothermal protections, and a control thermostat.

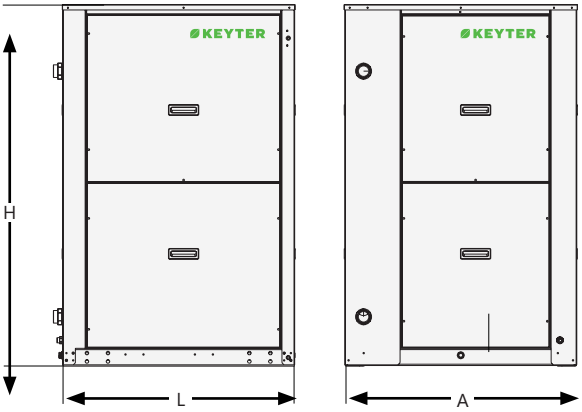
series x100



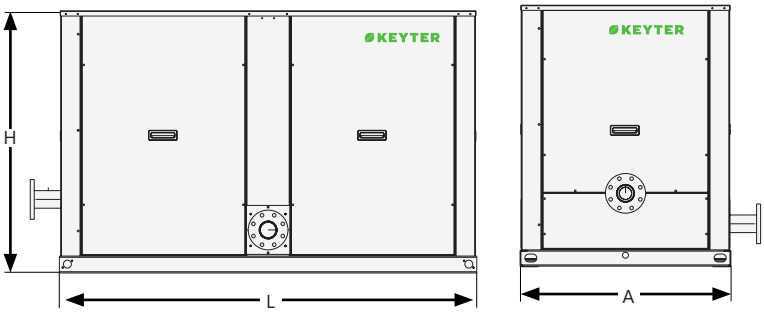
series x200



series x375



series x725



Dimensions (mm)				
	x100	**x200**	**x375**	**x725**
L	605	1100	1100	2100
A	456	800	1100	1050
H	1567	1300	1720	1320

Codification:

KWD

Series

Bodywork of the unit with which the module is paired.

Buffer tank volume (liters)

Flow rate in m^3/h for 15 mH_2O

1: one pump / **2**: two pumps in parallel / **9**: pump + reserve pump (if no pumps are included, this digit and the following ones are not required).

S: without heaters in the tank /
R: with heaters in the tank and thermostat /
P: with pumping unit

AHUs & Terminal Units

Air handling units and heat recovery units

2000 m^3/h - 46000 m^3/h

Air renewal | Indoor air quality | Heat recovery | Air purification

Climate control units

daira

16-98 kW | 22-118 kW

EC

3000m^3/h - 17000 m^3/h

Air handling units

Fancoils

fancoils

Air-cooled condensers

belair

KWPV

51-847 kW

Air coolers for liquid cooling

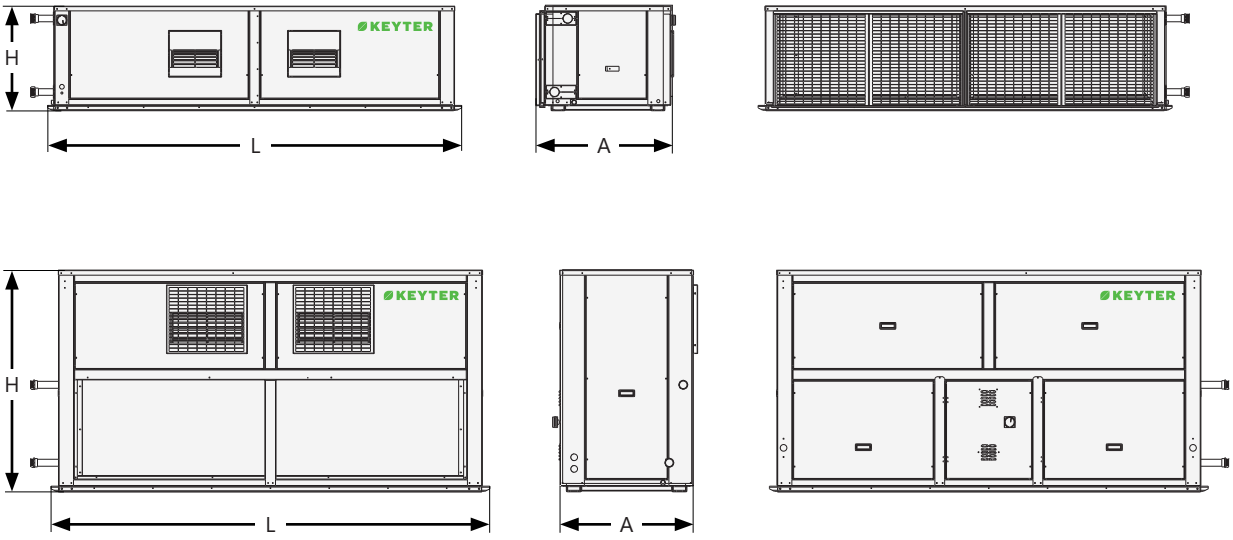
daira

Air handling units

16-98 kW 22-118 kW

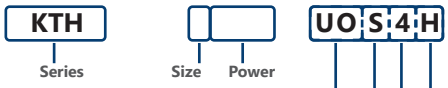
3000m³/h - 17000 m³/h

Dimensions:



Dimensions horizontal unit (KTH) (mm)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	906	1136	1339	2106	2556	2556	2556
A	806	806	806	806	806	856	856
H	660	660	660	660	660	660	960
Dimensions vertical unit (KTV) (mm)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	906	1136	1339	2106	2556	2556	2556
A	806	806	806	806	806	856	856
H	1100	1331	1331	1334	1334	1629	1629

Codification:



U - Non-self-contained model
O - Without compressor

S - Standard equipment
F - Version with free cooling

Power supply
4 - 400V/III/50Hz with neutral (standard)

H - Water

(1) Nominal cooling capacity for an indoor air temperature of 27°C/50% RH and water at 7/12°C.

(2) Nominal power consumed by the indoor unit fans.

(3) Nominal heating capacity for an indoor air temperature of 20°C and water at 45/40°C.

(4) Sound pressure level in dB(A) measured in free field at 10 m from the source, directivity 2, and at 1.5 m above the ground.

KTH/KTV model			0015	1022	2026	2039	3041	3045	4060	5080	6080	6090
Cooling Mode	Cooling capacity (1)	kW	16,2	25,2	28,7	35,4	44,5	48,7	54,4	77,3	85,3	97,6
	Absorbed power (2)	kW	0,46	0,87	0,99	1,65	1,01	1,67	2,26	2,22	1,92	2,82
	Water flow rate	m3/h	2,8	4,3	4,9	6,1	7,7	8,4	9,4	13,3	14,7	16,8
Heating Mode	Heating power (3)	kW	22,4	33,4	37,8	46,2	59,5	66,8	73,2	101,4	112,2	118,1
	Absorbed power (2)	kW	0,46	0,87	0,99	1,65	1,01	1,67	2,26	2,22	1,92	2,82
	Water flow rate	m3/h	3,9	5,8	6,5	8,0	10,2	11,5	12,6	17,5	19,3	20,3
Heating Mode Simultaneous	Heating power (3)	kW	5,5	10,4	11,5	12,6	19,5	21,8	26,2	27,7	38,2	41,5
	Absorbed power (2)	kW	0,51	0,93	1,02	1,73	1,06	1,86	2,32	2,40	2,05	2,96
	Water flow rate	m3/h	0,9	1,8	2,0	2,2	3,4	3,7	4,5	4,8	6,6	7,1
TECHNICAL SPECIFICATIONS												
Indoor air flow		m3/h	3000	4500	5000	6200	7000	9000	10500	12000	14000	17000
Nominal internal available pressure		Pa	60	80	80	80	100	100	100	100	100	100
Type of fan			Centrifugal									
Weight serie KTH		kg	120	132	168	225	283	294	338	384	454	465
Weight serie KTV		kg	192	236	248	260	415	436	589	638	638	671
Sound pressure (4)		dB	46	49	50	54	48	52	54	52	50	54

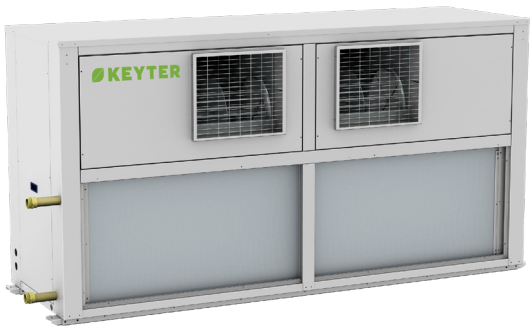
FHW

Options:

- EC technology supply fans
- Different possible configurations for supply and return
- Free-cooling box
- F filtration section
- Electric support heaters
- Hot water support coil in duct with three-way valve
- Dirty filter detector
- Differential pressure switch for air flow control
- Anticorrosion coating of the internal coil
- Three-way valve available as a separate kit
- Other electrical voltages (230V/III ph/50-60Hz, 380V/III ph/60Hz, 400V/III ph/60Hz, 460V/III ph/60Hz)

Horizontal unit KTH

Vertical unit KTV



Cassette-type fancoils — TL

2 kW 15 kW

Cassette-type fancoil for installation in false ceilings, ensuring uniform air conditioning throughout the room.

The dimensions of the chassis and external panel are compatible with most European false ceiling standards, with diffusers.

- **600x600** (size 0–4)
- **800x800** (size 5–6)
- **1200x1200** (size 7-8)

2- or 4-pipe systems for cooling and heating operation.

- AC fan version – 7 sizes (from 610 to 1820 m³/h).
- ECM Inverter fan version – 7 sizes (from 535 to 2480 m³/h).

Wall-mounted fancoils — FHW

1 kW 4 kW

Wall-mounted fancoil for installation on the wall with a very aesthetic design, high performance, and low noise level.

- Size 1 - 2 : width 800 mm
- Size 3 - 4 : width 1185 mm

2-pipe systems for cooling or heating operation.

- AC fan version – 4 sizes (from 375 to 790 m³/h).
- ECM Inverter fan version – 4 sizes (from 415 to 770 m³/h).

Console-type fancoils — TEC

Cased direct-drive fancoil for horizontal and vertical installation, with various casing options available (CV, CH, CVB types).
Available in 2- or 4-pipe versions for cooling and heating operation.
Equipped with 3- or 4-row heat exchange coils, with the option to add a 1- or 2-row coil for 4-pipe systems.

- AC fan version – 9 sizes (from 220 to 1500 m³/h).
- ECM Inverter fan version – 9 sizes (from 330 to 1365 m³/h).

1 kW 7.5 kW

Cased vertical version with bottom air intake, allowing installation on the floor using suspension feet.

Cased horizontal or vertical version with front air intake and grille, allowing installation on the floor or ceiling against the wall.

Low-pressure duct fancoils — TEC

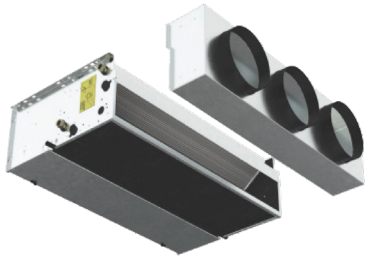
1 kW 7.5 kW

Non-cased horizontal or vertical version, without casing, suitable for duct distribution (ESP 50 Pa).

2- or 4-pipe version for cooling and heating operation.

- AC fan version – 9 sizes (from 220 to 1500 m^3/h).
- ECM Inverter fan version – 9 sizes (from 330 to 1365 m^3/h).

High-pressure duct fancoils — HPL



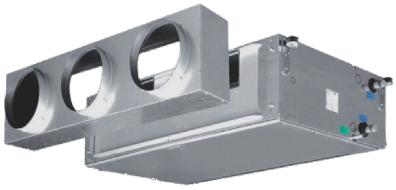
3 kW 10 kW

Non-cased horizontal fancoil for ducts with a available pressure of up to 80 Pa.

2- or 4-pipe version for cooling and heating operation.

- AC fan version – 7 sizes (from 535 to 1810 m^3/h).
- ECM Inverter fan version – 4 sizes (from 490 to 2220 m^3/h).

Very high-pressure duct fancoils — DFCL

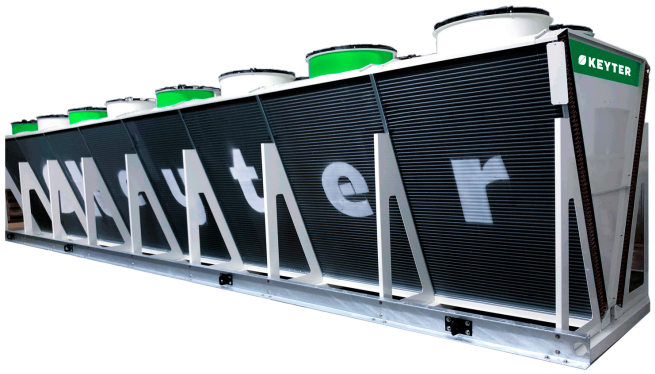


5 kW 42 kW

Non-cased horizontal fancoil of medium/high power with available pressure up to 160 Pa (sizes 1-5) and 250 Pa (sizes 6-7) 400 Pa.

2- or 4-pipe version for cooling and heating operation.

- AC fan version – 7 sizes (from 1630 to 7330 m^3/h).
- ECM Inverter fan version – 6 sizes (from 1500 to 5215 m^3/h).



belair

Air-cooled liquid coolers

51-847 kW

Custom configuration

- Possibility of study and design of custom equipment according to specifications thanks to the Selection Program.
- Different types of constructions to adapt to project specifications.
  - Horizontal design.
  - Vertical design.
  - V-shaped units with dry cooling.
  - V-shaped units with adiabatic cooling.

Energy savings and control

- High-efficiency ventilation units using two-speed AC axial fans or EC axial fans.
- Adiabatic panel with low loss and high efficiency.
- Control of the adiabatic system prioritizing the use of the equipment in dry mode and utilizing adiabatic mode during peak high outdoor temperatures to minimize water consumption.

Adaptation

- Aero-coolers with a casing protected by weather resistant polyester paint and high UV protection.
- Efficient operation according to variations in ambient temperature at the coil inlet.

Energy efficiency

- Units made with high-performance heat exchangers.
- Possibility of incorporating a high-efficiency adiabatic cooling system with low pressure loss to enhance efficiency.

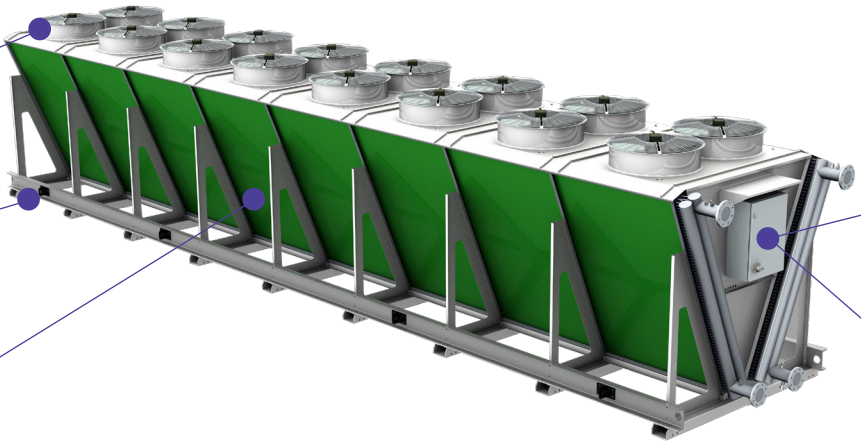
Ease of control

- CAREL electronic regulation and monitoring, easy to use and high performance.
- Wide selection of communication protocols (Modbus, BACnet, LonWorks).

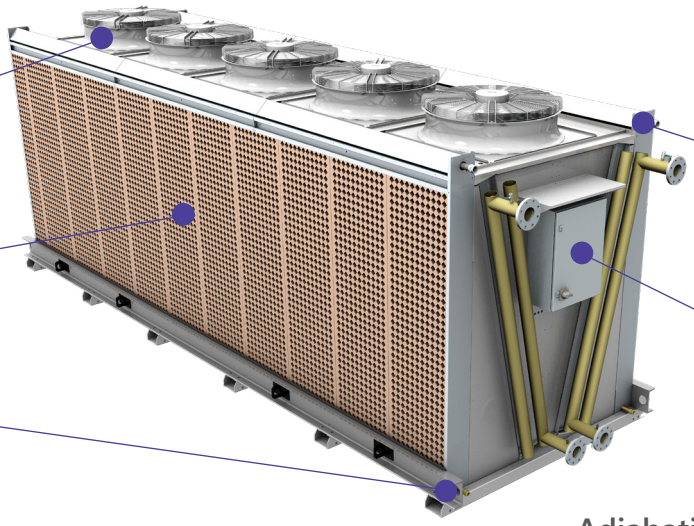
Compact aero-coolers with a structure designed to facilitate transportation and lifting.

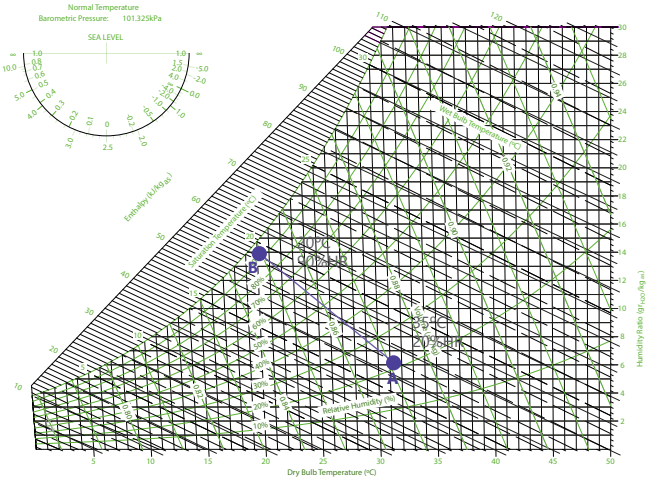
Optimized design for dry operation or adiabatic cooling using a high-efficiency adiabatic panel with low pressure loss.

Dry cooling



Adiabatic cooling





Adiabatic cooling

Cooling through an adiabatic panel is a direct air cooling system without the possibility of sprays or water stagnation, and therefore, with no risk of legionella generation.

By using high-performance panels with low pressure loss, efficiencies greater than 90% are achieved. This results in a reduction of air temperature by up to 15°C in warm and dry climates.

The control logic prioritizes the use of the equipment in dry mode and only utilizes adiabatic mode during peaks of high outdoor temperatures.

Rooftop

High-efficiency ***air-to-air*** rooftop units

139 *persea evo*	*KCRA*	R454B	

Comfort applications (autonomous units)

152 *eirene* *inverter*	*KCV*	*Compact vertical air-to-air units*
158 *thalia*	*KGH | KGV*	*Air-water compact plate heat exchangers*

rooftop **persea evo**

High-efficiency air-to-air rooftop units

20-317 kW 19-332 kW

EC EC AER DER heat recovery

4000 m³/h - 55000 m³/h

inverter version

20-147 kW 19-139 kW

Rooftop units equipped with inverter compressor technology, electronic expansion valve, and variable speed electronic fans to ensure maximum energy savings by minimizing the energy consumption of each application.

Exceeds the efficiency requirements of the Ecodesign Regulation (ErP 2021)
Average SEER of 5,2 - Average SCOP of 4

euro version

27-317 kW 25-332 kW

Rooftop units equipped with multiscroll compressor technology with tandem design, electronic expansion valve, and electronic fans, to achieve significant energy savings by optimizing the energy consumption of each application.

Exceeds the efficiency requirements of the Ecodesign Regulation (ErP 2021)
Average SEER of 4,7 - Average SCOP of 3,7

Adaptation and Environment

- Reduced refrigerant charge with low-GWP R-454B, minimizing CO_2 footprint (77% less GWP than R-410A and 31% less than R-32).
- Control of indoor air quality.
- Fully adaptable and configurable rooftops with optional features and a wide variety of installations.

Energy Efficiency

- Inverter technology to maximize seasonal energy efficiency.
- Optimized energy recovery systems for extracted air: Active Inverter Recovery – Dynamic Recovery
- Advanced control to increase seasonal efficiency by optimizing defrost management in the heat pump.

Active INVERTER Recovery

Codification:

KCRA | | **R V S4C**
Series | Size | Power

Operating mode
I - Reversible heat pump
R - Cooling only

Version - Compressor Type
Z - EURO version, multiscroll compressors
V - INVERTER version, Inverter technology compressors

Version - Type of Recovery
S - Standard equipment / **R -** Equipment with active recovery /
D - Equipment with dynamic recovery.
Power supply
4 - 400V/III/50Hz with neutral (standard)
Refrigerant
C - R454B / **B -** R452B / **W -** R410A

persea evo

range specification

General characteristics

		INVERTER	EURO
Refrigerant	R454B	✓	✓
	Charged equipment	✓	✓
	R452B or R410A refrigerants	●	●
	Leak detection*	✓	✓
	ATEX fan for extracting refrigerant gas in case of a leak	●	●
Bodywork	Self-supporting chassis/cabinet in galvanized steel with oven-cured thermosetting polyester paint treatment	✓	✓
	Panels for enclosed compressor compartments	-	● (KCRA 5-6)
	Treatment of polyester thermosetting paint cured in the oven at the base of the equipment	✓	✓
	Customized color to suit the needs of the installation (standard RAL 9002)	●	●
	10 mm thick insulation in the indoor unit of an air conditioner	✓	✓
	Insulation in the indoor unit with a thickness of 20 mm	●	●
	Insulation in the indoor unit of 10 or 20 mm in polyethylene with aluminum foil, M1 fire rating	●	●
	Rock wool sandwich panel with 50 mm thick insulation, with M0 fire rating	●	●
	Anti-vibration supplements	●	●
Compressor	Multiscroll version Tándem	-	✓
	Soft starter	-	●
	Inverter Compressors	✓	-
	Inverter compressor driver maintenance display	●	-
	Acoustic insulation jacket	●	●
	Original high-performance acoustic insulation jacket from the manufacturer	●	●
	Compressor anti-vibration mounts	✓	✓
Expansion valves	Electronic Expansion Valves (up to model 4150 are integrated, no optional driver required)	✓	✓
	Electronic Expansion Valve (Starting from Model 4170)	●	●
	Thermostatic expansion valves	-	●
Refrigeration components	Thermal insulation in all cold metal lines (refrigerant or water)	✓	✓

Fans

Outdoor fans	EC technology axial fans	✓	✓
	High-pressure EC axial fans available	●	●
	AC induction motor axial fans with variable frequency drive (VFD)	●	●
	Curved external nozzles (silent ring)	✓	✓
	Internal nozzles (recommended for container transport in series 5 and 6)	●	●
	AxiTop diffusers (only with EC fans)	●	●
Indoor fans	EC plug-fan supply fan	✓	✓
	High-pressure EC plug-fan supply fan available.	●	●
	EC plug-fan return fan in optional return assembly	✓	✓
	High-pressure EC plug-fan return fan available with optional back-mounted return assembly	●	●

Heat exchangers

Coils	Large surface heat exchangers, made of copper tubes and aluminum fins	✓	✓
	Cu/Al Tube Batteries with Pre-Lacquered Polyurethane	●	●
	ALUCOAST: high-strength Cu tubes / Al fins (not available with A2L refrigerants)	●	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●	●
	COPPERFIN: Cu tubes / Cu fins (Under consultation with A2L refrigerants)	●	●
	Drop separator in interior coil	●	●

Air quality

Filtration	Washable G4 pre-filter	✓	✓
	F filtration, from F6 to F9 // Double stage F filtration	●	●
Air quality sensors	CO_2 or VOC sensor for ambient/duct measurement	●	●

✓ Included as standard
● Optional
- Not applicable

* R410A refrigerant leak detector optional

persea evo

range specification

KEYTER

Energy

		INVERTER	EURO
Energy recovery	Active inverter refrigeration recovery	●	●
	Dynamic refrigeration recovery	●	●
Free-cooling	Two-damper free-cooling (assembly A)	●	●
	Free-cooling with three dampers: thermal / enthalpic / thermoenthalpic	●	●
	Droplet separator in outdoor air damper	✓	✓

Installation

Heating support	Hot water support coil and 3-way valve	●	●
	Supporting electrical resistors (2 stages)	●	●
	Electric heaters for preheating fresh air at the exterior air intake	●	●
	Hot gas post-heating coil (HUMDRY)	●	●
	Gas burner in independent module	●	●
Condensate pans	Removable indoor stainless steel condensate pan	✓	✓
	Outdoor condensate tray in stainless steel	✓	✓
	Electric heater in outdoor condensate tray	●	●
Power supply	400 V / III ph / 50 Hz (with neutral)	✓	✓
Banks	Adjustable bank made of zinc aluminium	●	●
	Multi-directional adaptation bank	●	●
Packaging	Packaging for maritime transport	●	●

Control

Electronic control and communication	Climanager (µPC electronic control)	✓	✓
	User and maintenance pGD terminal (standard terminal-to-board maximum distance: 50 m)	✓	✓
	TH-Tune user terminal	●	●
	TCONN cards (for terminal to plate distances > 50 m) (see technical manual)	●	●
	Condensing pressure control with transducers	✓	✓
	Master-Slave management	●	●
	RS485 card for Modbus communication	●	●
	BACNET/LONWORKS communication	●	●
	Boss / tERA supervision systems	●	●
Defrosting	Defrosting by cycle reversal using a 4-way valve (in I version)	✓	✓
Additional control and safety elements	Main switch in electrical panel	✓	✓
	Magneto-thermal protections for compressors and fans	✓	✓
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓	✓
	EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection	●	●
	Differential switches	●	●
	Differential pressure switch for airflow control (compulsory with electrical heaters)	●	●
	Smoke detector	●	●
	Dirty filter detector	●	●
	Ambient temperature sensor	●	●
	Electric energy meter / Thermal energy meter	●	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓	✓
	Insulated electrical panel	✓	✓
	Forced ventilation of the electrical panel	✓	✓
	FIBOX window on electrical panel	✓	✓
	Tropicalised electrical panel	●	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●	●

persea evo

inverter version R454B

KCRA *inverter* model			0020	0030	1040	1050	2060	2080	2100	3100	4150
Cooling mode	Cooling capacity (1)	kW	20,3	29,7	39,2	50,9	57,9	77,9	98,8	101,6	146,8
		TR	6,0	8,5	11,0	14,5	16,5	22,0	28,0	29,0	41,5
		kBTU/h	72	102	132	174	198	264	336	348	498
	Sensible cooling capacity	kW	15,6	23,2	29,5	38,3	42,1	57,1	71,6	74,5	109,2
	Maximum cooling capacity (2)	kW	24,0	35,0	47,4	59,9	69,5	95,0	116,8	119,4	169,1
	Absorbed power (3)	kW	6,5	10,0	12,1	16,2	17,5	24,1	31,7	31,6	48,3
	EER (4)	kW/kW	3,25	3,06	3,32	3,23	3,42	3,37	3,22	3,35	3,20
		BTU/(W·h)	11,15	10,22	10,87	10,73	11,35	10,97	10,60	11,00	10,31
	SEER (5)	kWh/kWh	5,3	5,1	5,2	5,2	5,5	5,4	4,9	5,6	5,2
	ηs,c (6)	kWh/kWh	210,7%	199,8%	204,0%	206,0%	215,0%	213,9%	192,7%	219,5%	203,2%
Heating mode	Heating power (7)	kW	19,1	28,1	37,0	47,8	55,5	74,5	95,0	95,0	139,1
	Max. heating power (8)	kW	23,5	36,4	45,7	57,9	66,6	91,3	113,1	113,4	171,9
	Absorbed power (3)	kW	6,1	8,9	11,2	14,8	16,3	22,4	28,7	28,4	43,3
	COP (4)	kW/kW	3,21	3,27	3,41	3,32	3,53	3,48	3,44	3,51	3,40
	SCOP, average climate (5)	kWh/kWh	4,0	3,9	3,7	3,7	3,9	3,8	3,8	3,9	3,8
	ηs,h (6)	kWh/kWh	157,9%	151,3%	144,9%	146,2%	151,0%	147,7%	149,1%	151,6%	148,5%
TECHNICAL SPECIFICATIONS											
Power supply			400V / III / 50HZ with neutral								
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466								
	Compressor type		Hermetic Scroll Inverter Version								
	No. of refrig. circuits / compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		25-100%	25-100%	25-100%	25-100%	12.5-100%	12.5-100%	12.5-100%	12.5-100%	12.5-100%
Indoor fan	Air supply flow rate	m^3/h	4600	6900	8000	10000	12400	18000	19000	19800	28000
	Nominal available pressure	Pa	100	100	100	100	100	125	125	150	200
	Fan type		plug-fan EC								
	Number of fans		1	1	1	1	2	3	3	3	4
	Absorbed power	kW	0,5	1,1	1,4	2,3	1,8	3,1	3,4	3,5	5,6
Outdoor fan	Outdoor air flow rate	m^3/h	17000	17000	17000	17000	34000	34000	34000	34000	50000
	Fan type		800 EC								800 EC HP
	Number of fans		1	1	1	1	2	2	2	2	2
	Absorbed power	kW	1,2	1,2	0,7	0,7	1,8	1,8	1,8	1,8	4,5
Sound pressure level of the equipment (Lp10) (9)		dB	52,8	55,1	56,8	61	56,8	59,1	59,8	59,3	64,6
Weight		kg	657	682	816	828	1343	1425	1467	1530	2001

(1) Nominal cooling capacity for an indoor air temperature of 27ºC/50% RH and an outdoor air temperature of 35ºC.
(2) Cooling capacity at the maximum compressor speed calculated with an indoor air temperature of 27ºC/50% RH and an outdoor air temperature of 35ºC.
(3) Total power absorbed by compressors, external fans, and the supply fan.
(4) EER and COP calculated according to the EN 14511:2022 standard.
(5) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP), calculated according to the EN 14825:2022 standard.
(6) Seasonal Energy Efficiency (ηs,c) for cooling and Seasonal Energy Efficiency (ηs,h) for heating, in accordance with the EU Ecodesign Regulation 2016/2281.
(7) Nominal heating capacity for an indoor air temperature of 20ºC and an outdoor air temperature of 7ºC DB / 6ºC WB.
(8) Heating capacity at the maximum compressor speed calculated with an indoor air temperature of 20ºC and an outdoor air temperature of 7ºC DB / 6ºC WB.
(9) Sound pressure level in dB(A) measured in free field at a distance of 10 meters from the source, with a directivity of 2 and at 1.5 meters above the ground.

Systems integration with photovoltaic installations

- Intelligent energy management.
- The ability to manage and adjust optimal electrical consumption and thermal production capacity based on the available photovoltaic generation power at any given moment.
- It enables the integration of rooftops, heat pumps, and inverter chillers with photovoltaic installations.

persea evo

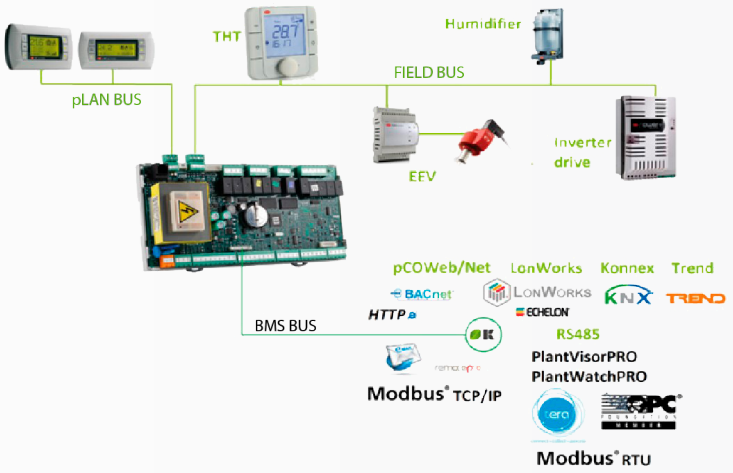
regulation and control

Climanager electronic microprocessor

The KEYTER Climanager electronic microprocessor control has been developed to manage KEYTER air-to-air units, meeting the market requirements in terms of energy management and simple operation and maintenance.

Main functions:

- Operating mode selection.
- Setpoint selection for summer and winter.
- Evaporation and condensing pressure regulation.
- Supply temperature limit.
- Time programming.
- Fault diagnosis and alarms.
- Heat pump defrost management.
- Optional function management (free-cooling, recovery, etc.)



pGD1 terminal controller

The pGD1 terminal is a user and maintenance terminal, available as a wall or panel version. It contains a display and keyboard, composed of 6 keys, which when pressed alone or in combination, enable all configuration and programming operations of the control to be performed.

TH-tune terminal controller

The THT controller is a user terminal.

It is supplied as an option and is complementary to the pGD1 terminal.

Main characteristics:

- Standard supply voltage (24V AC/DC...230V AC).
- Minimum cable cross-section 1,5 mm^2
- Cable type AWG20/22 plus screen.
- Valid for temperature and/or humidity control.
- Optional night or delayed operation.
- Can be used together with other pGD1 terminals.

persea evo

euro version R454B

Model KCRA *euro*			**0026**	**0035**	**1045**	**1050**	**1060**	**2070**	**2080**	**2090**	**2100**	**3090**	**3100**
Cooling mode	Cooling capacity (1)	kW	27,0	34,9	45,3	51,2	59,1	73,0	79,5	88,3	102	91,5	103,4
		TR	7,5	10,0	13,0	14,5	17,0	21,0	22,5	25,0	29,0	26,0	29,5
		kBTU/h	90	120	156	174	204	252	270	300	348	312	354
	Sensible cooling capacity	kW	21,2	27,1	33,9	38,0	45,1	53,9	57,3	63,6	73,5	67,0	74,6
	Absorbed power (2)	kW	8,6	11,9	14,7	17,5	19,6	21,7	25,8	28,6	33,4	28,4	33,3
	EER (3)	kW/kW	3,24	3,02	3,17	3,00	3,11	3,49	3,19	3,20	3,15	3,36	3,23
		BTU/(W·h)	10,45	10,08	10,63	9,94	10,43	11,59	10,45	10,49	10,42	10,98	10,64
	SEER (4)	kWh/kWh	4,9	4,6	4,5	4,5	4,6	4,9	4,6	4,5	4,4	5,3	5,0
	ηs,c (5)	kWh/kWh	191,2%	179,6%	177,7%	177,3%	180,8%	194,2%	182,4%	178,2%	172,7%	207,4%	197,8%
Heating mode	Heating power (6)	kW	25,1	33,7	43,6	50,3	56,6	68,6	77,8	87,0	99,2	87,0	99,5
	Absorbed power (2)	kW	7,5	10,8	13,7	16,1	17,3	20,6	24,4	27,1	31,4	26,6	30,7
	COP (3)	kW/kW	3,46	3,24	3,27	3,22	3,38	3,46	3,30	3,33	3,27	3,42	3,38
	SCOP, average climate (4)	kWh/kWh	3,7	3,4	3,4	3,4	3,5	3,5	3,5	3,4	3,5	3,6	3,6
	ηs,h (5)	kWh/kWh	143,9%	132,3%	131,0%	133,2%	136,4%	138,1%	135,3%	134,3%	136,9%	141,2%	139,0%
TECHNICAL SPECIFICATIONS													
Alimentación eléctrica			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	Compressor type		Hermetic scroll tandem version										
	No. of refrig. circuits / compressors		1/2	1/2	1/2	1/2	1/2	2/4	2/4	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	2	2	4	4	4	4	4	4
Indoor fan	Air supply flow rate	m^3/h	6500	8000	9000	10000	12500	15500	16000	18000	19000	18000	19000
	Nominal available pressure	Pa	100	100	100	100	100	120	125	125	125	150	150
	Fan type		plug-fan EC										
	Number of fans		1	1	1	1	2	2	2	3	3	3	3
	Absorbed power	kW	0,97	1,5	1,8	2,3	2,1	2,9	3,1	3,1	3,4	3,0	3,3
Outdoor fan	Outdoor air flow rate	m^3/h	17000	17000	17000	17000	17000	34000	34000	34000	34000	34000	34000
	Fan type		800 EC										
	Number of fans		1	1	1	1	1	2	2	2	2	2	2
	Absorbed power	kW	1,2	1,2	0,7	0,7	0,8	1,8	1,8	1,8	1,8	1,8	1,8
Sound pressure level of the equipment (Lp10) (7)		dB	51,8	55,8	58,1	60,4	54,1	58	58,6	55,9	57,2	55,4	56,6
Weight		kg	694	694	889	903	935	1354	1354	1485	1525	1549	1588

(1) Nominal cooling capacity for an indoor air temperature of 27ºC/50% RH and an outdoor air temperature of 35ºC.
(2) Total power absorbed by compressors, external fans, and the supply fan.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP), calculated according to the EN 14825:2022 standard.
(5) Seasonal Energy Efficiency (ηs,c) for cooling and Seasonal Energy Efficiency (ηs,h) for heating, in accordance with the EU Ecodesign Regulation 2016/2281.
(6) Nominal heating capacity for an indoor air temperature of 20ºC and an outdoor air temperature of 7ºC DB / 6ºC WB.
(7) Sound pressure level in dB(A) measured in free field at a distance of 10 meters from the source, with a directivity of 2 and at 1.5 meters above the ground.

Scroll Hermetic DSH On/Off Compressors designed in tandem for the PERSEA EVO Euro version

he DSH scroll compressors integrated into the PERSEA EVO rooftop range form a multi-refrigerant platform that allows operation with low GWP refrigerant R-454B or alternatively with R-410A.

They offer maximum performance thanks to the Intermediate Discharge Valve (IDV) technology, which improves seasonal efficiency in partial load cooling. This technology also expands the operational range of the units and adapts them to a wider and greater variety of applications. For more information, please refer to the technical catalog.

persea evo

euro version R454B

KEYTER

Multi-Scroll R454B ErP 2021

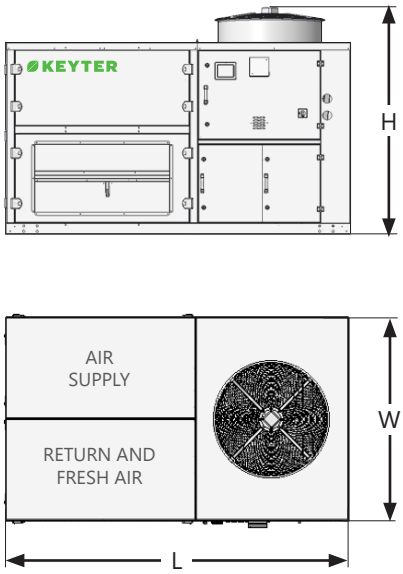
Modelo KCRA *euro*			**3120**	**4125**	**4135**	**4150**	**4170**	**5200**	**5230**	**6240**	**6270**	**6300**	**6360**
Cooling mode	Cooling capacity (1)	kW	114,2	122,7	136,6	151,5	166,1	197,0	213,4	224,4	246,4	266,4	316,9
		TR	32,5	35,0	39,0	43,0	47,0	56,0	60,5	64,0	70,0	75,5	90,0
		kBTU/h	390	420	468	516	564	672	726	768	840	906	1080
	Sensible cooling capacity	kW	81,8	89,5	100,0	111,7	122,3	138,6	147,8	162,7	180,2	193,9	225,1
	Absorbed power (2)	kW	38,1	38,7	44,8	52,9	60,3	64,6	75,2	76,6	87,3	97,0	125,4
	EER (3)	kW/kW	3,10	3,29	3,16	3,00	2,88	3,19	2,96	3,07	2,96	2,87	2,62
		BTU/(W·h)	10,23	10,86	10,45	9,76	9,35	10,40	9,66	10,03	9,63	9,34	8,61
	SEER (4)	kWh/kWh	4,8	5,1	5,0	4,7	4,4	5,5	4,9	4,8	4,8	4,3	3,9
	ηs,c (5)	kWh/kWh	187,8%	200,4%	197,5%	184,4%	172,2%	215,0%	194,9%	188,0%	189,7%	168,6%	154,0%
Heating mode	Heating power (6)	kW	110,3	117,7	132,9	148,8	166,3	212,1	237,2	232,9	254,6	275,5	331,5
	Absorbed power (2)	kW	34,8	36,3	41,0	46,2	51,6	61,6	70,1	67,1	75,1	83,6	110,0
	COP (3)	kW/kW	3,29	3,38	3,37	3,40	3,40	3,61	3,54	3,66	3,58	3,47	3,14
	SCOP, average climate (4)	kWh/kWh	3,5	3,7	3,6	3,6	3,4	3,9	3,9	4,2	4,1	4,0	3,6
	ηs,h (5)	kWh/kWh	137,1%	144,3%	140,0%	139,1%	134,6%	154,2%	152,0%	165,4%	160,9%	156,0%	140,1%
TECHNICAL SPECIFICATIONS													
Power supply			400V / III / 50HZ with neutral										
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466										
	Compressor type		Hermetic scroll tandem version										
	No. of refrig. circuits / compressors		2/4	2/4	2/4	2/4	2/4	2/6	2/6	2/4	2/4	2/4	2/4
	No. power stages		4	4	4	4	4	6	6	4	4	4	4
Indoor fan	Air supply flow rate	m^3/h	19800	22000	24000	28000	30000	33000	36000	40000	45000	48000	52000
	Nominal available pressure	Pa	150	150	150	200	200	200	200	200	200	200	200
	Fan type		plug-fan EC							enhanced EC plug Fan			
	Number of fans		3	4	4	4	4	4	4	5	5	5	5
	Absorbed power	kW	3,5	3,4	3,9	5,6	6,3	7,6	9	8,3	10,4	11,8	14
Outdoor fan	Outdoor air flow rate	m^3/h	34000	50000	50000	50000	50000	68000	68000	68000	68000	74000	84000
	Fan type		800 EC HP					800 EC					
	Number of fans		2	2	2	2	2	4	4	4	4	4	4
	Absorbed power	kW	1,8	4,5	4,5	4,5	4,5	3,8	3,8	3,8	3,8	4,7	6,7
Sound pressure level of the equipment (Lp10) (7)		dB	58,1	57,4	57,9	59,8	61,2	62,0	62,5	61,3	62,0	62,3	63,8
Weight		kg	1591	1936	1957	1965	1983	2709	2721	3309	3309	3309	3546

(1) Nominal cooling capacity for an indoor air temperature of 27ºC/50% RH and an outdoor air temperature of 35ºC.
(2) Total power absorbed by compressors, external fans, and the supply fan.
(3) EER and COP calculated according to the EN 14511:2022 standard.
(4) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP), calculated according to the EN 14825:2022 standard.
(5) Seasonal Energy Efficiency (ηs,c) for cooling and Seasonal Energy Efficiency (ηs,h) for heating, in accordance with the EU Ecodesign Regulation 2016/2281.
(6) Nominal Heating Capacity for an indoor air temperature of 20°C and an outdoor air temperature of 7°C DB / 6°C WB.
(7) Sound Pressure Level in dB(A) measured in free field at a distance of 10 meters from the source, directivity 2, and at 1.5 meters above the ground.

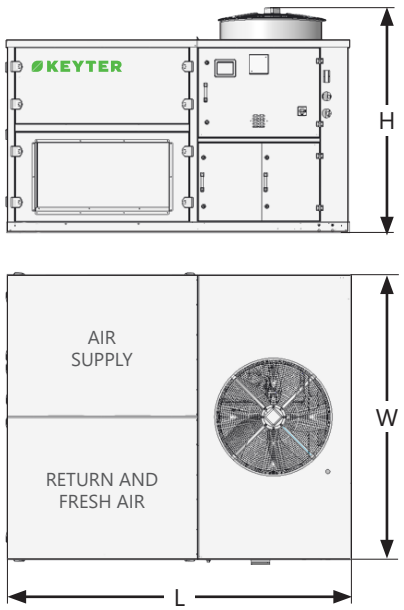
persea evo

dimensions

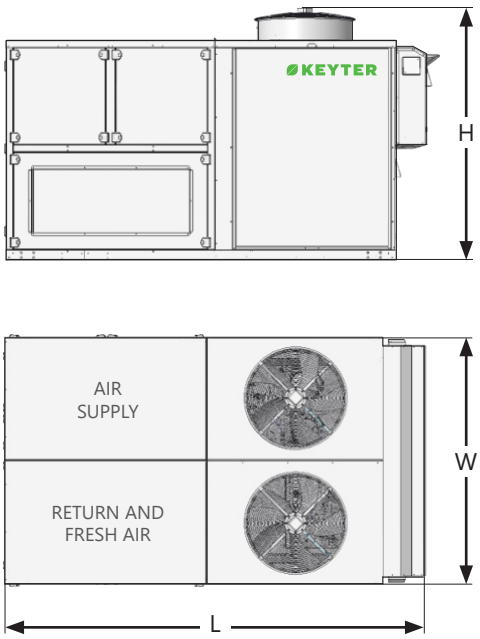
Series 0



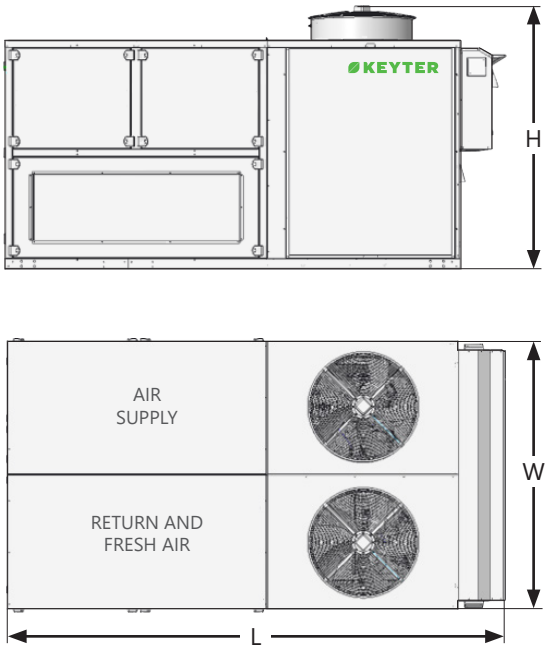
Series 1



Series 2



Series 3



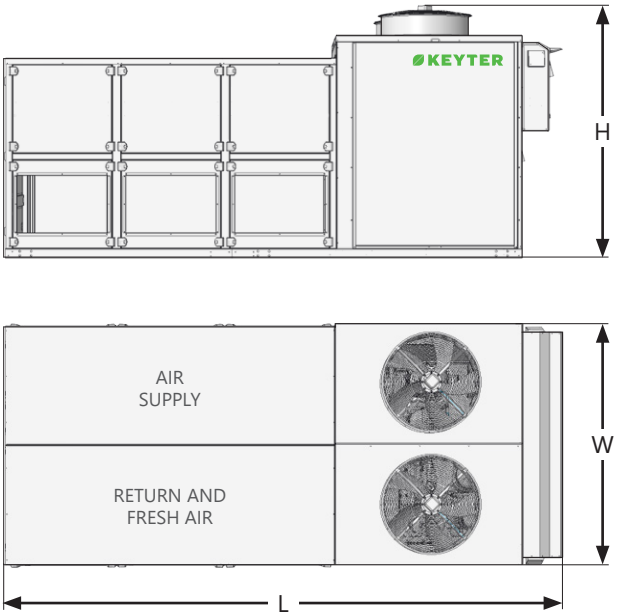
Standard equipment dimensions (mm)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	2575	2575	3600	3900	4950	5300	5910
W	1500	2100	2100	2100	2100	2100	2100
H	1730	1730	2060	2060	2260	2485	2485

Dimensions of Equipment with Module (SC and SF Mounting) (mm)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	2575	2575	3600	3900	4950	5300	5910
W	1900	2500	2500	2500	2500	2500	2500
H	2135	2135	2465	2465	2465	2485	2485

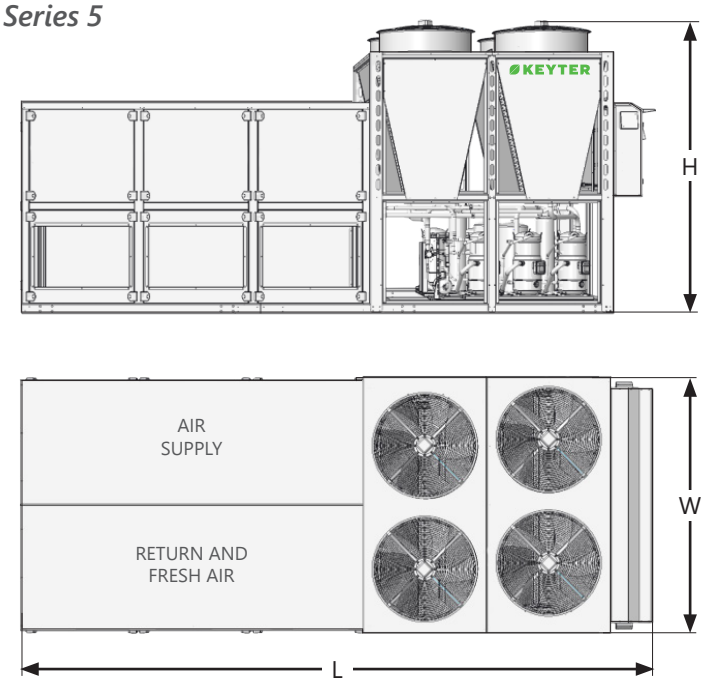
persea evo

dimensions

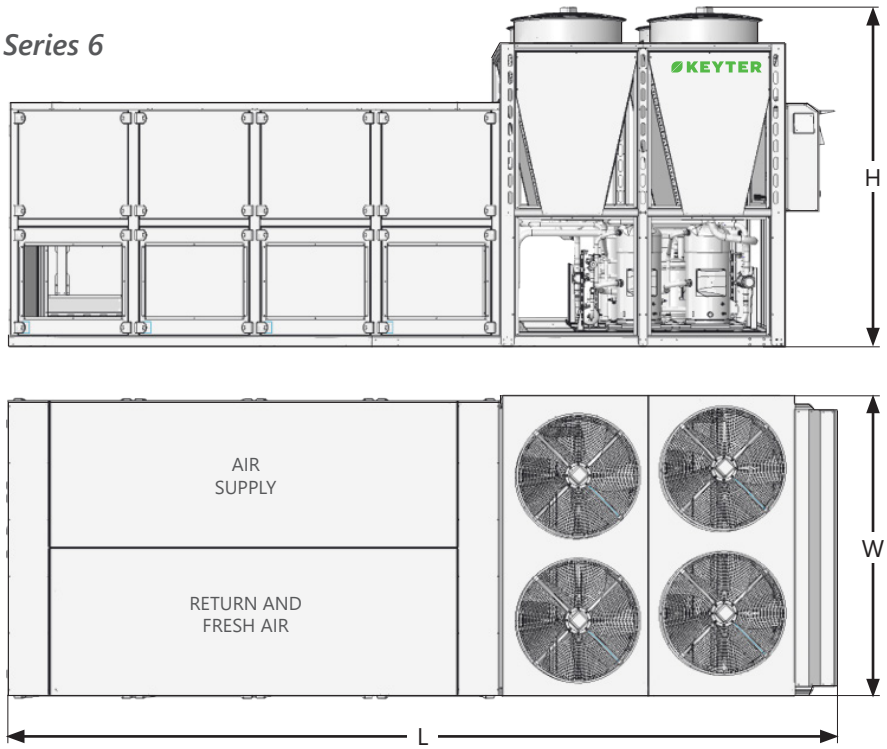
Series 4



Series 5



Series 6



persea evo

assemblies

Supply air

Return air

N Fresh air

E Extraction air

Adjustable damper

Overpressure damper

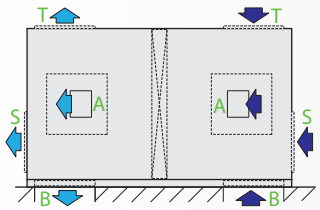
Supply
- **B** - Lower
- **S** - Side
- **T** - Upper
- **A** - Short side (only with radial fan)

Return
- **B** - Lower
- **S** - Side
- **T** - Upper
- **A** - Short side

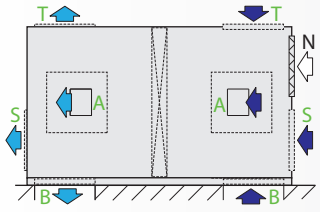
Type of assembly
- **0** - Standard
- **T** - Outdoor air intake
- **A** - Two-way mixing chamber
- **B** - Axial return
- **E** - Axial extraction
- **C** - Centrifugal return
- **K** - EC radial return fan in upper module
- **Z** - EC radial return
- **F / R** - Active recovery with return fan
- **D / M** - Dynamic recovery

assemblies without free-cooling

0 - Standard

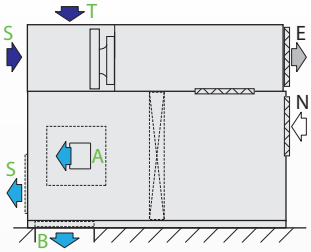


T - Outdoor air intake

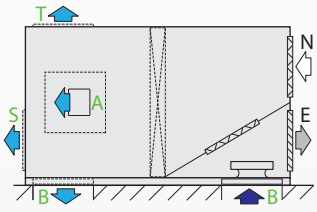


assemblies with free-cooling & return fan

K - EC radial return fan in upper module

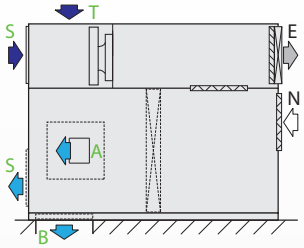


Z - EC radial return

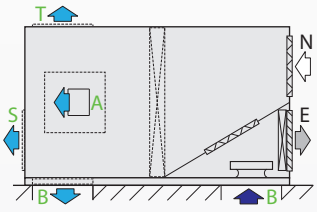


assemblies with free-cooling & heat reclaim

_R / _M - Active/Dynamic recovery

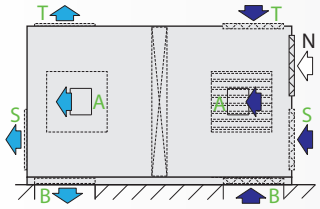


BF / BD - Active/dynamic recovery with lower return fan

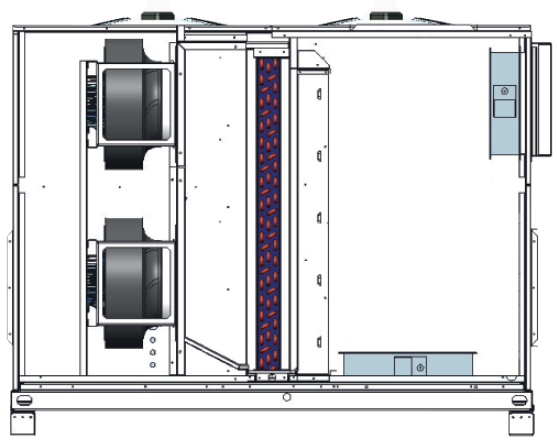


assemblies with free-cooling & without return fan

A - Two-way mixing chamber

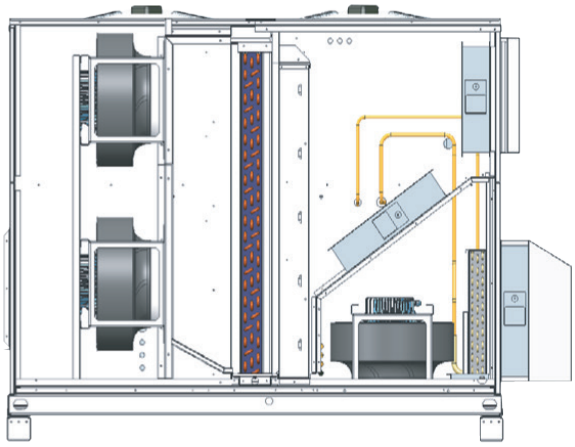


2-way mixing box



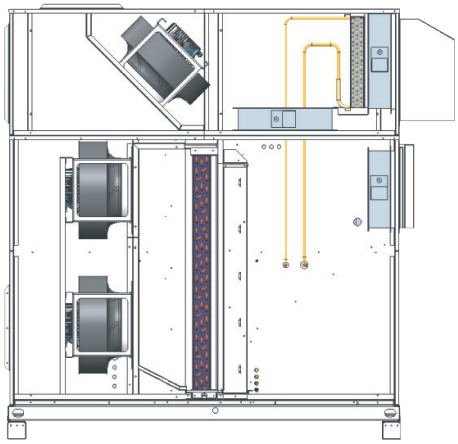
- **0** fresh air damper
- **T** two-way mixing chamber with manually adjustable fresh air intake
- **A** automatic fresh air control of the two-way mixing chamber

3-way mixing box with bottom return fan



- **BZ** radial
- **BE** axial extraction fan
- **BB** axial
- **BF** radial & active recovery
- **BD** radial & dynamic recovery

3-way mixing box with return fan and top box



- ***K** EC radial return fan in upper module
- ***R** EC radial return fan and active recovery
- ***M** EC radial return fan and dynamic recovery

* Available with side return (S) and upper return (T)

persea evo

heat recovery

Heat recovery is an energy recovery system from the exhaust air to meet the requirements of energy efficiency regulations in buildings and thermal installations.

active INVERTER heat recovery

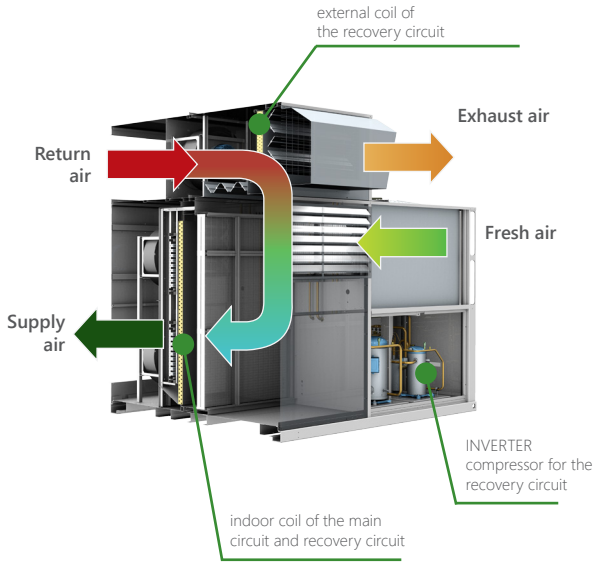
Innovative Full Inverter Active Heat Recovery System for energy recovery through an additional refrigeration circuit with an inverter compressor.

This circuit allows for an increase in the unit's nominal capacity, enhancing its compactness.

Additionally, since this extra circuit exchanges heat between the fresh air and exhaust air, under favorable temperature and humidity conditions, it achieves high cooling performance.

As a result, the unit's nominal performance is improved, and seasonal efficiency is enhanced under partial loads.

Furthermore, the INVERTER technology ensures proper operation at the minimum air flow rates established by the 2021 RITE update, reducing the air flow from 1800 m^3/h to 1000 m^3/h.

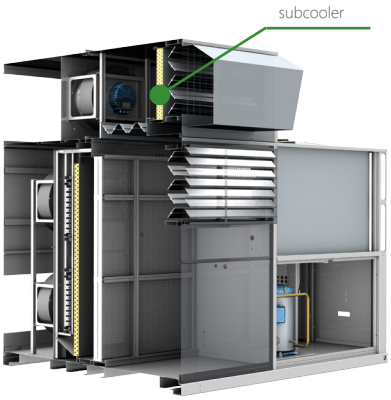


dynamics heat recovery

It consists of an energy recovery system using an additional exchange coil (subcooler), placed in series with the air-cooled condenser of the unit. This setup significantly improves the unit's efficiency by reducing the electrical consumption of the compressors.

This system offers advantages over static recovery systems because it avoids higher consumption by supply and return fans due to the high pressure drop associated with plate or rotary heat exchangers.

Additionally, it allows for installation in units with extraction fans.



auxiliary heaters

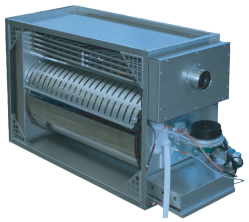
Optional electrical auxiliary heaters for heating in two stages of on/off power.

hot water auxiliary heaters

Optional hot water support coil with control via a three-way proportional valve, and with anti-freeze protection for the water.

gas burner

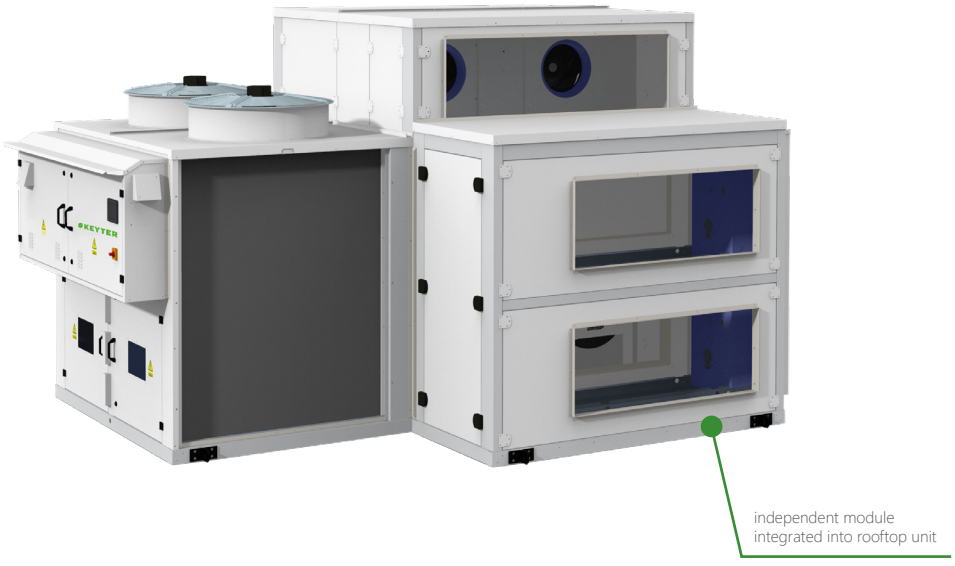
Condensing gas burners.
Low NOx emissions, class A, thanks to their pre-mixing system and diffuser.
High efficiency level.
Power modulation from 10% to 100%.



rooftop with gas burner in independent module

Independent self-supporting metal module with a gas burner attached to the rooftop unit.

Gas burner module	KCRA0	KCRA1	KCRA2	KCRA3	KCRA4	KCRA5	KCRA6
Power (kW)	8-63	9-63	13-160	13-194	13-252	13-252	13-389



eirene

Compact vertical air-to-air units

22-108 kW 23-109 kW

Inverter EC R410A

Model KCV Inverter			1022	2039	3045	4060	5080	6090
COOLING-ONLY VERSION (R)								
Cooling capacities	Cooling capacity (1)	kW	22.9	35.9	54.1	74.1	89.8	108.3
		TR	6.5	10.5	15.5	21.5	25.5	31
		kBTU/h	78	126	186	258	306	372
	Absorbed power (2)	kW	7.4	11.8	14.6	19.9	23.5	32.5
	EER (3)	kW/kW	3.1	3.0	3.7	3.7	3.8	3.3
		BTU/(h*W)	10.6	10.4	12.6	12.7	13.1	11.4
	SEER (4)	kWh/kWh	4.0	4.0	4.7	4.7	4.9	4.2
	ηs,c (5)	%	159%	156%	186%	186%	192%	167%
HEAT PUMP VERSION (I)								
Cooling mode	Cooling capacity (1)	kW	22.9	35.9	54.1	74.1	89.8	108.3
	Absorbed power (2)	kW	7.4	11.8	14.6	19.9	23.5	32.5
	EER (3)	kW/kW	3.1	3.0	3.7	3.7	3.8	3.3
	SEER (4)	kWh/kWh	4.0	4.0	4.7	4.7	4.9	4.2
	ηs,c (5)	%	159%	156%	186%	186%	192%	167%
Heating mode	Heating power (6)	kW	23.2	37.6	54.3	72.6	91.3	109.0
	Absorbed power (2)	kW	6.3	11.9	13.5	17.4	21.1	27.6
	COP (3)	kW/kW	3.7	3.2	4.0	4.2	4.3	4.0
	SCOP average climate (4)	kWh/kWh	3.8	3.2	3.8	4.0	4.1	3.8
	ηs,h average climate (5)	%	148%	127%	150%	156%	162%	148%
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50HZ with neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088					
	Compressor type		Inverter Compressor					
	No. of circuits / Compressors		1/1	1/1	2/2	2/2	2/2	2/2
	Power stage control		modulante 25 - 100%		modulante 12.5 - 100%			
Indoor fan	Supply air flow	m^3/h	4500	6200	9000	10500	12000	17000
	Nominal available pressure	Pa	80	80	100	100	100	100
	No. x Type of fan		1 x plug-fan EC		2 x plug-fan EC			
	Absorbed power	kW	1.07	1.10	2.20	2.80	2.14	3.40
Outdoor fan	Outdoor air flow rate	m^3/h	7000	11500	14000	20000	25000	28000
	Nominal available pressure	Pa	70	70	80	90	120	120
	No. x Type of fan		1 x plug-fan EC		2 x plug-fan EC			
	Absorbed power	kW	1.20	2.94	2.42	4.28	5.54	8.78
Sound pressure level of the equipment (Lp10) (7)		dB(A)	69	72	73	75	75	76
Weight		kg	556	567	824	1005	1087	1099

(1) Nominal cooling capacity for an indoor air temperature of 27ºC/50% RH and an outdoor air temperature of 35ºC.

(2) Total power absorbed by compressors, external fans, and the supply fan.

(3) EER and COP calculated according to the EN 14511:2022 standard.

(4) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP), calculated according to the EN 14825:2022 standard.

(5) Seasonal Energy Efficiency values for cooling (ηs,c) and heating (ηs,h) of spaces, in compliance with the EU Ecodesign Regulation 2016/2281.

(6) Nominal heating capacity for an indoor air temperature of 20ºC and an outdoor air temperature of 7ºC DB / 6ºC WB.

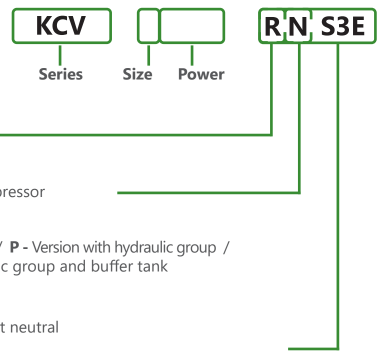
(7) Sound pressure level in dB(A) measured in free field at a distance of 10 meters from the source, with a directivity factor of 2 and at 1.5 meters above the ground.

		EIRENE
General characteristics		
Refrigerant	R410A	✓
	Equipment with refrigerant charge	✓
	Leak detection	●
Bodywork	Self-supporting chassis in galvanized steel with a polyester powder coating cured in an oven	✓
	Insulation in the indoor unit	✓
	Anti-vibration supplements	●
Compressors	Inverter technology	✓
	Acoustic insulation jacket	●
	Original high-performance acoustic insulation jacket from the manufacturer	●
	Compressor anti-vibration mounts	✓
Expansion valves	Electronic expansion valves	✓
Fans		
Outdoor fans	EC plug-fans	✓
Outdoor fans	EC plug-fan indoor fans	✓
Heat exchangers		
Coils	Copper tube and aluminum fin heat exchangers	✓
	Cu tube bundle / polyurethane pre-lacquered Al fins	●
	ALUCOAST: high-strength Cu tubes / Al fins	●
	BLYGOLD: Cu tubes / Al fins with Blygold coating	●
	COPPERFIN: Cu tubes / Cu fins	●
	Droplet separator in outdoor unit (*)	●
Air quality		
Filtration	Washable G4 pre-filter	✓
	Cleanable very low pressure drop pre-filter	●
	Cleanable G2 and G3 pre-filters	●
	F filtration, from F6 to F9	●
Air quality sensors	CO_2 sensor for ambient / duct	●
	VOC sensor for ambient / duct	●
Energy		
Free-cooling	Free-cooling 2 dampers	●
	Free-cooling three dampers: thermal / enthalpic or thermo-enthalpic	●
	Drip separator in the outdoor air damper	●

✓ Included as standard
● Optional
- Not applicable

(*) In technical rooms, it is necessary to select the optional drip separator for the outdoor unit.

Codification:



R - Cooling only

N - Standard scroll compressor

S - Standard equipment / **P** - Version with hydraulic group /
H - Version with hydraulic group and buffer tank

Power supply
3 - 400V/III/50Hz without neutral

Refrigerant
E - R410A

Split version

Outdoor unit:

Indoor unit:

eirene

range specification

Installation

Control

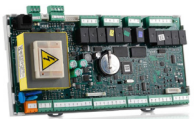
		EIRENE
Support in Heating	Hot water support coil in duct	●
	3-way valve for support coil, ON/OFF or with proportional actuator	●
	Electric heaters at the supply outlet on a painted galvanized steel frame (1 or 2 stages)	●
Condensate trays	Condensate tray with asphalt paint	✓
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	220 V / III ph / 60 Hz; 380 V / III ph / 60 Hz; 400 V / III ph / 60Hz; 460 V / III ph / 60 Hz	●
Electronic control and communication	Climanager	✓
	TH-Tune user terminal	●
	pGD user and maintenance terminal	✓
	Condensing pressure control with transducers	✓
	Master-Slave management	●
	RS485 card for Modbus communication	●
	BOSS / tERA monitoring systems	●
	BACNET / LONWORKS/ KNX Communication	●
Defrosting	Defrosting by cycle reversal using a 4-way valve	✓
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors and fans	✓
	PREMIUM phase control relay (phase failure detection and rotation direction protection)	✓
	EXCELLENT phase control relay, includes phase imbalance detection, overvoltage, and undervoltage	●
	Differential switches	●
	Differential pressure switch for air flow control (mandatory with optional electric heaters)	●
	Dirty filter detector	●
	Smoke detector	●
	Ambient temperature sensor	●
	Energy meter	●
Electrical panel	Fully wired electrical panel	✓
	Forced ventilation of the electrical panel	●
	FIBOX window in electrical panel	●
	Antifreeze electrical resistor in electrical panel for low outdoor temperatures	●

Electronic control:

The KEYTER Climanager electronic microprocessor control is developed for the management of KEYTER air-to-air equipment, addressing market needs in energy management and ease of operation and maintenance.

It has two terminals:

- pGD1 maintenance terminal
- TH-Tune user terminal, which is a room terminal that allows the user to control temperature and humidity.

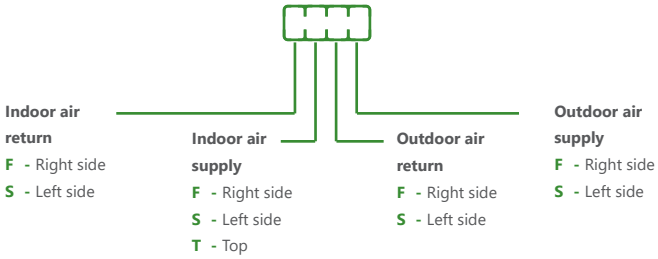


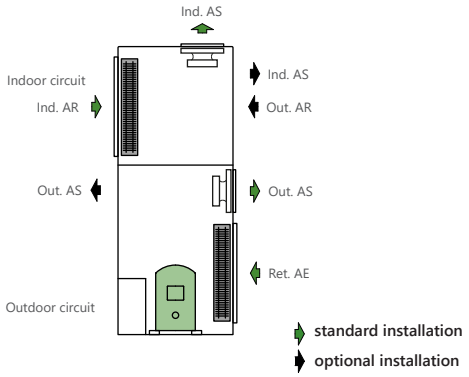
CLIMANAGER

Terminal TH-Tune

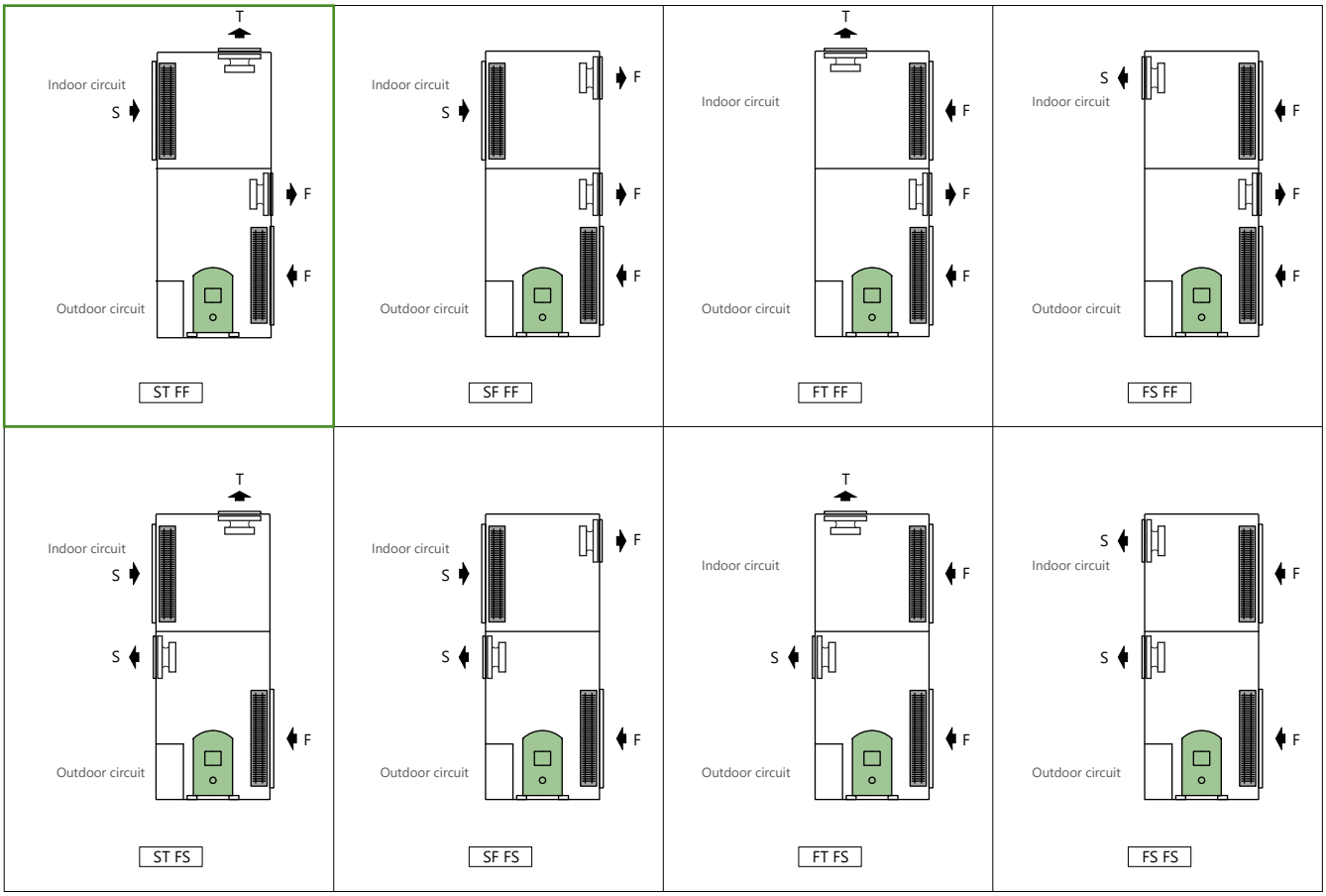
Terminal pGD1

Type of assembly:





STANDARD INSTALLATION

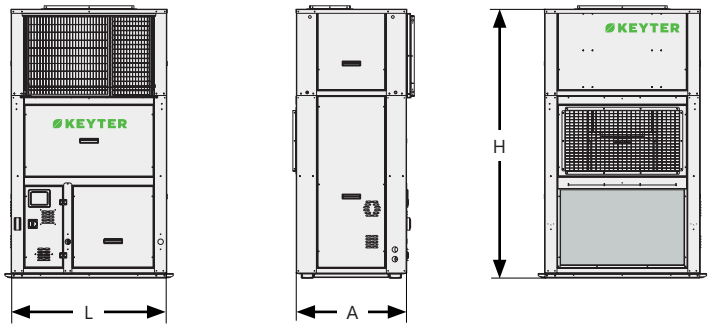


eirene

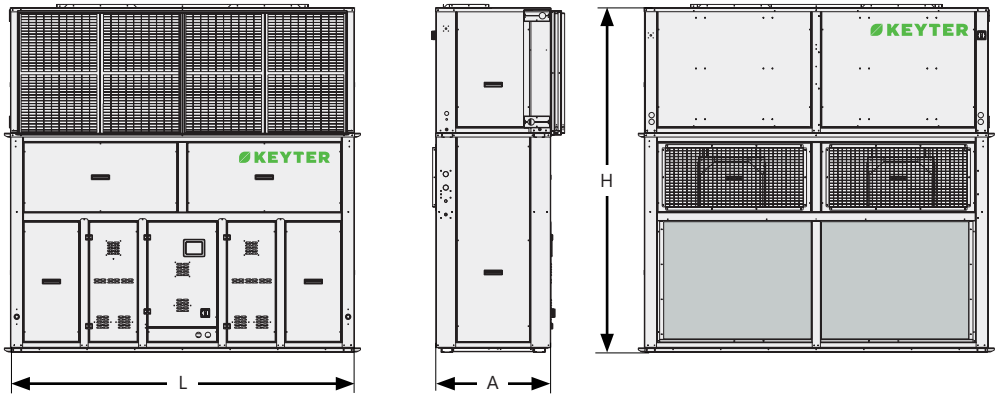
dimensions

Compact Equipment KCV

Series 1-2



Series 3-6



Compact equipment dimensions (KCV)						
	Series 1	**Series 2**	**Series 3**	**Series 4**	**Series 5**	**Series 6**
L	1136	1339	2106	2556	2556	2556
A	806	806	806	806	856	856
H	1958	1958	1958	1958	2258	2557

Options de Free-cooling:

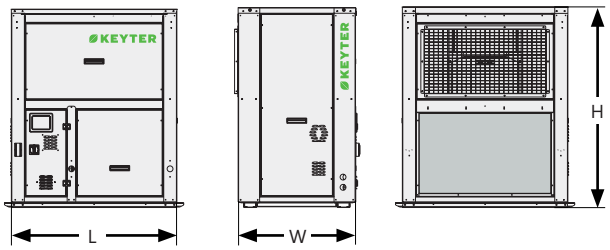
Free-cooling 2 dampers

Free-cooling 3 dampers

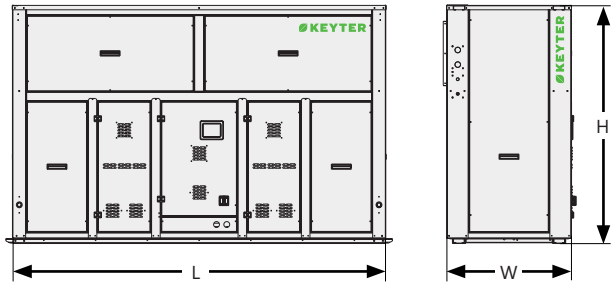
Split version KDV-KPH

Outdoor unit KDV

Series 1-2



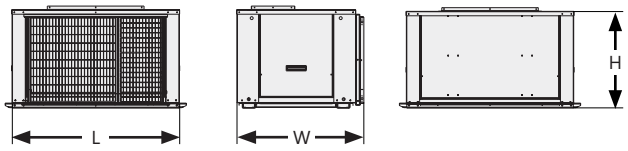
Series 3-6



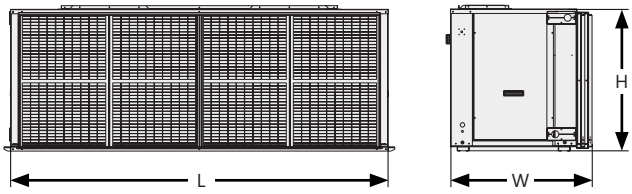
Dimensions outdoor unit (KDV)						
	Series 1	**Series 2**	**Series 3**	**Series 4**	**Series 5**	**Series 6**
L	1336	1339	2106	2556	2556	2556
A	806	806	806	806	856	856
H	1331	1331	1334	1334	1629	1629

Indoor unit KPH

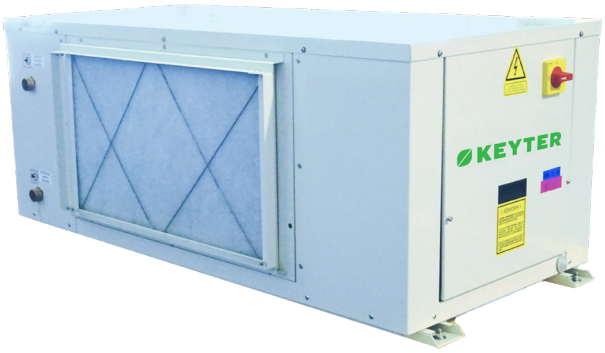
Series 1-2



Series 3-6



Indoor unit dimensions (KPH)						
	Series 1	**Series 2**	**Series 3**	**Series 4**	**Series 5**	**Series 6**
L	1336	1339	2106	2556	2556	2556
W	806	806	806	806	856	856
H	660	660	660	660	660	960



thalia

Compact water-to-air units with plate heat exchanger

8-50 kW 9-58 kW

Multi-Scroll EC R410A

Model KGH			GH1007	GH2010	GH3012	GH3018	GH4025	GH4030	GH4040	GH4050	GV2040	GV3050
HEAT PUMP VERSION (I)												
Cooling mode	Cooling capacity (1)	kW	7,9	9,7	13,9	19,2	26,7	34,2	42,0	47,0	37,6	50,0
		TR	2,5	3	4,0	5,5	8	10	12	13,5	11	14,5
		kBTU/h	30	36	48	66	96	120	144	162	132	174
	Absorbed power (2)	kW	1,8	2,4	3,1	4,8	5,8	7,7	9,0	10,2	9,4	12,1
	EER (3)	W/W	4,4	4,0	4,5	4,0	4,6	4,4	4,7	4,6	4,0	4,1
		BTU/(h*W)	16,6	14,8	15,4	13,8	16,6	15,5	16,0	15,9	14,1	14,4
	SEER (4)		3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6
	ηs,c		140%	139%	139%	140%	141%	140%	141%	140%	139%	139%
Heating mode	Heating power (5)	kW	8,6	10,8	14,9	20,7	29,0	37,3	44,8	50,2	42,5	58,0
	Absorbed power (2)	kW	2,4	3,3	4,0	5,8	7,1	9,9	10,6	11,9	12,9	15,1
	COP (3)		3,6	3,2	3,7	3,6	4,1	3,8	4,2	4,2	3,3	3,8
	SCOP, average climate (4)		3,3	3,2	3,2	3,3	3,3	3,2	3,3	3,3	3,2	3,2
	ηs,h		128%	125%	126%	127%	128%	126%	128%	128%	125%	125%
TECHNICAL SPECIFICATIONS												
Power supply			230V / I / 50HZ + N	400V / III / 50HZ + Neutral								
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088									
	Compressor type		Hermetic scroll									
	No. circuits / compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/2
	No. power stages		1	1	1	1	1	1	1	1	1	2
Indoor fan	Supply airflow	m^3/h	1200	1600	2000	2800	4000	4800	6000	7000	5700	8500
	Nominal available pressure	Pa	50	50	50	50	75	75	100	100	100	100
	No. x Type of fan		1 x plug-fan EC									2xplug-fan EC
	Absorbed power	kW	0,11	0,20	0,22	0,42	0,57	0,74	0,99	1,31	1,45	1,92
Outdoor water circuit	Water flow rate	m^3/h	1,65	2,05	2,89	4,06	5,49	7,10	8,62	9,62	7,84	10,37
	No. x Type of heat exchanger		1 x brazed stainless steel plate heat exchanger									
	Hydraulic connections		3/4"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Sound press. level of the equip. (Lp10) (6)		dB(A)	49	50	50	50	50	51	51	51	62	63
Weight		kg	115	132	146.4	156.7	295	303	383	385	416	694

(1) Cooling Capacity for an Indoor Air Temperature of 27°C/50% RH and a Water Inlet/Outlet Temperature of 30/35°C.

(2) Power consumption by compressor and indoor fan.

(3) EER and COP calculated according to the EN 14511:2022 standard.

(4) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP), calculated according to the EN 14825:2022 standard.

(5) Nominal Heating Capacity for an Indoor Air Temperature of 20°C and Water Inlet/Outlet Temperature of 15/10°C.

(6) Sound Pressure Level in dB(A) measured 10 meters from the source, with ductwork for air intake and air discharge.

Codification:

Horizontal design

KGH | Size | Power | N | S4W

Series

I - Reversible heat pump

N - Standard scroll compressor

S - Standard equipment

Power supply
3 - 400V/III/50Hz
Refrigerant
W - R410A

Vertical design

KGV | Size | Power | N | S4W

Series

I - Reversible heat pump

N - Standard scroll compressor

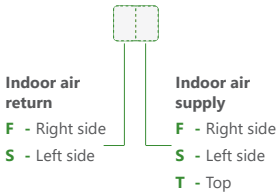
S - Standard equipment

Power supply
3 - 400V/III/50Hz
Refrigerant
W - R410A

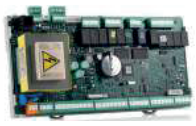
Options:

- Electronic expansion valve.
- F filtration section.
- Supporting electrical resistors.
- In-duct hot water backup battery.
- Differential pressure switch to control the airflow.
- Dirty filter detector.
- Regulation of the condensation pressure with a three-way valve and proportional motor provided in a separate kit.
- Water filter.
- Anti-corrosion treatments for the indoor coil.
- Other electrical voltages (230 V/I ph/60 Hz, 230 V/III ph/50-60 Hz, 380 V/III ph/60 Hz, 400 V/III ph/60 Hz, 460 V/III ph/60 Hz).

Type of assembly (KGV):



Electronic control:

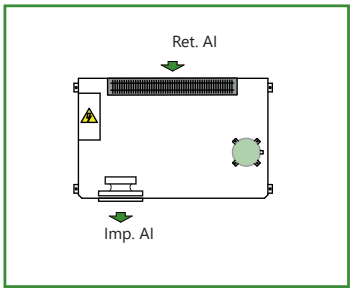


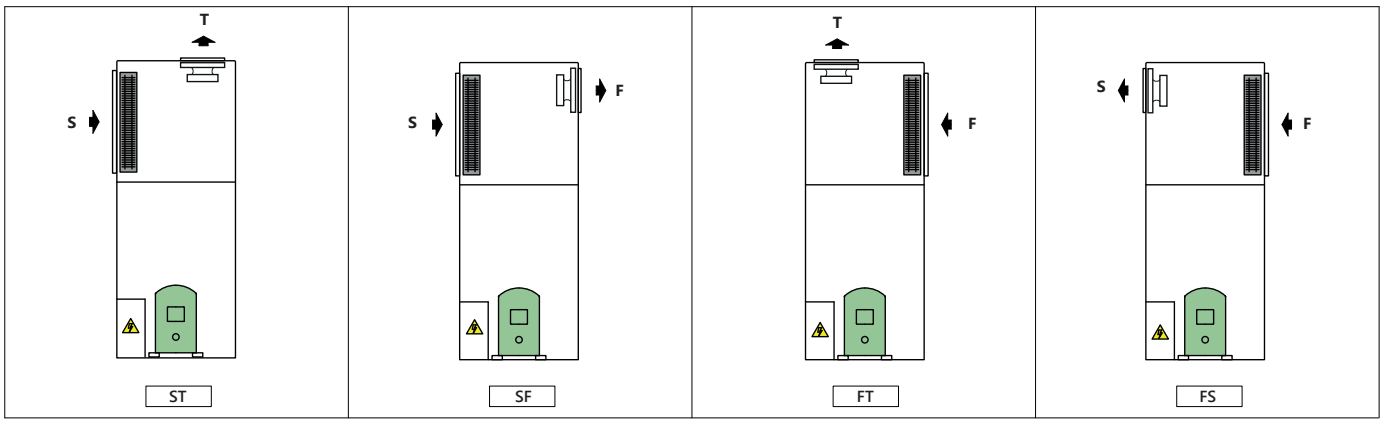
CLIMANAGER

Terminal TH-Tune

Type of assembly (KGH):

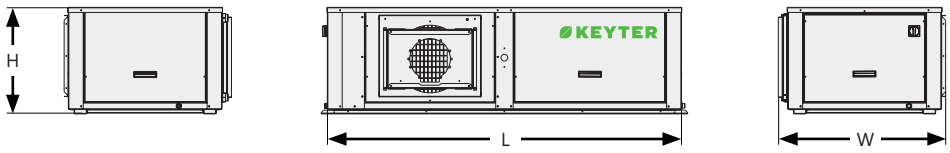
STANDARD ASSEMBLY



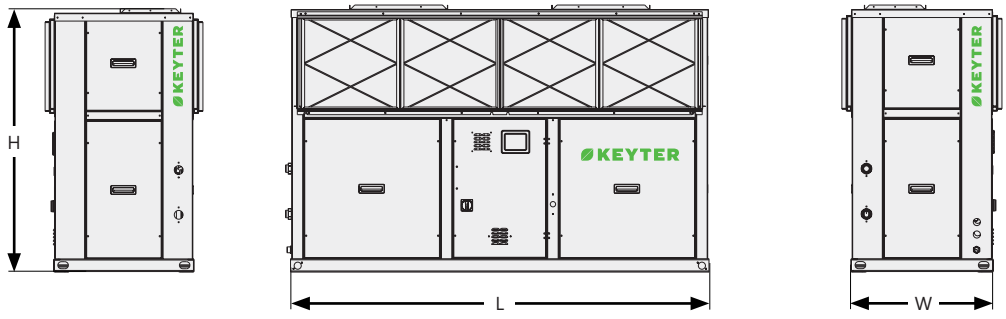


Dimensions:

KGH series



KGV series



Dimensions for Horizontal Construction (KGH) (mm)				
	Series 1	Series 2	Series 3	Series 4
L	1150	1150	1295	2095
W	510	510	610	915
H	465	495	530	630

Dimensions for Vertical Construction (KGV) (mm)		
	Series 2	Series 3
L	1339	2350
W	800	800
H	1475	1475

Dehumidifiers

Comfort applications

161	*ocean*	*DTS*

ocean

Dehumidifiers

11-194 kW 14-150 kW

Multi-Scroll EC AER+ heat recovery R410A

7kg/h | 2000 m³/h - 311kg/h | 48000 m³/h

Adaptability and Versatility

- Fully adaptable and configurable units with OPTIONS and a wide variety of MOUNTING options, including mixing sections, free cooling, and energy recovery.
- Mounting flexibility, suitable for both indoor and outdoor machine rooms, adaptable to the needs of each installation.
- Combination of a compact design with maximum accessibility and easy maintenance through easily removable panels.
- Reduced height for installation in indoor pool galleries.
- Enclosure with double-sided painted sandwich panels featuring 50 mm thick rock wool insulation, optimized for corrosive environments.

Codification:

DTS — Series

[ ] — Size / Dehumidification capacity

R N S4W

Operating mode
I - Reversible
R - No reversible

Version - Compressor Type
N - Compressor Scroll

Version - Type of Recovery
S - Standard equipment
F - Equipment with free-cooling
R - Equipment with active recovery
E - Equipment with plate heat recovery

Power supply
4 - 400V/III/50Hz with neutral (standard)

Refrigerant
W - R410A

Corrosion resistance

- Refrigeration compartment isolated from the air flow.
- Plate heat exchanger for condensation heat recovery.
- Fans protected with epoxy paint or high-strength plastic.
- BLUECOAST treatment on batteries as standard.
- High-strength cross-linked polyethylene hydraulic connections.
- Removable condensate tray in stainless steel.

Energy Efficiency

- Energy recovery from exhaust air with reversible active recovery or via a cross-flow plate heat exchanger.
- Preheating of pool water through condensation heat recovery.
- Air renewal with a mixing section, free-cooling, and energy recovery.
- Electronic expansion valve and optional electronic plug fans for minimal energy consumption.

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range specification

		DTS
General characteristics		
Refrigerant	R410A	✓
	Equipment with refrigerant charge	✓
	Leak detection	●
Bodywork	Self-supporting bodywork/cabinet made of galvanised steel with oven cured polyester paint treatment	✓
	Self-supporting chassis in stainless steel or aluminum with polyester powder coating, oven-cured for durability.	●
	Customized color to suit the needs of the installation	●
	Anti-vibration supplements	●
	Improved hinge closures	✓
	Double-sided painted sandwich panel with 50 mm rock wool insulation	✓
Compressors	Hermetic scroll compressors	✓
	Refrigeration core mounted in a compartment isolated from the air flow (series 2-5)	✓
	Soft starter	●
	High-performance acoustic insulation jacket	●
	Manufacturer's original acoustic insulation jacket	●
	Compressor anti-vibration mounts	✓
Expansion valves	Thermostatic expansion valves in main circuits	✓
	Electronic expansion valves in main circuits	●
	Electronic expansion valves in the refrigeration recovery circuit	✓
Fans		
Supply fans	Interior EC plug-fans, available in plastic or metal with epoxy paint	✓
	High-pressure EC plug-fans for interior use, available in plastic or metal with epoxy paint	●
Return fans	Interior centrifugal fans with epoxy paint protection	●
	Interior EC plug-fans, available in plastic or metal with epoxy paint	●
	High-pressure EC plug-fans for return air, available in plastic or metal with epoxy paint	●
Heat exchangers		
Coils	Copper tube and aluminum fin coils with polyurethane pre-coating	✓
	ALUCOAST: High-strength Cu tubes/Al fins alloyed with CrMg	●
	PAINTCOAST: Cu tubes/Al fins with post-applied epoxy coating	●
	BLYGOLD: Cu tubes/Al fins with Blygold coating	●
	COPPERFIN: Cu tubes/Cu fins	●
	Drop separator in interior coil	●
Heat exchangers	Stainless steel SMO plate heat exchanger for condensation heat recovery	✓
	SEALIX heat exchanger for direct pool water exchanger	●
Energy		
Energy recovery	Active refrigeration recovery	● (DTS 3-5)
	Total heat recovery from condensation in air and/or water	✓
	Static recovery using a cross-flow plate heat exchanger	● (DTS 2-5)
	Partial recovery of hot discharge gases from the compressor for domestic hot water preheating	●
Free-cooling	Free-cooling with two dampers	●
	Free-cooling with three dampers and return centrifugal fan	●
	Conversion from standard thermal freecooling to enthalpic or thermo-enthalpic freecooling using an ambient sensor	●
	Conversion from standard thermal freecooling to enthalpic or thermo-enthalpic freecooling using a duct sensor	●
	Conversion from standard thermal freecooling to enthalpic or thermo-enthalpic freecooling using a THT control	●
	Drip separator in the outdoor air damper	✓
Air quality		
Air quality	Washable G4 pre-filter	✓
	Cleanable very low pressure drop pre-filter	●
	Cleanable G2 and G3 pre-filters	●
	F filtration, from F6 to F9	●
	Double stage F filtration	●
	F filtration on return	●

✓ Included as standard
● Optional
- Not applicable

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range specification

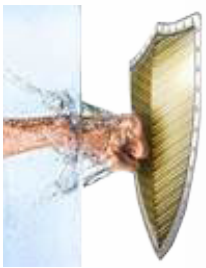
Installation

		DTS
Heating support	Hot water backup coil and 3-way valve	●
	Supporting electrical resistors (2 stages)	●
Condensate drain pan	Removable indoor stainless steel condensate pan	✓
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●
Remote condensation	Remote dual air condenser for the water circuit	●
	Remote dual air condenser for the air circuit	●
	Remote dual air condenser for elimination of the water recovery circuit	●
Power supply	400 V / III ph / 50 Hz with neutral	✓
	220 V / III ph / 60 Hz; 380 V / III ph / 60 Hz; 400 V / III ph / 60 Hz; 460 V / III ph / 60 Hz	●
	Other electrical voltages (consult for additional options)	●
Packaging	Packaging for maritime transport	●

Control

Electronic control and communication	DRYMANAGER Electronic Control (µPC Control)	✓
	User and Maintenance Terminal PGD1	✓
	Temperature and humidity control	✓
	Hot water temperature control	●
	Dirty filter detector	●
	RS485 card for Modbus communication, with DRYMANAGER control	●
	Boss / tERA supervision systems with DRYMANAGER control	●
	BACNET/LONWORKS communication with DRYMANAGER control	●
Additional control and safety components	Main switch in electrical panel	✓
	Magneto-thermal protections for compressors and fans	✓
	PREMIUM phase control relay, with phase failure detection and rotation direction protection	✓
	EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection	●
	Thermal-magnetic switch in the fan supply line	●
	Smoke detector	●
	Duct/ambient CO2 sensor	●
	Duct/ambient VOC sensor	●
	Ambient temperature and humidity sensor	●
	Energy meter	●
Electrical panel	Fully wired electrical panel, with IP54 protection	✓
	Tropicalised electrical panel con barniz protector	✓
	Forced ventilation of the electrical panel	●
	FIBOX window on electrical panel	✓
	Antifreeze electrical resistor in electrical panel	●

SEALIX heat exchanger



SealiX

- Brazed plate heat exchanger with a silicon dioxide protective coating on all inner surfaces.
- Increases resistance to corrosion, chlorine and salt and improves performance in terms of fouling and scaling.
- Improves stability and mechanical properties by providing high pressure strength.
- High thermal and hydraulic performance.

This system strongly benefits the service life of the heat exchanger, it increases the operational safety of the entire system and it significantly reduces maintenance costs, enabling the installation of more compact and affordable air conditioning equipment.

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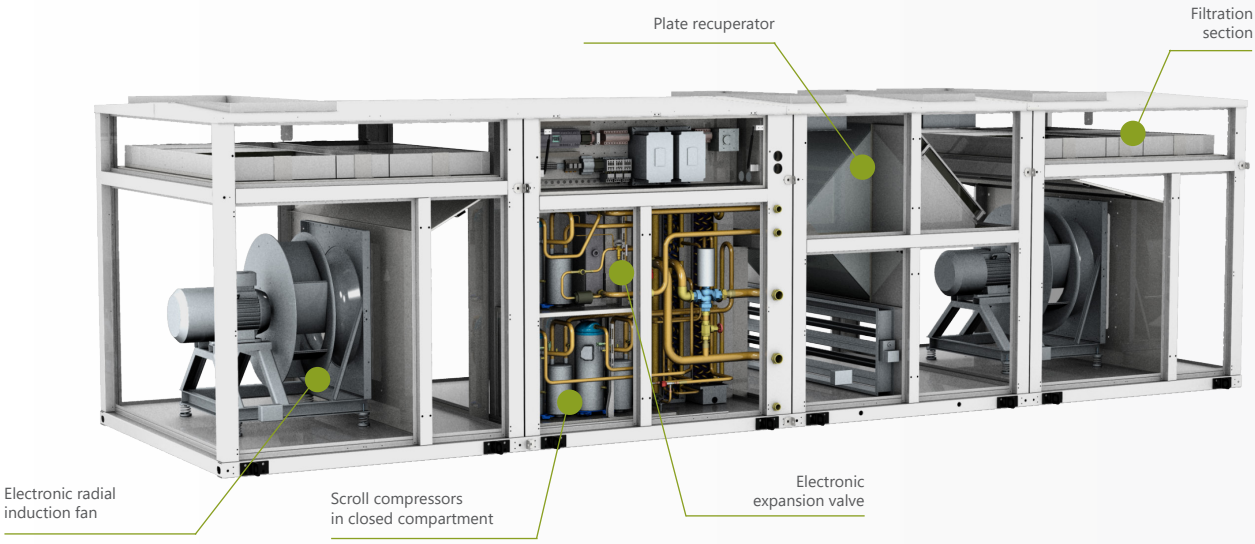
OCEAN DTS construction



Temperature and humidity control via built-in air conditioning of covered swimming pools

Ventilation

Two or three-damper mixing sections

Centrifugal extraction/return and induction fans with a wide range of flows and pressures available

Filtration

Different filtration levels, with flat or bag filters, to meet the demanding air quality requirements.

Dehumidification

Customised and optimised selection of the most suitable equipment for the needs of each facility based on the combination of the dehumidification capacity as regards the outdoor air provided and the air produced by the cooling systems

Cooling

Free-cooling via outdoor air

Possibility of discharging excess heat that cannot be used in the facility via integrated or remote condensers

Heating

Pre-heating of the supply air via condensation heat recovery

Hot water backup battery of the heat production system, equipped with a proportional three-way valve

Pre-heating of the swimming pool water

Pre-heating of the pool water via condensation heat recovery

Energy Efficiency

High performance equipment to significantly reduce energy consumption compared to conventional systems
Casing based on a sandwich panel painted on two faces with mineral wool insulation (50 mm thick)

Optional electronic type plug fans

Free-cooling/dehumidification via outdoor air

Total recovery of condensation heat in the supply air circuit and in the heating of water in the vessel

Recovery of heat from extraction air with plate heat exchangers or active recovery

Partial recovery of the heat from the hot discharge gases from the compressor to preheat the sanitary water

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R410A technical data

DTS model			1007	1009	2009	2012	2015	2020	3027	3035	3045
Dehumidification capacity with fresh air 30% (1)		kg/h	15,7	21,5	22,8	30,3	36,7	43,4	57,8	75,4	96,4
Dehumidification capacity with fresh air 0% (2)		kg/h	7,0	9,7	12,4	16,0	19,4	22,2	29,9	40,0	50,9
Heating capacity		kW	13,6	19,0	10,3	13,1	15,6	17,9	34,6	44,5	57,0
Cooling capacity		kW	11,0	14,9	17,9	23,0	26,7	30,7	42,7	56,3	71,7
Compressor power absorbed		kW	2,7	4,3	3,0	3,9	4,9	5,7	7,1	9,9	13,7
Total power consumption (3)		kW	3,0	4,9	3,5	4,8	5,9	7,2	8,3	12,0	16,4
Power supply			400V / III / 50HZ with neutral								
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088								
	Compressor type		Hermetic scroll								
	No. of Circuits / Compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2
Indoor fan (Nominal flow rate)	Nominal air flow rate	m^3/h	2000	2700	2700	3700	4500	5500	7000	9000	11600
	Available static pressure	Pa	100	100	100	100	100	100	120	120	150
	No. x type of Fans		1 x EC Plug-fan								2 x EC Plug-fan
	Total power consumption of fans	kW	0,32	0,52	0,57	0,92	1,00	1,47	1,25	2,07	2,79
Indoor fan (maximum flow rate)	Maximum air flow rate	m^3/h	2400	3275	3375	4400	5400	7200	9000	11000	14000
	Available static pressure	Pa	100	100	100	100	100	120	120	120	150
	No. x type of Fans		1 x EC Plug-fan								2 x EC Plug-fan
	Total power consumption of fans	kW	0,45	0,72	0,84	1,31	1,49	2,75	2,07	2,49	4,07
Water recovery circuit	Recovered heat power (4)	kW	-	-	10	14	16	18	15	21	27
	Nominal water flow rate	m^3/h	-	-	1,8	2,4	2,73	3,15	2,6	3,68	4,8
	Pressure drop	kPa	-	-	32,3	25,6	32,5	41,1	20,9	36,8	29,9
	Hydraulic connections		-	-	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"
Hot water support coil	Heating power (5)	kW	22,1	26,5	26,5	31,7	35,2	38,9	88,1	104	121
	Water flow rate	m^3/h	1,3	1,6	1,6	1,9	2,1	2,3	5,2	6,1	7,1
	Pressure drop	kPa	3	4	4	3	3	4	22	27	36
	Hydraulic connections		1"	1"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"
Weight (6)		kg	283	295	481	502	518	539	849	868	893

DTS model			4060	4075	4080	5100	5120	5140
Dehumidification capacity with fresh air 30% (1)		kg/h	110,8	138,7	160,6	201,2	225,6	310,6
Dehumidification capacity with fresh air 0% (2)		kg/h	58,6	74,5	78,3	102,9	117,8	143,2
Heating capacity		kW	64,5	81,5	84,6	110,3	125,6	149,1
Cooling capacity		kW	81,9	103,3	108,1	143,8	163,0	193,7
Compressor power absorbed		kW	16,7	21,9	21,8	23,4	26,6	31,3
Total power consumption (3)		kW	19,7	26,0	29,9	30,8	34,0	47,6
Power supply			400V / III / 50HZ with neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088					
	Compressor type		Hermetic scroll					
	No. of Circuits / Compressors		2/2	2/3	3/3	3/3	3/3	3/3
Indoor fan (Nominal flow rate)	Nominal air flow rate	m^3/h	13200	16500	21000	25000	28000	43500
	Available static pressure	Pa	150	150	180	180	180	180
	No. x type of Fans		2 x EC Plug-fan				3 x EC Plug-fan	4 x EC Plug-fan
	Total power consumption of fans	kW	3,06	4,16	8,12	7,40	7,41	16,32
Indoor fan (maximum flow rate)	Maximum air flow rate	m^3/h	15900	19000	25000	32400	34000	48000
	Available static pressure	Pa	150	150	180	180	180	180
	No. x type of Fans		2 x EC Plug-fan			3 x EC Plug-fan		4 x EC Plug-fan
	Total power consumption of fans	kW	4,52	6,20	11,70	9,60	11,30	20,50
Water recovery circuit	Recovered heat power (4)	kW	33	43	44	56	63	74
	Nominal water flow rate	m^3/h	5,8	7,4	7,6	9,6	10,9	12,9
	Pressure drop	kPa	40,9	22,4	29,7	34,2	35,8	28,0
	Hydraulic connections		1 1/2"	1 1/2"	1 1/2"	2"	2"	2"
Hot water support coil	Heating power (5)	kW	131	148	167	253	270	342
	Water flow rate	m^3/h	7,7	8,7	9,8	14,8	15,8	20,0
	Pressure drop	kPa	41	52	64	14	15	23
	Hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"
Weight (6)		kg	1054	1205	1212	1848	2040	2245

(1) Dehumidification Capacity with 30% Fresh Air at 7°C/90% RH and 70% Return Air at 28°C/65% RH according to UNE 100011.

(2) Dehumidification Capacity of the Unit with an Evaporator Air Inlet at 28°C/65% RH, without Fresh Air.

(3) Rated power absorbed by compressors y ventiladores.

(4) Recovered Heat Power in a Water Condenser with an Inlet/Outlet Water Temperature of 28/33°C.

(5) Heating Power in the Hot Water Support Coil with an Inlet/Outlet Water Temperature of 80/65°C and an Inlet Air Temperature of 20°C.

(6) Weight of the Cooling Module and the Ventilation Module.

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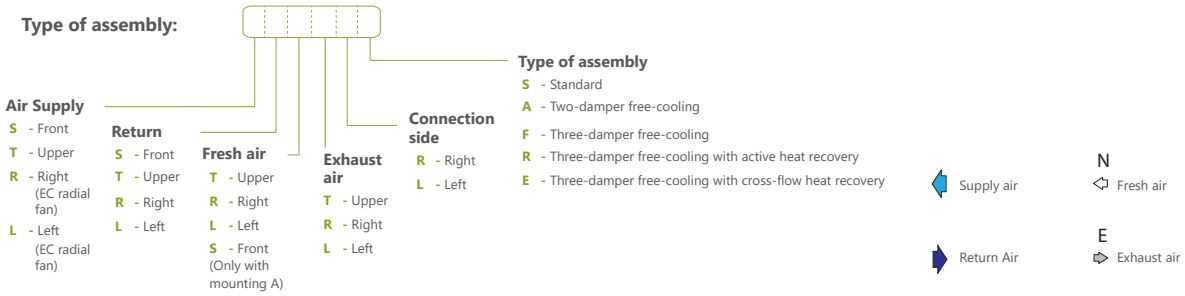
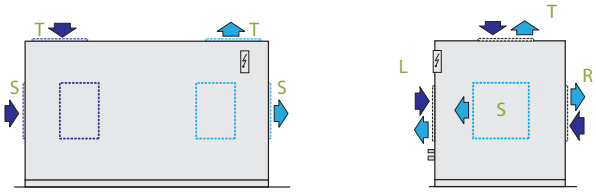


S STANDARD INSTALLATION

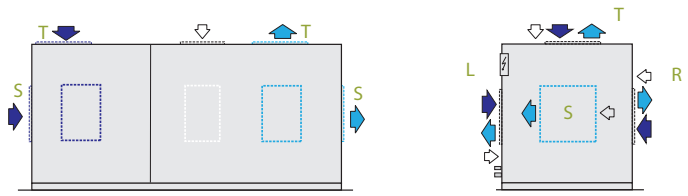
S - Standard



Front view, from the supply side

A ASSEMBLY

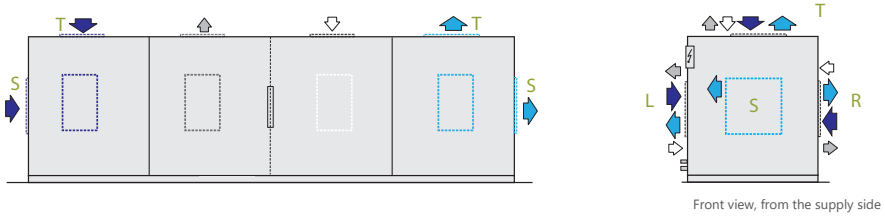
A - Two-Damper Free-Cooling



Front view, from the supply side

F / R ASSEMBLY

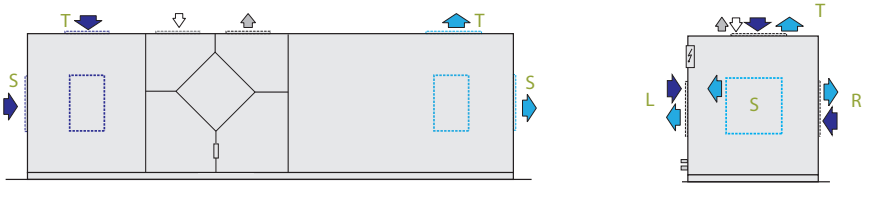
F - Freecooling with three dampers.
R - Freecooling with three dampers + Active recovery.



Front view, from the supply side

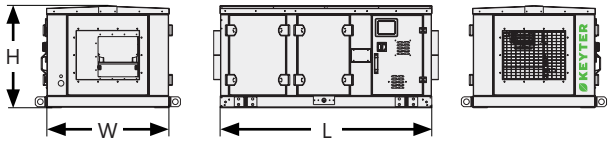
E ASSEMBLY

E - Freecooling with three dampers and cross-flow heat exchanger.

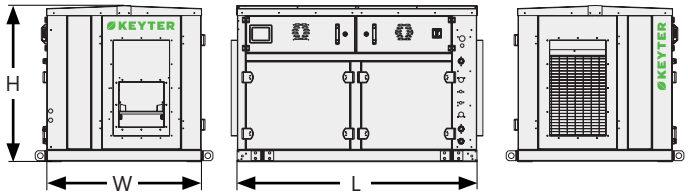


Front view, from the supply side

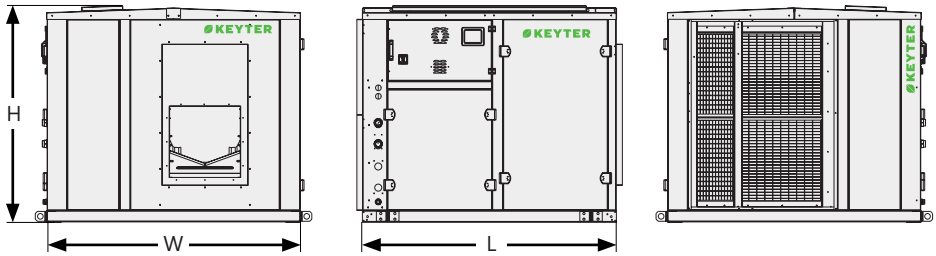
Series 1



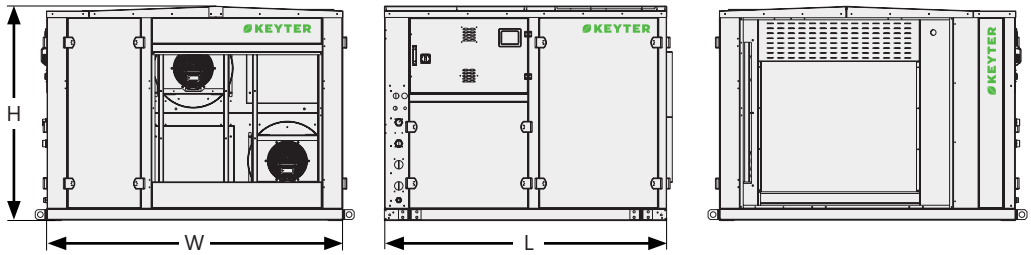
Series 2



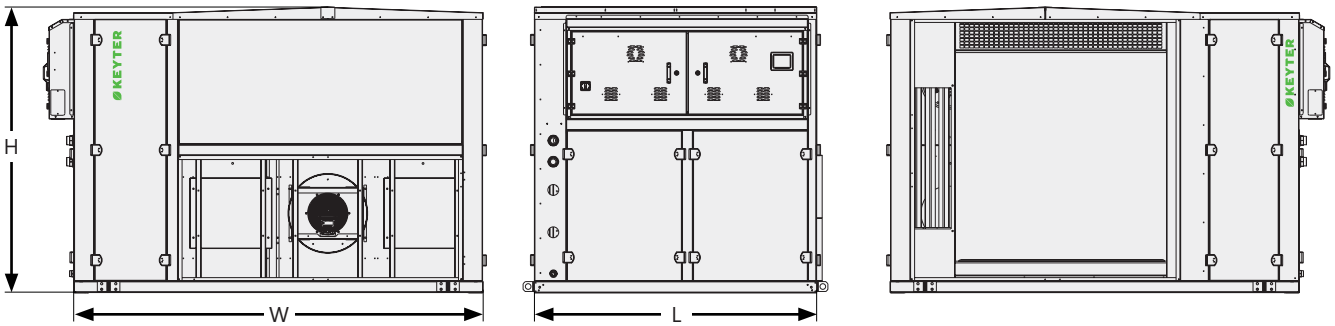
Series 3



Series 4



Series 5



Dimensions (cooling module + ventilation module) (mm)					
	Series 1	Series 2	Series 3	Series 4	Series 5
L	1500	1700	1800	2000	2000
W	870	1100	1800	2100	3200
H	720	1100	1500	1500	2000

Life solutions

169 *life IT&Power* — *Adapted for installation in shipping containers*

172 *life data center* — *Solutions for data centers*

173 *life airports* — *Solutions for airports*

life IT&Power

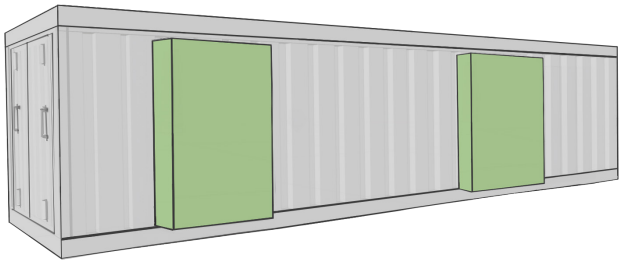
Compact, standalone air-to-air units for industrial applications

8-40 kW

R454B R410A R134a

LIFE IT&Power is a range of compact, standalone air-to-air units with a special design adapted for installation on the exterior of shipping containers.

Optimized design with eco-friendly refrigerant R454B upon request, R-410A, or R-134a in the high temperature version.



Adaptability and Versatility

- The adaptability to different installation sizes is ensured by a wide range of models.
- Maximum accessibility and easy maintenance are provided through removable panels.

Energy Efficiency

- Free cooling is possible for free refrigeration using outside air.

Environment

- Reduced refrigerant charge R-454B, R-410A, or R-134a.

Designed to operate under adverse conditions

- With a version for working with R-134a refrigerant capable of handling outdoor temperatures up to 55°C.
- Option for protecting external coils from agents such as sand and dust...
- The units have an enclosure protected with weather-resistant polyester paint and high UV protection.

Ease of control

- Easy control is facilitated by electronic regulation and CAREL supervision with user-friendly operation.
- There is a wide selection of communication protocols (Modbus, BACnet, LonWorks).

Codification:

KCVC | | | R N S4Y

Series | Size | Power

R410A

KCVC-W model			C009-W	C114-W	C118-W	C222-W	C236-W	C241-W	C365-W
COOLING-ONLY VERSION (R)									
Power ratings under nominal conditions	Cooling capacity (1)	kW	8,4	14,7	17,7	23,6	34,2	40,2	61,2
		TR	2,4	4,2	5,0	6,7	9,7	11,4	17,4
		(kBTU/h)	29	50	60	81	117	137	208
	Sensible cooling capacity (1)	kW	7,9	13,4	14,7	19,7	27,5	31,7	43,9
		TR	2,2	3,8	4,2	5,6	7,8	9,0	12,5
		(kBTU/h)	27	46	50	67	94	108	149
	Absorbed power (2)	kW	3,8	5	6,1	7,4	11,9	13,8	23,2
	EER (3)	W/W	2,2	2,9	2,9	3,2	2,9	2,9	2,6
		BTU/(h*W)	7,5	10	9,9	10,9	9,8	9,9	9,00
Power ratings at maximum outside temperature	Cooling capacity (1)	kW	7,4	13,2	15,9	21,2	30,7	37	54,8
		TR	2,1	3,8	4,5	6,0	8,7	10,5	15,6
		(kBTU/h)	25	45	54	72	105	126	186
	Sensible cooling capacity (1)	kW	7,4	12,8	13,9	18,6	26	30,2	41,2
		TR	2,1	3,6	4	5,3	7,4	8,6	11,7
		(kBTU/h)	25	44	47	63	89	103	140
	Absorbed power (2)	kW	4,6	5,8	7,1	8,8	13,8	15,8	26,5
	EER (3)	W/W	1,6	2,3	2,2	2,4	2,2	2,3	2,1
		BTU/(h*W)	5,5	7,8	7,6	8,2	7,6	8,0	7,0
	Maximum outside temperature	ºC	45	45	45	45	45	45	45
TECHNICAL SPECIFICATIONS									
Power supply			400V / III / 50HZ with neutral						
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R410A / 2088						
	Compressor type		Hermetic scroll						
	No. of refrig. circuits / compressors		1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		1	1	1	2	2	2	2
Indoor fan	Air flow rate	m^3/h	2150	3020	3020	4500	6500	7500	12400
	Nominal available pressure	Pa	150	150	150	150	150	150	300
	No. x fan type		1 x Plug-fan EC						
Outdoor fan	Outdoor air flow rate	m^3/h	4000	5500	5500	9000	9000	9000	14000
	No. x fan type		450	450	450	450	450	450	500
	Fan Ø	mm	1 x axial EC			2 x axial EC			

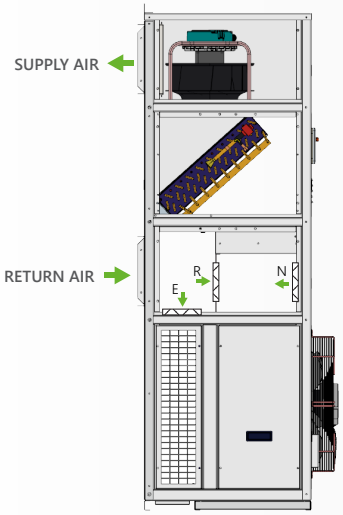
(1) Total cooling capacity and sensible cooling capacity for an indoor air temperature of 27°C/50% RH and an outdoor air temperature of 35°C.

(2) Total power absorbed by compressors, external fans, and the supply fan.

(3) EER and COP calculated according to the EN 14511:2022 standard.

Freecooling

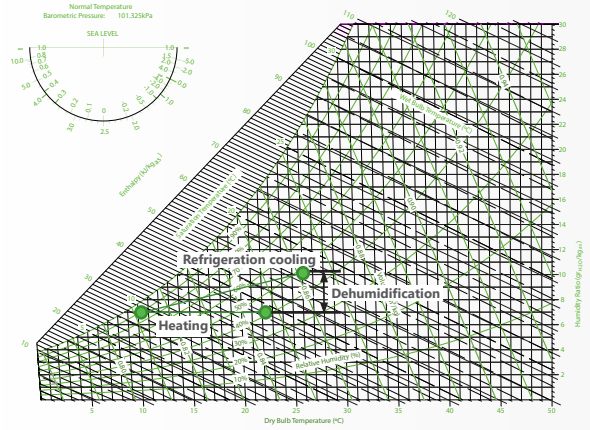
The KCVC units can include a free cooling system. The free cooling system consists of three motorized dampers as follows:



Humidity control

The KCVC units can be configured to dehumidify the room air using electric heaters in the supply air outlet of the unit.

This setup helps control humidity levels in areas where high outdoor humidity could lead to excessive indoor humidity issues.

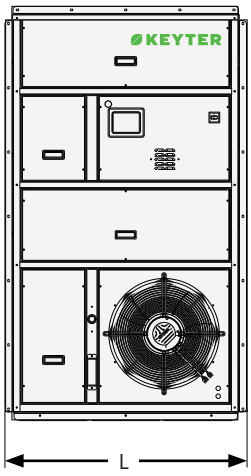


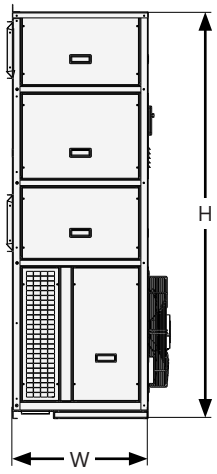
R134a

KCVC-Y model			C007-Y	C110-Y	C114-Y	C220-Y	C223-Y	C235-Y
COOLING-ONLY VERSION (R)								
Power ratings under nominal conditions	Cooling capacity (1)	kW	7.5	10.3	14.5	21.4	26.8	33.7
		TR	2.1	2.9	4.1	6.1	7.6	9.6
		(kBTU/h)	26	35	49	73	91	115
	Sensible cooling capacity (1)	kW	7.4	9.9	13.4	18.7	24.2	28.8
		TR	2.1	2.8	3.8	5.3	6.9	8.2
		(kBTU/h)	25	34	46	64	83	98
	Absorbed power (2)	kW	3.1	4.0	5.7	6.6	8.4	11.5
	EER (3)	W/W	2.4	2.6	2.5	3.2	3.2	2.9
		BTU/(h*W)	8.3	8.8	8.7	11.1	10.9	10.0
Power ratings at maximum outside temperature	Cooling capacity (1)	kW	6.1	8.5	11.2	17.6	21.6	27.5
		TR	1.7	2.4	3.2	5.0	6.1	7.8
		(kBTU/h)	21	29	38	60	74	94
	Sensible cooling capacity (1)	kW	6.1	8.5	11.2	17.0	21.6	26.0
		TR	1.7	2.4	3.2	4.8	6.1	7.4
		(kBTU/h)	21	29	38	58	74	89
	Absorbed power (2)	kW	4.6	5.4	8.1	9.2	11.8	16.0
	EER (3)	W/W	1.3	1.6	1.4	1.9	1.8	1.7
		BTU/(h*W)	4.5	5.4	4.7	6.6	6.2	5.9
	Maximum outside temperature	°C	53	55	55	55	55	55
TECHNICAL SPECIFICATIONS								
Power supply			400V / III / 50HZ with neutral					
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R134a / 1300					
	Compressor type		Hermetic scroll					
	No. of refrig. circuits / compressors		1/1	1/1	1/1	2/2	2/2	2/2
	No. power stages		1	1	1	2	2	2
Indoor fan	Air flow rate	m^3/h	2150	3020	3020	4500	6500	7500
	Nominal available pressure	Pa	150	150	150	150	150	150
	No. x fan type		1 x Plug-fan EC					
Outdoor fan	Outdoor air flow rate	m^3/h	4000	5500	5500	9000	9000	9000
	No. x fan type		450	450	450	450	450	450
	Fan Ø	mm	1 x axial EC			2 x axial EC		

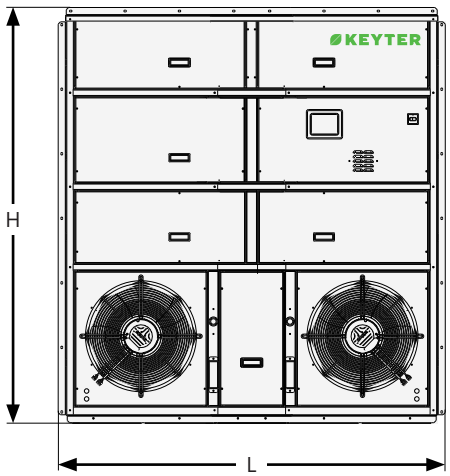
Dimensions:

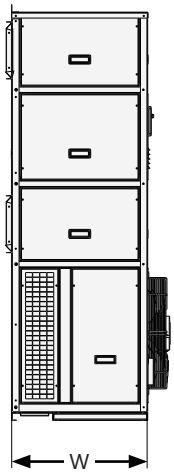
Series 0-1



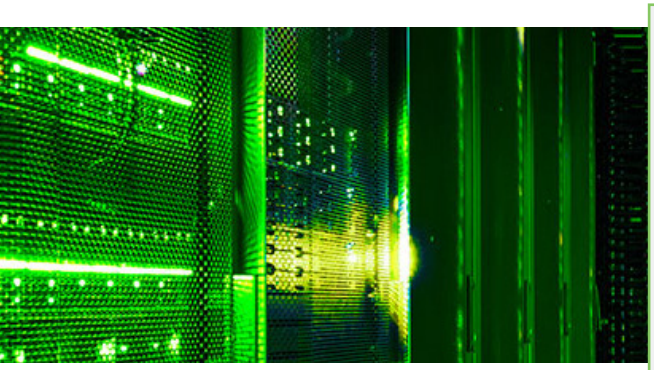


Series 2-3





Standard equipment dimensions (mm)				
	Series 0	Series 1	Series 2	Series 3
L	800	1000	1600	2100
W	500	600	800	950
H	1600	1800	2050	2300

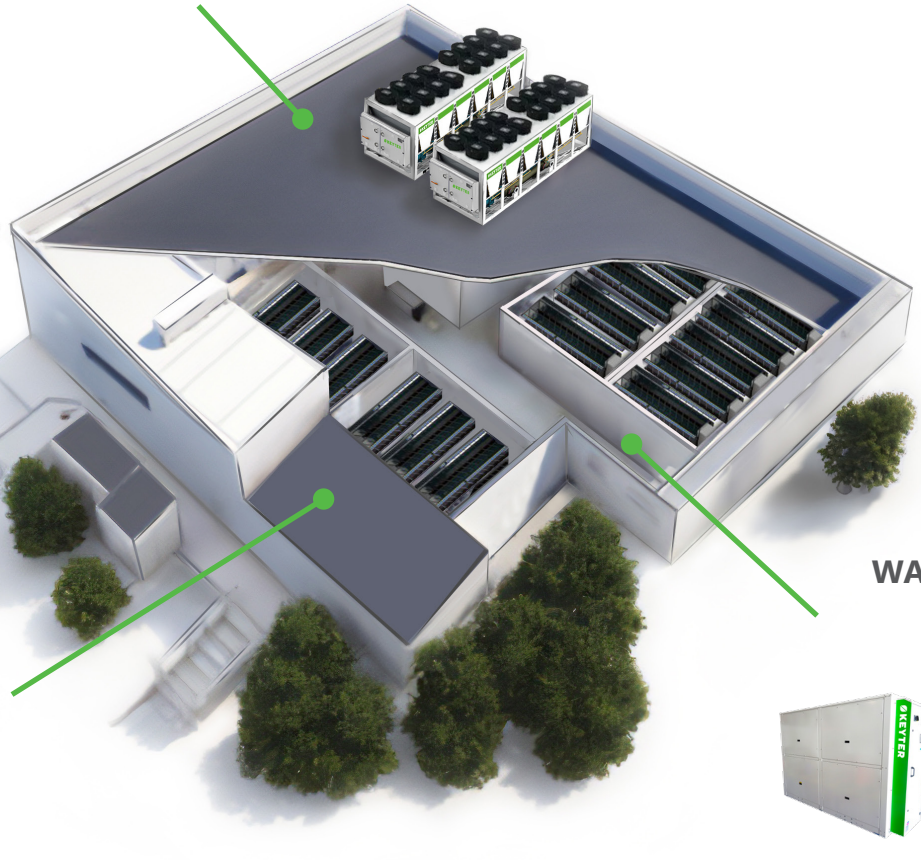


Solutions for
Data Centers

Cooling and air conditioning solutions play a critical role in ensuring the stability, performance, and longevity of critical systems in Data Centers.

It is essential to select high-efficiency equipment that minimizes energy consumption and carbon emissions, contributing to long-term sustainability.

AIR-COOLED CHILLERS



IT&POWER

WATER-COOLED CHILLERS

Energy Efficiency

Monitoring and Control

Cooling capacity

life airports KCRP

Compact PCA DX (Preconditioned Air Direct Expansion) air-to-air technology units for aircraft conditioning and low-profile rooftop units for the climate control of boarding bridges.

aslan

The **ASLAN** units form a complete range of autonomous PCA equipment for ground-based and hanging aircraft air conditioning.

These units are compact autonomous units of the Pre-Conditioned Air (PC Air) type with Direct Expansion, air-cooled to operate with all external air, specifically designed for the conditioning of aircraft and hangars with high-pressure air delivery and the possibility of heating by reversible heat pump with multiscroll technology in ON/OFF or INVERTER versions, and VAV (Variable Air Volume) system by frequency inverter.

The design of the equipment, completely innovative, integrates different technologies from the world of refrigeration, air conditioning, and energy saving, making these units the most versatile and advanced on the market for providing ventilation, cooling, dehumidification, heating, and air filtration supplied to the aircraft.
They include equipment from 80 kg/min to 210 kg/min in Narrow Body, Wide Body, and Jumbo versions.

seila inverter

SEILA KCRP is a new range of next-generation compact air-to-air units with a low-profile design, featuring a height of 700 mm, specifically developed for installations where a reduced equipment height is required, such as airport boarding bridges or transport containers.

SEILA *inverter*

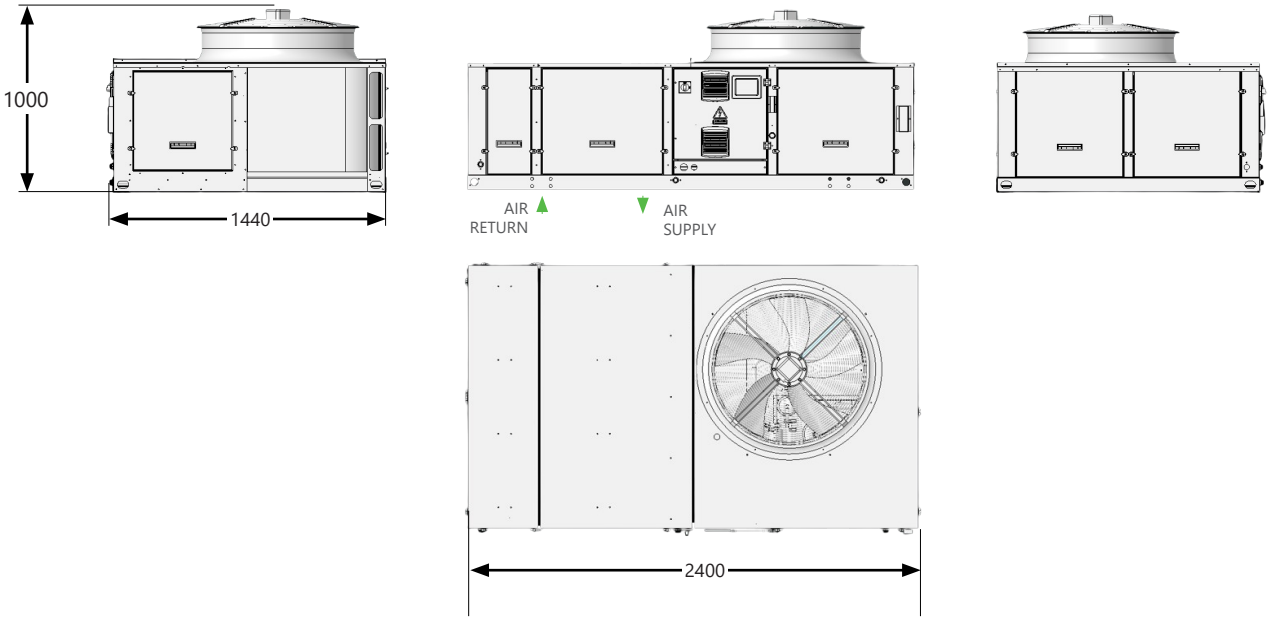
Low-profile air-to-air units

21-39 kW 20-39 kW

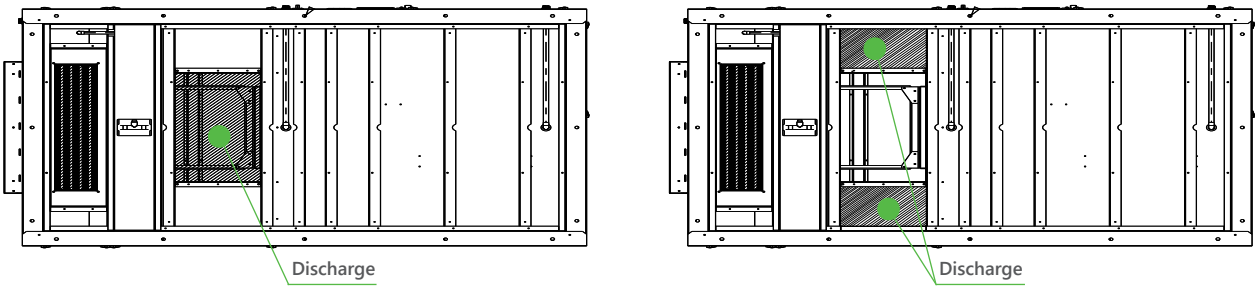
Inverter EC EC

Free-Cooling capability

Reduced height (mm)



Adaptation of installation to boarding bridges and containers



seila inverter

KEYTER

KCRP model			022	032	039
COOLING-ONLY VERSION (R)					
Cooling mode	Cooling capacity (1)	kW	21,7	32,0	38,9
		TR	6,2	9,1	11,1
		KBTU/h	74,2	109,2	132,6
	Sensible cooling capacity	kW	16,6	25,3	29,8
	Absorbed power (2)	kW	6,2	10,1	14,1
	EER (3)	W/W	3,63	3,27	2,85
		BTU/h/W	15,27	13,97	11,84
	SEER (4)		6,3	5,7	4,7
	ηs,c (5)		250,0%	223,3%	185,9%
HEAT PUMP VERSION (I)					
Cooling mode	Cooling capacity (1)	kW	21,7	32,0	38,9
	Absorbed power (2)	kW	6,2	9,1	11,1
	EER (3)	W/W	3,63	3,27	2,85
	SEER (4)		6,3	5,7	4,7
	ηs,c (5)		250,0%	223,3%	185,9%
Heating mode	Heating power (6)	kW	20,3	29,5	38,9
	Absorbed power (2)	kW	5,9	9,5	12,9
	COP (3)	W/W	3,57	3,22	3,12
	SCOP average climate (4)		3,9	3,7	3,4
	ηs,h average climate (5)	%	152,9%	143,5%	134,4%
TECHNICAL SPECIFICATIONS					
Power supply			400V / III / 50Hz with neutral		
Refrigeration circuit	Refrigerant fluid / GWP	kg CO_2	R454B / 466		
	Compressor type		Hermetic scroll compressor in tandem configuration		
	No. of refrig. circuits / compressors		1/1	1/1	1/1
	No. power stages		modulating control 30-100 %		
Indoor fan	Supply air flow	m^3/h	4600	6000	7600
	Nominal available pressure	Pa	100	120	140
	Fan type		Plug-fan EC		
	Number of fans		1	1	1
	Power input (kW)	kW	0,54	0,91	1,51
Outdoor fan	Outdoor air flow	m^3/h	13000	16000	16000
	Fan type	N x mm	800 EC		
	Number of fans		1	1	1
	Power input (kW)	kW	0,80	1,38	1,38
Sound pressure level of the equipment Lp10 (7)		dB(A)	50,8	52,7	57,9
Weight		kg	459	502	514

(1) Nominal cooling capacity for an indoor air temperature of 27ºC/50% RH and outdoor air temperature of 35ºC.
(2) Total power input by compressors, outdoor fans, and supply air fan.
(3) EER and COP calculated according to EN 14511:2022 standard.
(4) Seasonal Energy Efficiency Ratio (SEER) and Seasonal Coefficient of Performance (SCOP) for average climate, calculated according to EN 14825:2022 standard.
(5) Seasonal energy efficiency for cooling (ηs,c) and space heating (ηs,h), in accordance with the Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for an indoor air temperature of 20ºC and outdoor air temperature of 7ºC DB / 6ºC WB.
(7) Sound pressure level in dB(A), measured in free field conditions at 10 m from the source, with directivity 2 and 1.5 m above the ground.

Electronic control:

SEILA series production equipment includes the CLIMANAGER programmable electronic control, specifically developed for the management of air-to-air equipment and optionally the TH-Tune user terminal.

Included as standard:

- Inverter compressor
- Electronic expansion valve
- Radial induction fans with EC technology
- Axial fans, outdoor unit with EC technology

Options:

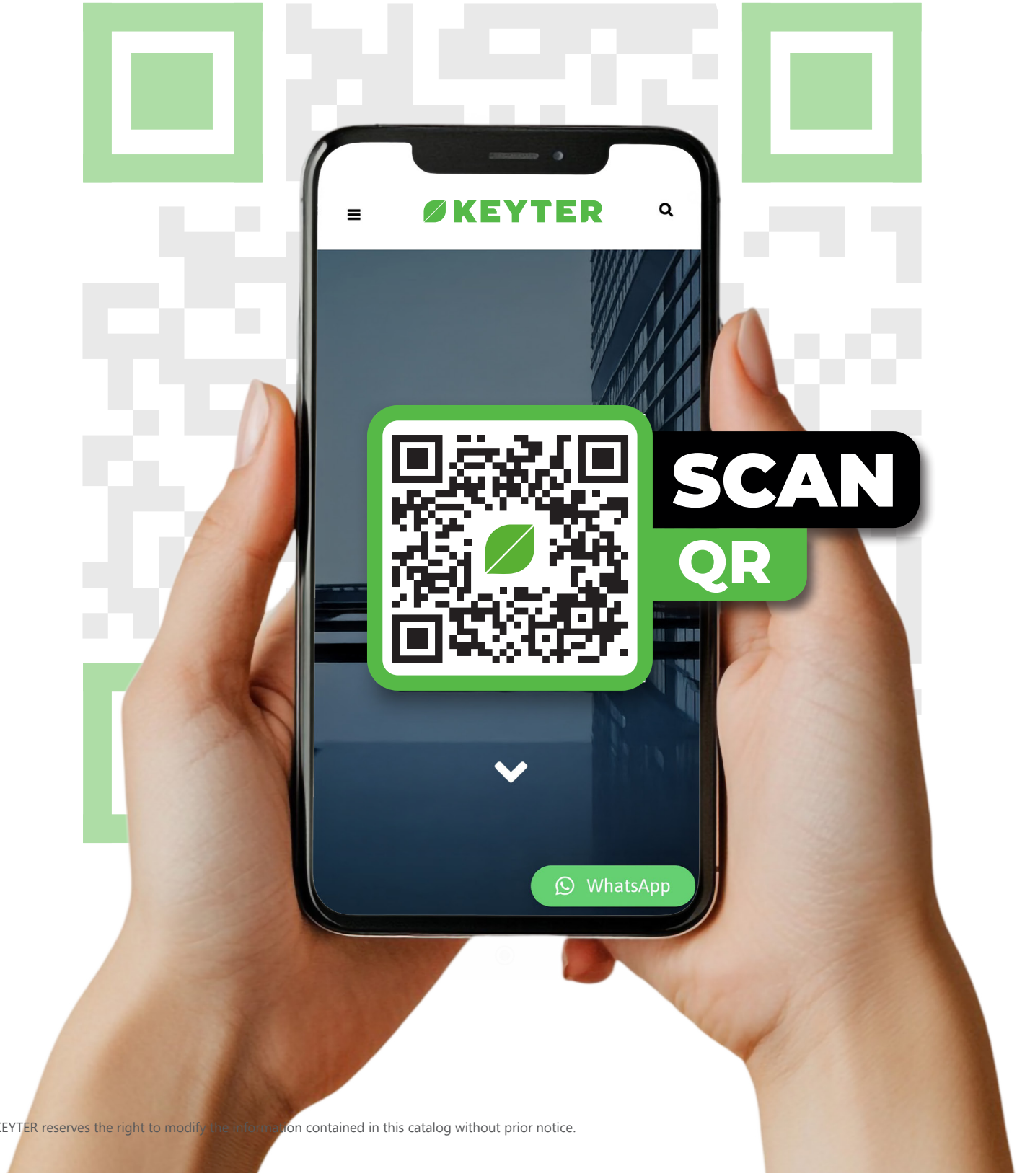
- F filtration section
- Thermal and enthalpic free-cooling
- Supporting electrical resistor
- Hot water backup battery with 3-way valve
- Dirty filter detector

Options:

- Smoke detector
- Ambient/duct CO_2 or VOC sensor
- Ambient temperature sensor
- Anti-corrosion treatments of the coils (BLUECOAST, ALUCOAST, GREYCOAST, BLYGOLD AND COPPERFIN)
- Other electrical voltages
- RS485 card for communication in MODBUS protocol
- BACNET/LONWORKS communication
- THT controller
- Change to on-off scroll compressors in tandem (see technical data)

commercial conditions

general terms and conditions of sale and warranty



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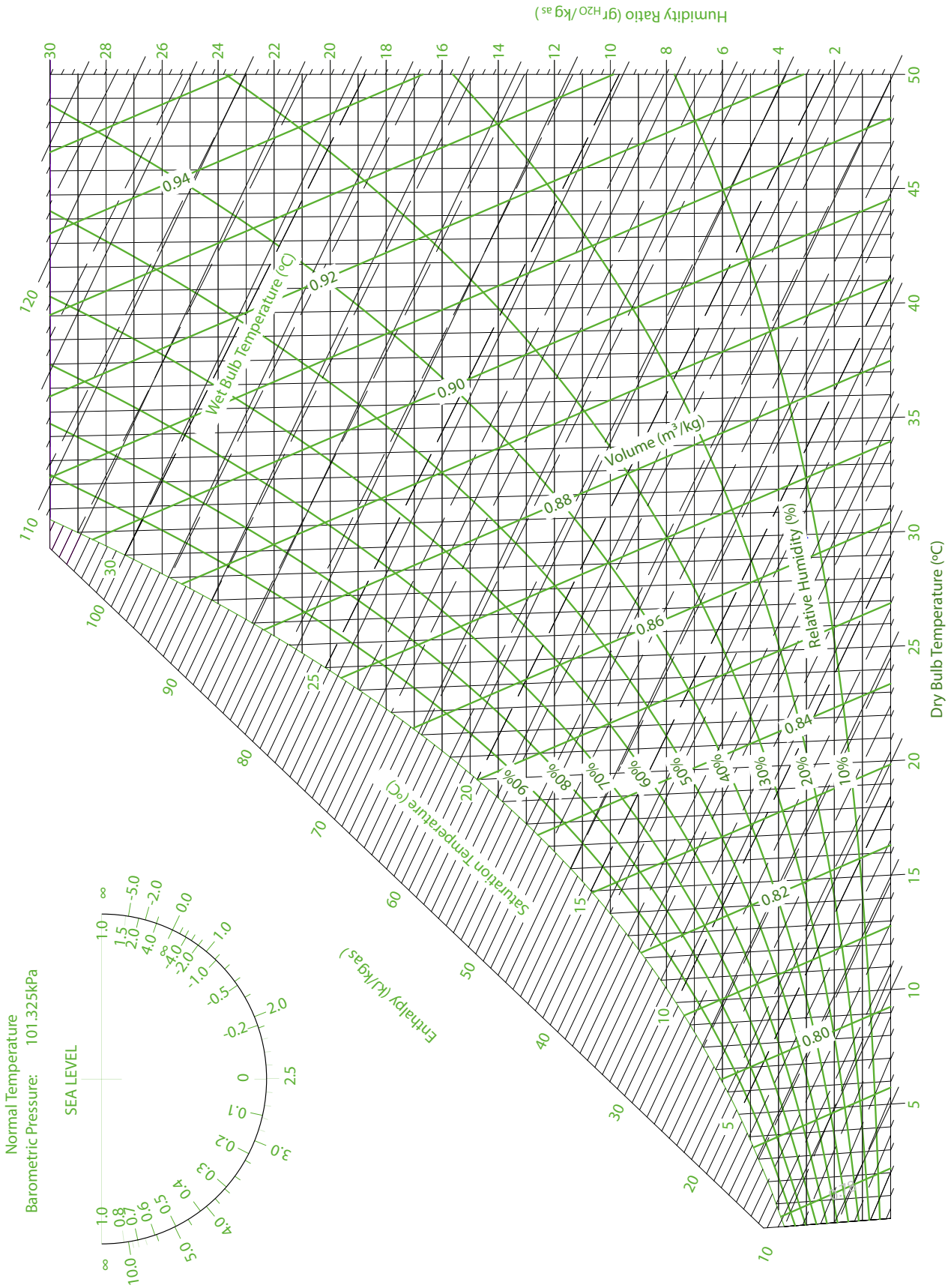
Humidity Ratio (gr H2O /kg as)
Dry Bulb Temperature (ºC)
Relative Humidity (%)
Volume (m³/kg)
Wet Bulb Temperature (ºC)
Saturation Temperature (ºC)
Enthalpy (kJ/kg as)
Normal Temperature
Barometric Pressure: 101.325kPa
SEA LEVEL

V20250807

KEYTER

HVAC+R
is green

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