Keyter

industrial HVAC & R

HVAC&R is green

product catalogue 2018-2019

Keyter Technologies is a **Spanish group** of industrial companies dedicated to the design, **engineering**, **manufacturing,** marketing and service of systems and solutions based on **refrigeration** and **air conditioning technologies (HVAC & R).**

Keyter is recognized for its work in **R&D**, and is committed to the development of projects related to **technological innovation** and **environmental protection.**

With an increasing footprint and commercial growth, **Keyter** has a Sales and Technical Service network with **13 offices in Spain** and international offices throughout **Europe**, **America**, **Africa, Middle East** and **Asia-Pacific.**

The **Keyter** team has over **30 years experience** in the developing and manufacturing of **high-tech solutions**, based on the principles of **sustainability**, **reliability** and **energy efficiency.**

product & service 360º

Our Engineering, Manufacturing and Technical Service departments, always at your service

Spanish Technology

European Directive

committed to environment

R&D&I projects for **Sustainable Solutions**

Eurovent Certification

Low GWP refrigerants

focused on energy efficiency

Optimised designs for a better environmental impact and low GWP refrigerants

ISO 9001:2008
ISO 14001:2004

Environmental Award

EcoDesign

Heat pump programme

RoHS directive

Innovative SME award

contents

sales network

Keyter Technologies: local manufacturing with a global vision

Keyter has a network of sales offices that covers the whole of Spain and a growing international network of offices throughout Europe, America, Africa, the Middle East and Asia.

Headquarters and production
PI Los Santos, C/ José Estrada Orellana, 2 - 14900 Lucena (Córdoba) Spain

+34 957 51 07 52

International Sales
commercial@keyter.es

International Service
international.service@keyter.es

- Headquarters and production plants
  Lucena, Córdoba (Spain)
- International sales subsidiaries
  Keyter Intarcon Nederland (Netherlands)
  Keyter Intarcon Newtech (Turkey)
- International sales offices

  Europe: Belgium, Czech Republic, Denmark, France, Germany, Italy, Portugal, Romania, Spain, Switzerland and United Kingdom

  Africa: Algeria, Angola, Cape Verde, Equatorial Africa, Morocco, Mozambique, Sub-Saharan Africa and Tunisia

  Asia-Pacific: Bangladesh, India, Middle East and Pakistan

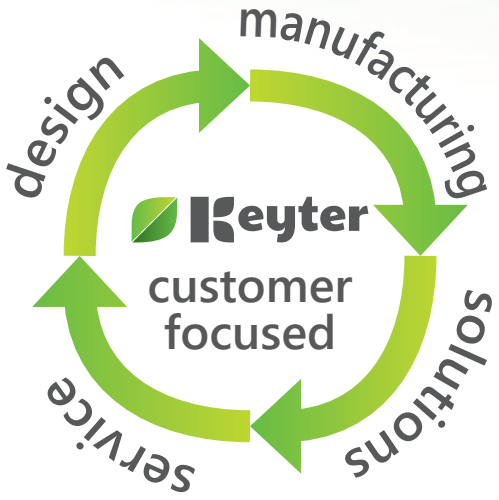
  America: Argentina, Bolivia, Chile, Colombia, Dominican Republic, Ecuador, Mexico, Peru, Uruguay and Venezuela

service 360º

Keyter's philosophy is simple: service comes first!

Technical Assistance Service

Keyter Technologies employs highly-qualified staff with vast experience to support customers with the installation, commissioning, supervision and operational optimisation of equipment, etc.



Keep calm and Spare parts

Keyter sees the spare parts service not as a business area, but as an added value that we provide for our customers, making management easier and more agile, with customised care.




Spanish development and manufacturing at the cutting edge of technology

Keyter Technologies develops and manufactures efficient solutions for HVAC & R. Constantly working with leading global companies enables us to have and integrate the latest energy-efficient technologies, which, combined with flexibility, enables us to offer market solutions that enable the most efficient operation of their facilities.

#welovecranes




environment

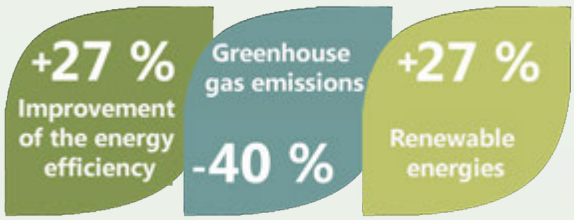
FUTURE SOLUTIONS FOR TODAY AND TOMORROW

EUROPEAN ERP DIRECTIVE

Keyter recognises the great importance of complying with the Ecodesign regulation, the European ErP directive, which regulates the conditions and criteria related to the ecodesign of products with an impact on energy consumption during their life cycle.

F-GAS REGULATION

Includes measures that aim to control and reduce emissions of fluorinated greenhouse gases in the European Union.



COMMITTED TO THE ENVIRONMENT

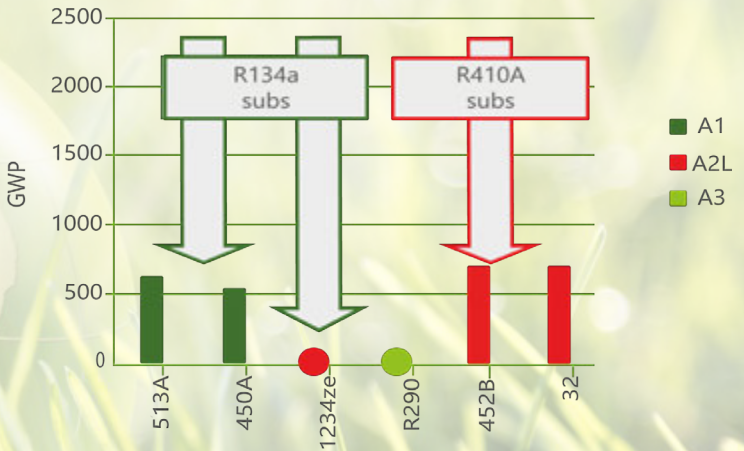
Keyter is committed to looking for sustainable, efficient and innovative solutions to limit energy consumption and reduce greenhouse gas emissions.

Compliance with environmental regulations requires the implementation of suitable solutions.

At Keyter we focus our developments on sustainable solutions with:

- Minimal refrigerant charge
- Use of environmentally-friendly refrigerants with low GWP and natural refrigerants
- High seasonal energy efficiency
- Recyclable materials

Applications	Present	Short-term, until 2022	Long-term, until 2022-2030
Semi-hermetic screw	R134a R513A R450A R1234ze	R134a R513A R450A R1234ze	R513A R450A R1234ze
Scroll	R410A R452B	R410A R452B R32 R290	R452B R32 R290
	R134a R513A	R134a R513A	R513A
Roof-Top	R410A	R410A R452B R32	R452B R32
	R134a	R134a R513A	R513A R1234ze



quality and innovation

THE BEST WAY TO PREDICT THE FUTURE IS TO INVENT IT

- Alan Kay

Keyter considers that our Quality and Respect for the Environment Policy constitutes the basic strategic parameters for our organisation.

Keyter Technologies is a member of the EUROVENT certification programme.

Through this programme and the testing of equipment in different manufacturing processes and specific PPI Validation Plans, Keyter keeps its commitment to integrity and transparency in the solutions offered to customers.

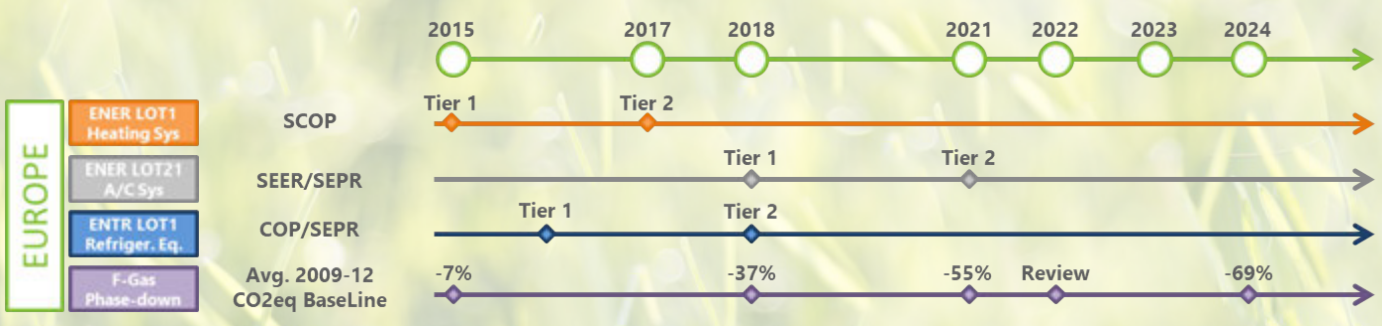
Keyter is in the process of certifying various product ranges.

The certified products are listed in the Directory of Certified Products available at

www.eurovent-certification.com

Keyter will work with TÜV Rheinland as an independent, internationally-recognised certification organisation, to issue certificates that confirm that our equipment is designed, manufactured and tested as per all the European technical quality standards.

Keyter will develop the implementation and follow-up of our quality and environmental policies using innovation as a key factor in satisfying our customers.



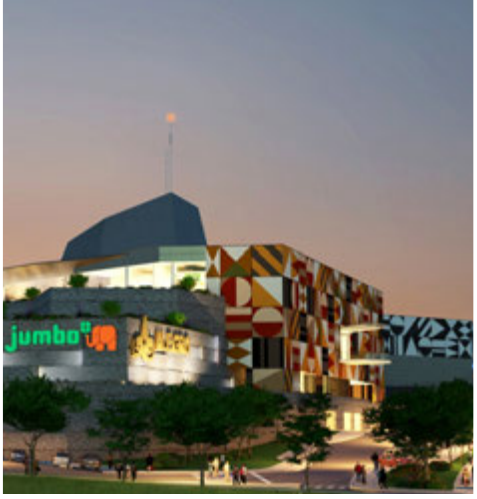
SHOPPING CENTRES

INDUSTRY

ENTERTAINMENT

RIVE GAUCHE | Charleroi, Belgium
Autonomous units **KGH**

EROSKI | Melilla, Spain
Rooftop units **KCR**



ALEGRO SHOPPING CENTER | Setúbal, Portugal
Rooftop units **KCR**

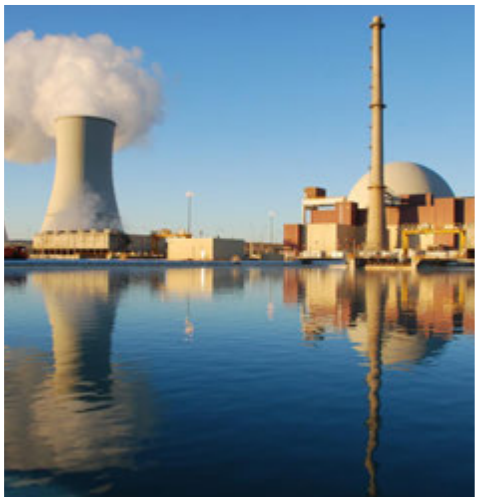
POPULAR PHARMA | Gazipur, Bangladesh
Chillers **KWE** and AHUs **KTS**

SMURFIT KAPPA | Madrid, Spain
Rooftop units **KCR**

MICHELIN EXPERIENCE CENTRE | Almería, Spain.
Rooftop units **KCR**

POWER ELECTRONICS | Valencia, Spain Rooftop units **KCR**

IBERIA CAE FLIGHT TRAINING CENTRE| Madrid, Spain. Heat pump **KWE**



NUCLEAR POWER STATIONS | Trillo and Almaraz, Spain. Autonomous units **KRH**

MARINA D'OR spa I Castellón, Spain Dehumidifier **DTS**

KINEPOLIS HERON DIVERSIA | Madrid, Spain
Rooftop units **KCR**

VARYAP MERIDIAN | Istanbul, Turkey
Chiller **KWB**

ETH Polytechnic school | Zurich, Switzerland
Heat pumps **KZV**

READING UNIVERSITY. England
Chillers **KWE**

HOTEL GUADALMINA I Marbella, Spain
Chillers **KWA** with full heat reclaim

HOTEL MELIA SOL BARBADOS | Mallorca, Spain
Rooftop units **KCR,** Chillers **KWE** & Fan coil units

BEST TENERIFE HOTEL I Tenerife, Spain
Chillers **KWE**

ZARA - INDITEX GROUP | Various international locations
Rooftop units **KCR** and autonomous units **KGH**

BURGER KING | Various locations, Spain
Rooftop units **KCR** & Chiller **KWF**

QUIRÓN CLINICS | Various locations, Spain
Heat pumps **KWE**

REINA SOFIA HOSPITAL | Córdoba, Spain
Dry coolers **KTW**

EXTREME ENVIRONMENTS

Air-to-air packaged and rooftop units

Packaged air conditioning units for electrical component and telecommunications containers including a safety system for redundancy in the equipment.

Galvanised steel structure with special paint treatment to obtain classification up to C5M Hard and enable the equipment to operate under conditions of extreme environmental humidity and salinity

MOBILE AIR CONDITIONING - Malaysia

AIR QUALITY

100% fresh air-to-air packaged units

Ventilation units with active thermodynamic heat reclaim, using extraction air as a heat source/drain, with high energy efficiency, ideal for applications where there is a significant presence of people, as is the case for gyms

The active heat reclaim is combined with the possibility of modulating the flow of outdoor air based on the indoor air quality and the variable capacity of the compressor

ANYTIME FITNESS - Various locations, Spain

INDUSTRIAL PRECISION

Industrial dehumidification

Dehumidifying units to control the temperature and humidity for industrial applications using units with three refrigerant circuits, with the possibility of outdoor air dissipation

This equipment is supplemented with air-to-water heat pumps and air handling units for support at the hottest times of the year

FERTIBERIA - Sagunto, SPAIN

High-temperature heat pump

Water-to-water heat pump with special compressors with high compression ratios and R-134a refrigerant. This type of compressor can generate sanitary hot water up to 80°C thanks to the work with high evaporation temperatures

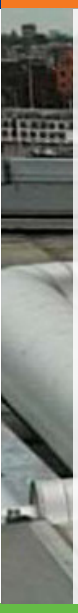
This type of units can replace boilers and thus centralise all production using electrical power

SAN JUAN DE DIOS HOSPITAL - Zaragoza, Spain

Full or partial heat reclaim

Air-to-water heat pumps with total or partial heat reclaim. Energy reclaim, in addition to the outdoor EC axial condensation fans, controls heat reclaim so as to be able to generate sanitary hot water from low temperatures, using full heat reclaim, and up to temperatures of more than 60°C, using partial heat reclaim

HOTELS - Best Hotels | Garden Hotels | Melia



Low-noise chillers

'This is Holland' is the name of the new tourist attraction in the city of Amsterdam in the Netherlands.

To achieve suitable thermal comfort in the building and the 3D viewing room, a hydronic air conditioning system was chosen based on its high energy efficiency and the low noise level of the chillers

THIS IS HOLLAND - Amsterdam, Netherlands

product 360°

0 kW | 50 kW | 100 kW | 200 kW | 300 kW | 500 kW

ROOF-TOP & WALL-TOP UNITS

PERSEA air-to-air roof-top units *new* (inverter)

R410A R513A

18 kW – 407 kW
19 kW – 438 kW

new **SEILA** slim air-to-air roof-top units

R410A

23 kW – 37 kW
25 kW – 40 kW

new **TROPIK** air-to-air roof-top packaged units

R410A

18 kW – 106 kW

ATENEA water-to-air roof-top units

R410A

44 kW – 255 kW
49 kW – 276 kW

WALL-TOP wall-mounted air-to-air monoblock units

R410A

12 kW – 46 kW
13 kW – 47 kW

DEHUMIDIFIERS

OCEAN dehumidifiers

R410A

11 kg/hr | 2700 m³/hr – 166 kg/hr | 48000 m³/hr
13 kW – 156 kW
8 kW – 130 kW

AUTONOMOUS UNITS

EIRENE air-to-air vertical packaged units *new* (inverter)

R410A

23 kW – 108 kW
25 kW – 109 kW

ASTRIA air-to-air horizontal packaged units *new* (inverter)

R410A

19 kW – 32 kW
18 kW – 32 kW

VERSIA all-outdoor-air air-to-air packaged units *new* (inverter)

R410A

9 kW – 54 kW
9 kW – 52 kW

ARAL split system | condensing units + indoor units

R410A

33 kW – 102 kW
32 kW – 102 kW

new (inverter)

THALIA water-to-air horizontal packaged units

R410A

6 kW – 50 kW
7 kW – 58 kW

BOTHNIA water-to-air vertical packaged units

R410A

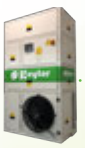
23 kW – 79 kW

LIFE MOBILE SOLUTIONS

new **LIFE IT&Power** monoblock units for containers

R410A R134a

7 kW – 40 kW



new **LIFE SHELTER** portable units

R134a

12 kW – 17 kW

LIFE AIRPORTS ASLAN *new*
airport solutions
PCA unit

LIFE OFFSHORE *new*
maritime applications

ErP 2018 ErP 2021 LOW GWP REFRIGERANTS

0 kW 50 kW 100 kW 500 kW 1000 kW 2000 kW

CHILLERS AND HEAT PUMPS

new Inverter

air-to-water heat pumps and micro-chillers NESEA

6 kW – 24 kW
8 kW – 31 kW

R410A R452B

new Inverter

air-to-water heat pumps and chillers PACIFICA

29 kW – 329 kW
33 kW – 387 kW

R410A R452B

air-to-water heat pumps and chillers ARGIA new

28 kW – 244 kW
30 kW – 247 kW

R134a R513A

air-to-water heat pumps and chillers ATLANTIA

101 kW – 678 kW
164 kW – 755 kW

R410A R452B

air-to-water chillers ATLANTIA POWER

208 kW – 831 kW

R410A R452B

modular air-to-water chillers NEMESIS new

101 kW – 1040 kW (5 x 208 kW)

R410A R452B

Inverter

air-to-water screw chillers PANGEA new

214 kW – 1642 kW

R134a R513A R450A R1234ze

panelled water-to-water heat pumps and chillers MEDEA

27 kW – 308 kW
32 kW – 349 kW

R410A R134a

water-to-water heat pumps and chillers LANGIA

213 kW – 755 kW
234 kW – 829 kW

R410A R134a R1234ze

water-to-water heat pumps and chillers with shell and tube heat exchanger ACTEA

46 kW – 755 kW
54 kW – 829 kW

R410A R134a R1234ze

Inverter

water-to-water screw chillers ONEIDA new

170 kW – 1813 kW
150 kW – 1610 kW

R134a R513A R450A R1234ze

TERMINAL UNITS

FAN COIL UNITS

2 kW – 42 kW
1 kW – 50 kW

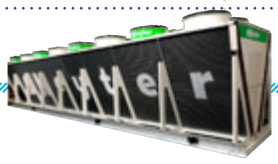
air handling units TITAN

2000 m³/hr – 44000 m³/hr
2000 m³/hr – 54000 m³/hr

indoor air handling units DAIRA

3000 m³/hr – 17000 m³/hr
16 kW – 102 kW
22 kW – 126 kW

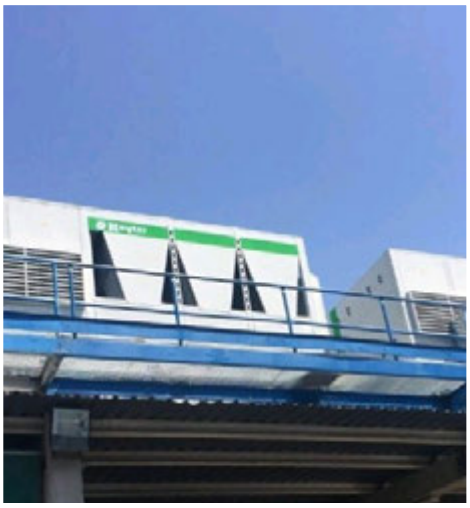
dry coolers BELAIR



51 kW – 847 kW



NOVOPRINT S.A. | SPAIN - AKI BRICOLAJE | SPAIN - BAKERY DONUTS IBERIA | SPAIN - ALUMINIUM BEVERAGE CANS | PAKISTAN


BCN CARTON | SPAIN - TOYOTA DEALER | SPAIN - ENDEKA CERAMICS | SPAIN - CAPRABO SUPERMARKETS | VARIOUS


SAN TELMO FOUNDATION | SPAIN - VILLA JOIOSA MUSEUM | SPAIN - SEVILLE BARRACKS | SPAIN - GUTIERREZ DE ALBA THEATRE | SPAIN


roof-top & wall-top units

PERSEA

ROOF-TOP UNITS
air-to-air heat pump

18 - 407 kW
19 - 438 kW

Inverter | Multi-Scroll | EC | 50 Hz 60 Hz

AER | DER | ACS

R410A | R513A | R134a

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

Adaptation and Versatility

- Fully adaptable and configurable roof-top units with OPTIONS and a wide variety of ASSEMBLIES
- Condensing pressure control as standard for all year operation
- Versions for extreme conditions with refrigerant R-134a for high temperatures up to +55°C
- Maximum accessibility and easy maintenance via removable panels
- Versions that can be adapted to suit the needs of each facility such as: Split versions (see boxes)
- NEW equipment adapted for High Airflow applications

Low noise level

- Acoustic insulation of compressors in a closed compartment, isolated from the airflow
- Low speed condensation axial fans
- EC axial fans with AxiTop diffusers as option, resulting in improved efficiency and reduced noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW inverter compressors in the PERSEA VRF INVERTER range for maximum energy efficiency
- Tandem multiscroll in the EURO and COMFORTER ranges to improve seasonal energy efficiency
- Optimised extraction air Heat Recovery systems
- Electronic fans and electronic expansion valve for minimum consumption

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW Refrigerant R-513A (ODP 0, GWP 573)

Applications

Industry & Logistics | Retail & Shopping Centres | Education & Culture | Entertainment

and other applications, please consult us

versions

PERSEA VRF INVERTER

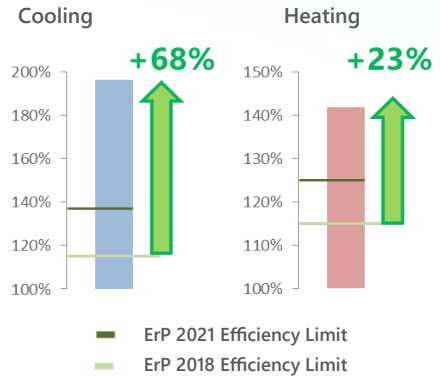
20-189 kW | 20-184 kW

Configurable rooftop units equipped with INVERTER technology, electronic expansion valve and variable-speed electronic fans to comply with the ErP 2021 regulation and guarantee maximum energy savings.

ErP 2021

High energy savings in consumption of electricity

Seasonal Energy Efficiency



PERSEA EURO

25-351 kW | 27-361 kW

Configurable rooftop units equipped with multiscroll technology.

ErP 2018

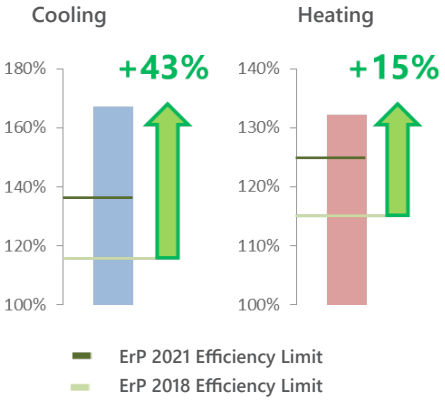
- Seasonal energy efficiency ratio for cooling (SEER) ηs,c 2018 >= 117%
- Seasonal coefficient of performance for heating (SCOP) ηs,h 2018 >= 115%

Configurable rooftop units equipped with multiscroll technology, electronic expansion valve and variable-speed electronic fans.

ErP 2021

- Seasonal energy efficiency ratio for cooling (SEER) ηs,c 2021 >= 138%
- Seasonal coefficient of performance for heating (SCOP) ηs,h 2021 >= 125%

Seasonal energy efficiency

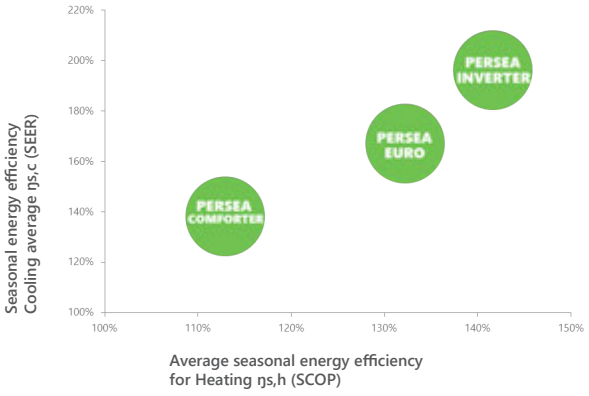


PERSEA COMFORTER

18-351 kW | 16-361 kW

Configurable rooftop units equipped with multiscroll technology and centrifugal fans with a robust and efficient configuration to provide the best energy performance in a competitive way.

ErP 2018



*SEER = Seasonal energy efficiency ratio for cooling

*SCOP = Seasonal coefficient of performance for heating

PERSEA
range specification

			INVERTER	EURO	COMFORTER
General characteristics					
Refrigerant	R410A		✓	✓	✓
	Full charge of refrigerant		✓	✓	✓
	Leak detection		●	●	●
Casing	Self-supporting chassis of galvanized steel with oven cured polyester paint treatment		✓	✓	✓
	Self-supporting chassis of stainless steel or aluminium with oven cured polyester paint treatment		●	●	●
	Base of the unit with oven cured polyester paint treatment (base of the unit of galvanized steel as standard)		✓	✓	●
	Customisable colour to meet the needs of the facility (RAL 9002 as standard)		●	●	●
	Panels for closed compressor compartment		✓	✓	●
	Insulation in the indoor unit: 10 mm thick		✓	✓	●
	Insulation in the indoor unit: 20 mm thick		●	●	●
	Sandwich panel with mineral wool insulation: 20/50 mm thick		●	●	●
	Anti-vibration mounts		●	●	●
Compressors	Single version scroll	up to model KCR4090	–	✓	✓
	Tandem version multiscroll	up to model KCR4095	–	●	●
		from model KCR4100	–	✓	✓
	Digital Scroll technology		–	●	●
	Inverter technology		✓	–	–
	Soft starter		●	●	●
	Acoustic jacket		●	●	●
	Original manufacturer high-performance acoustic jacket		●	●	●
	Compressor anti-vibration mounts		✓	✓	✓
Expansion valves	Thermostatic expansion valves		–	✓	✓
	Electronic expansion valves		✓	●	●
Ventilation					
Outdoor fans	Axial fans with AC technology		–	✓	✓
	Axial fans with EC technology		✓	●	●
	Fan nozzles painted inside		✓	✓	●
	AxiTop diffusers		●	●	●
Indoor fans	Centrifugal supply fan		–	●	✓
	EC supply plug fan		✓	✓	●
	High available pressure EC supply plug fan		●	●	●
	Centrifugal return fan in optional return assembly		–	✓	✓
	EC return plug fan in optional return assembly		✓	●	●
Heat exchangers					
Coils	Heat exchangers with large surface area, copper tubes and aluminium fins		✓	✓	✓
	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)		●	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)		●	●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)		●	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating		●	●	●
	COPPERFIN: Copper tubes/Copper fins		●	●	●
	Droplet separator in indoor coil		●	●	●
Air quality					
Filtration	Cleanable G4 prefilter		✓	✓	●
	Cleanable prefilter with very low pressure drop		●	●	✓
	F Filtration, from F6 to F9 // Double F filtration stage		●	●	●
Air quality sensors	Ambient/duct CO2 or VOC sensor		●	●	●

Codification:

KCR (Series) | (Size Capacity) | **NS4W**

S - Standard unit / **R** - Equipment with heat reclaim
4 - Power supply
4 - 400 V/III/50 Hz with neutral (series 0 to 6) / **3** - 400 V/III/50 Hz without neutral (series 7)
8 - 400 V/III/60 Hz with neutral (option) / **7** - 400 V/III/60 Hz without neutral (option)
W - Refrigerant R410A / **Y** - R134a / **T** - R513A

Series version
N - EURO **version** with Scroll compressor / **V** - INVERTER **version** / **C** - COMFORTER **version** with Scroll compressor

I - Reversible heat pump
R - Cooling only

			INVERTER	EURO	COMFORTER
Energy					
Energy reclaim	Active heat reclaim		●	●	●
	Enhanced active heat reclaim		●	●	●
	Active heat reclaim with Digital Scroll compressor		●	●	●
	Dynamic heat reclaim		●	●	●
	Static heat reclaim via a rotary heat exchanger		●	●	●
	Condensation energy reclaim for sanitary hot water		●	●	●
	Antifreeze electrical heater in reclaim plates heat exchanger for sanitary hot water		●	●	●
Free-cooling	Free-cooling, two dampers (assembly A)		●	●	●
	Free-cooling three dampers, thermal/enthalpic/thermo-enthalpic, with return fan		●	●	●
	Droplet separator in outdoor air damper		✓	✓	●
Installation					
Auxiliary heating	Auxliary hot water coil and three-way valve		●	●	●
	Auxiliary electrical heater (2 stages)		●	●	●
	Hot gas post-heating coil (HUMDRY)		●	●	●
	Built-in gas burner		●	●	●
	Preheating heater in outdoor air intake		●	●	●
Condensate pans	Removable indoor stainless steel condensate drain pan		✓	✓	●
	Removable indoor galvanised steel condensate drain pan		–	–	✓
	Outdoor condensate drain pan		✓	✓	✓
	Electrical heater in outdoor condensate drain pan		●	●	●
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)		✓	✓	●
Electrical power supply	400 V/III ph/50 Hz (with/without neutral, depending on model)		✓	✓	✓
	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)		●	●	●
Banks	Adjustable bank made of zinc aluminium		●	●	●
	Multi-directional adaptation bank		●	●	●
Packaging	Packaging for maritime transportation		●	●	●
Control					
Electronic control and Communication	Climanager programmable electronic control (µPC by Carel)		✓	✓	✓
	pGD user and maintenance terminal (standard terminal-plate maximum distance: 50 m)		✓	✓	●
	TH-Tune user terminal		●	●	✓
	TCONN cards (for terminal to plate distances > 50 m) (see technical manual)		●	●	●
	Condensing pressure control		✓	✓	●
	Pressure transducers	cooling only version	✓	✓	●
		heat pump version	✓	✓	✓
	Master-slave management		●	●	●
	RS485 card for MODBUS communication		●	●	●
	Plant Visor/Plant Watch PRO/tERA supervision		●	●	●
	BACNET/LONWORKS communication		●	●	●
	Electronic expansion valve management		●	●	●
Defrosting	Defrosting via cycle inversion via a 4-way valve		✓	✓	✓
	Defrosting via hot gas bypass in 1-circuit units		●	●	●
Additional control and safety elements	General switch on electrical cabinet		✓	✓	✓
	Thermal-magnetic protection 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		●	●	●
	Pressure switch for airflow control (mandatory with option of electrical heater)		●	●	●
	Smoke detector		●	●	●
	Clogged filter detector		●	●	●
	Ambient temperature sensor		●	●	●
	Energy meter		●	●	●
Electrical cabinet	Fully-wired electrical cabinet, with IP54 protection		✓	✓	✓
	Insulated electrical cabinet		✓	✓	●
	Forced ventilation of the electrical cabinet	series KCR 2 to KCR 7	✓	✓	●
		series KCR 0 and KCR 1	●	●	●
	FIBOX inspection window on electrical cabinet		✓	✓	✓
	Tropicalised electrical cabinet		●	●	●
	Antifreeze electrical heater in electrical cabinet for low temperatures		●	●	●

✓ Included as standard ● Option – Not applicable

PERSEA VRF INVERTER

very high efficiency version, full-inverter technology

ErP 2021

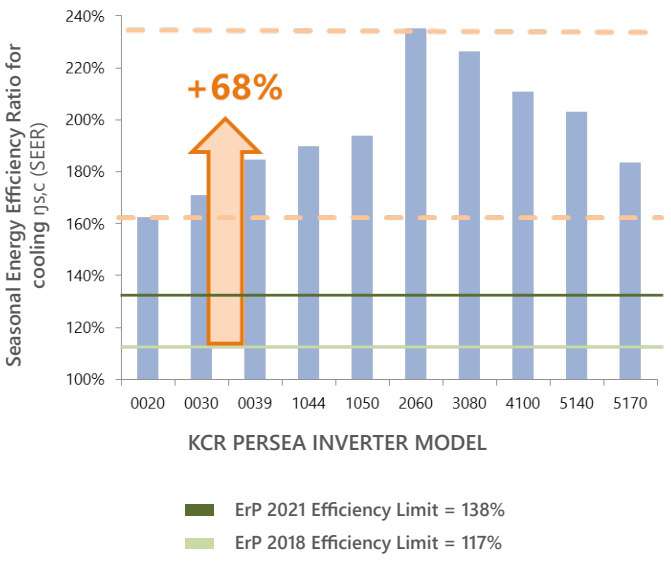
20 - 190 kW

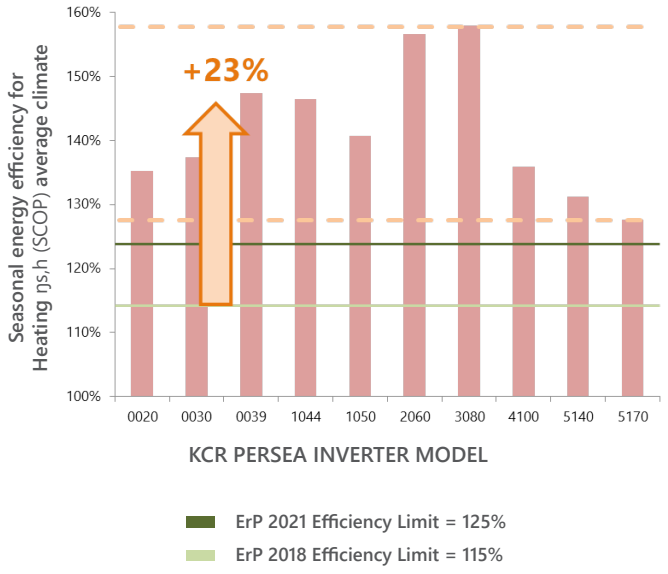
KCR model			0020	0030	0039	1044	1050	2060	3080	4100	5140	5170
Cooling only version (R)												
Cooling	Cooling capacity (1)	kW	20.0	27.7	38.9	47.8	57.0	81.8	92.4	111.8	156.7	188.6
		TR	6	8	11.5	14	16.5	23.5	26.5	32	45	54
		kBTU/hr	68	94	133	163	195	279	315	381	535	644
	Power input (2)	kW	5.7	8.0	10.9	12.7	15.1	17.4	21.4	29.9	42.5	57.9
	EER (3)	W/W	3.4	3.4	3.5	3.7	3.7	4.6	4.2	3.6	3.6	3.2
		BTU/(Wxhr)	12.0	11.9	12.1	12.9	12.9	16.0	14.8	12.8	12.6	11.1
	SEER (4)		4.1	4.4	4.7	4.8	4.9	6.0	5.7	5.4	5.2	4.7
	ηs,c (5)		162%	171%	184%	190%	194%	235%	226%	211%	203%	184%
	IEER (6)	BTU/(Wxhr)	16.41	16.07	16.99	18.43	18.57	21.33	20.52	18.96	17.62	16.18
Heat pump version (I)												
Cooling Mode	Cooling capacity (1)	kW	19.9	27.5	38.4	47.6	55.9	72.8	88.3	105.5	151.2	179.7
	Power input (2)	kW	5.7	8.0	10.9	13.2	15.4	17.5	21.3	30.0	47.4	57.7
	EER (3)	W/W	3.4	3.4	3.5	3.5	3.5	4.1	4.1	3.4	3.1	3.0
	SSER (4)		4.1	4.3	4.7	4.6	4.7	5.3	5.5	5.1	4.4	4.5
	ηs,c (5)		161%	169%	183%	182%	186%	210%	217%	199%	174%	176%
Heating Mode	Heating capacity (7)	kW	19.8	28.0	41.2	46.7	55.6	71.4	84.8	104.6	149.5	183.9
	Power input (2)	kW	5.2	7.4	10.8	11.6	14.6	17.1	21.0	29.9	42.9	54.0
	COP (3)	W/W	4.1	4.1	4.1	4.4	4.2	4.5	4.4	3.9	3.8	3.7
	SCOP average climate (4)		3.5	3.5	3.8	3.7	3.6	4.0	4.0	3.5	3.4	3.3
	ηs,h average climate (5)		135%	137%	147%	146%	141%	157%	158%	136%	131%	128%
Technical characteristics												
Power supply			400 V/III/50 HZ with neutral									
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088									
	Type of compressor		Inverter compressor									
	No. circuits/No. compressors		1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	Power stage control		Modulating control 25 - 100%					Modulating control 12.5 - 100%				
Indoor fan	Supply airflow	m³/h	3700	5100	6800	8400	8800	10300	13300	17700	23500	28600
	Nominal available pressure	Pa	80	100	100	100	100	120	120	150	150	150
	Type of fan		EC plug fan									
	Number of fans		1	1	1	1	1	2	2	2	3	4
	Power input	kW	0.37	0.47	0.64	1.03	1.23	1.35	1.77	2.99	3.30	4.32
Outdoor fan	Outdoor airflow	m³/h	20000	20000	20000	20000	20000	40000	40000	40000	80000	80000
	No. x Type of fan		1 x Axial 800 EC					2 x Axial 800 EC			4 x Axial 800 EC	
Equipment sound pressure of Lp10 (8)		dB(A)	51	57	62	58	59	58	59	59	63	62
Weight		kg	520	565	616	716	769	1129	1271	1638	2334	2399

The data provided in this table corresponds to the nominal compressor operating point.

Equipment with inverter compressors, exterior axial electronic fans, interior EC plug fans and electronic expansion valve.

Seasonal energy efficiency





PERSEA EURO

single compressor and EC plug fan version

ErP 2018 ErP 2021 25 - 95 kW

KCR model			0026	0030	0035	0039	1039	1044	2050	2060	3070	3080	4090
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	25.8	30.6	34.3	37.9	42.3	47.2	54.0	67.6	74.4	80.9	95.7
		TR	7.5	9	10	11	12	13.5	15.5	19.5	21.5	23	27.5
		kBTU/hr	88.2	104.3	117.2	129.2	144.3	161.0	184.3	230.6	254.0	276.0	326.5
	Power input (2)	kW	8.1	9.6	11.5	12.5	13.7	14.6	17.9	19.8	22.3	25.2	29.6
	EER (3)	W/W	3.4	3.3	3.1	3.2	3.3	3.5	3.2	3.7	3.6	3.5	3.5
		BTU/(Wxhr)	10.8	10.9	10.2	10.3	10.5	11.0	10.3	11.7	11.4	11.0	11.0
	SEER (4)		3.4	3.4	3.3	3.3	3.4	3.5	3.5	3.9	4.2	4.0	4.0
	ηs,c (5)		132%	132%	128%	130%	131%	137%	136%	154%	163%	158%	158%
	IEER (6)	BTU/(Wxhr)	14.43	14.36	13.86	13.90	14.35	15.01	14.00	15.60	16.45	15.91	15.96
Heat pump version (I)													
Cooling Mode	Cooling capacity (1)	kW	25.6	30.3	33.9	37.4	41.6	47.0	52.6	60.2	71.4	77.2	91.6
	Power input (2)	kW	8.1	9.7	11.4	12.5	14.0	15.2	18.0	19.8	22.3	25.1	29.6
	EER (3)	W/W	3.3	3.3	3.1	3.1	3.2	3.3	3.1	3.3	3.4	3.3	3.3
	SSER (4)		3.3	3.3	3.3	3.3	3.2	3.4	3.4	3.5	4.0	3.9	3.9
	ηs,c (5)		131%	131%	128%	128%	126%	131%	131%	137%	157%	151%	152%
Heating Mode	Heating capacity (7)	kW	27.0	32.1	37.2	41.4	40.7	47.3	54.3	62.0	73.2	79.4	92.2
	Power input (2)	kW	7.5	8.9	11.1	12.3	12.0	13.4	16.5	19.4	21.9	24.8	29.0
	COP (3)	W/W	3.8	3.8	3.5	3.5	3.7	3.8	3.5	3.4	3.6	3.5	3.4
	SCOP average climate (4)		3.0	3.1	3.1	3.1	3.0	3.1	2.9	3.0	3.4	3.2	3.1
	ηs,h average climate (5)		119%	121%	119%	121%	116%	123%	115%	119%	133%	127%	122%
Technical characteristics													
Power supply			400 V/III/50 HZ with neutral										
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088										
	Type of compressor		Hermetic scroll, single version										
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		1	1	1	1	1	1	2	2	2	2	2
Indoor fan	Supply airflow	m^3/h	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
	Nominal available pressure	Pa	100	100	100	100	100	100	120	120	120	120	120
	No. x Type of fan		1 x EC plug fan						2 x EC plug fan				
	Power input	kW	0.44	0.47	0.55	0.64	0.92	1.03	1.17	1.35	1.54	1.77	1.99
Outdoor fan	Outdoor airflow	m^3/h	14000	14000	20000	20000	20000	20000	40000	40000	28000	28000	40000
	No. x Type of fan	N x mm	1 x Axial 800 AC						2 x Axial 800 AC				
Equipment sound pressure of Lp10 (8)		dB(A)	53	57	59	62	63	58	58	58	59	59	59
Weight		kg	521	538	561	587	641	660	948	1075	1155	1210	1355
Characteristics with active heat reclaim option													
20% outdoor air	Cooling capacity (1)	kW	33.0	41.1	43.2	47.3	51.4	59.2	66.3	74.4	90.4	95.0	106.5
	Heating capacity (7)	kW	36.4	45.5	47.4	51.9	57.1	68.1	74.4	87.9	105.5	112.1	126.5
	EER/COP (3)		3.5/4.3	3.8/4.8	3.5/4.3	3.5/4.3	3.9/5.3	3.5/5.2	3.9/4.6	3.8/4.6	3.9/4.8	3.6/4.6	3.3/4.6
	ηs,c (5)		158%	166%	152%	152%	149%	157%	165%	167%	195%	182%	171%
	ηs,h average climate (5)		146%	164%	159%	159%	180%	178%	162%	173%	193%	171%	170%
40% outdoor air	Cooling capacity (1)	kW	34.6	43.1	45.3	49.5	53.8	62.0	69.5	77.9	94.7	99.5	112.4
	Heating capacity (7)	kW	37.2	46.5	48.4	53.0	58.3	69.6	76.0	89.6	107.8	114.5	129.3
	EER/COP (3)		3.6/4.4	4.0/4.9	3.7/4.4	3.6/4.4	4.0/5.4	3.7/5.3	4.1/4.7	3.9/4.7	4.1/4.9	3.8/4.7	3.5/4.7
	ηs,c (5)		157%	165%	151%	151%	148%	156%	165%	167%	195%	182%	171%
	ηs,h average climate (5)		150%	168%	163%	164%	185%	184%	167%	179%	200%	177%	176%
60% outdoor air	Cooling capacity (1)	kW	35.9	44.7	47.0	51.3	55.7	64.2	72.1	80.8	98.2	103.2	117.3
	Heating capacity (7)	kW	37.9	47.4	49.5	54.1	59.5	71.0	77.5	91.5	110.2	116.8	132.0
	EER/COP (3)		3.8/4.5	4.2/5.0	3.8/4.5	3.8/4.5	4.2/5.5	3.8/5.4	4.2/4.8	4.1/4.8	4.2/5.0	3.9/4.8	3.6/4.9
	ηs,c (5)		155%	163%	149%	149%	146%	154%	164%	166%	194%	181%	170%
	ηs,h average climate (5)		155%	173%	168%	169%	191%	190%	172%	184%	206%	182%	182%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll										
Return fan	Airflow	m^3/h	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
	Nominal available pressure	Pa	80	80	80	80	80	80	96	96	96	96	96
	No. x Type of fan		1 x EC plug fan										2 x EC plug fan
	Power input	kW	0.44	0.47	0.55	0.61	0.70	0.79	1.01	1.63	0.80	1.29	1.39

The data provided in this table corresponds to standard unit without options and unit with active heat reclaim option.

The heat reclaim data is calculated for units with return in upper module (xSF assemblies) and the EC return plug fan option; for upper return with centrifugal fan or lower return with EC plug fan, consult the information in the technical documentation.

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

(2) Total power input by compressors, outdoor fans and supply fan.

(3) EER and COP calculated based on standard EN 14511-2013.

(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.

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

(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.

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

(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

PERSEA EURO

EC plug fan and tandem compressor version

25 - 95 kW

KCR model			0026T	0030T	0035T	0039T	1041	1045	1050	2050T	2060T	3070T	3080T	4095
Cooling only version (R)														
Cooling Mode	Cooling capacity (1)	kW	25.8	30.6	35.0	37.7	42.6	47.2	51.9	53.6	67.6	74.4	80.9	95.4
		TR	7.5	9	10	11	12.5	13.5	15	15.5	19.5	21.5	23	27.5
		kBTU/hr	88.2	104.3	119.5	128.5	145.2	161.0	177.2	183.0	230.6	254.0	276.0	325.4
	Power input (2)	kW	8.1	9.6	11.0	12.5	13.0	14.2	17.2	17.8	19.8	22.3	25.2	29.7
	EER (3)	W/W	3.4	3.3	3.3	3.2	3.5	3.5	3.3	3.2	3.7	3.6	3.5	3.5
		BTU/(Wxhr)	10.8	10.9	10.8	10.3	11.2	11.3	10.3	10.3	11.7	11.4	11.0	11.0
	SEER (4)		3.5	3.5	3.5	3.4	3.8	3.9	3.6	3.7	4.1	4.5	4.4	4.5
	ηs,c (5)		137%	138%	136%	134%	150%	155%	142%	144%	162%	177%	172%	177%
	IEER (6)	BTU/(Wxhr)	14.64	14.56	14.31	14.02	15.02	15.72	14.82	13.14	14.77	16.06	15.57	15.49
Heat pump version (I)														
Cooling Mode	Cooling capacity (1)	kW	25.6	30.3	34.7	37.1	41.7	46.0	50.9	52.3	60.2	71.4	77.2	90.5
	Power input (2)	kW	8.1	9.7	11.0	12.5	14.0	14.3	17.6	17.9	19.8	22.3	25.1	29.6
	EER (3)	W/W	3.3	3.3	3.3	3.1	3.2	3.4	3.1	3.1	3.3	3.4	3.3	3.3
	SSER (4)		3.5	3.5	3.5	3.4	3.5	3.8	3.5	3.6	3.7	4.3	4.2	4.3
	ηs,c (5)		136%	136%	135%	133%	137%	150%	136%	140%	144%	170%	165%	169%
Heating Mode	Heating capacity (7)	kW	27.0	32.1	36.9	41.2	41.9	47.5	53.0	54.1	62.0	73.2	79.4	93.5
	Power input (2)	kW	7.5	8.9	10.7	12.3	14.1	15.3	16.6	16.6	19.4	21.9	24.8	31.1
	COP (3)	W/W	3.8	3.8	3.6	3.5	3.2	3.3	3.4	3.5	3.4	3.6	3.5	3.2
	SCOP average climate (4)		3.1	3.2	3.2	3.2	3.0	3.2	3.0	3.0	3.1	3.6	3.4	3.4
	ηs,h average climate (5)		123%	125%	127%	124%	116%	127%	117%	118%	123%	141%	135%	132%
Technical characteristics														
Power supply			400 V/III/50 HZ with neutral											
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088											
	Type of compressor		Hermetic scroll, tandem version											
	No. circuits/compressors		1/2	1/2	1/2	1/2	1/2	1/2	1/2	2/4	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	2	2	2	2	4	4	4	4	4
Indoor fan	Supply airflow	m^3/h	4600	5100	6000	6800	6800	7400	8800	8900	10300	12000	13300	15400
	Nominal available pressure	Pa	100	100	100	100	100	100	100	120	120	120	120	150
	No. x Type of fan		1 x EC plug fan							2 x EC plug fan				
	Power input	kW	0.44	0.47	0.55	0.64	0.82	0.90	1.23	1.13	1.35	1.54	1.77	2.19
Outdoor fan	Outdoor airflow	m^3/h	14000	14000	20000	20000	20000	20000	20000	40000	40000	28000	28000	40000
	No. x Type of fan	N x mm	1 x Axial 800 AC							2 x Axial 800 AC				
Equipment sound pressure of Lp10 (8)		dB(A)	53	57	59	62	59	60	59	58	58	59	59	59

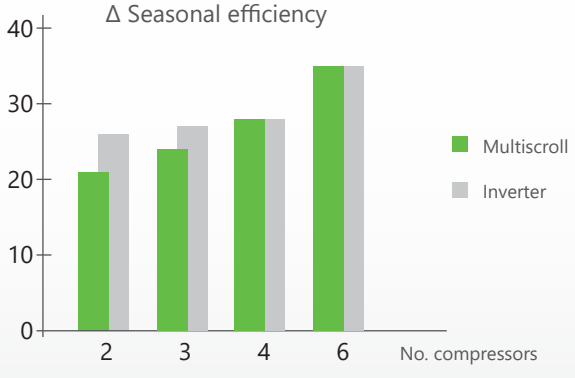
Multi-Scroll

Energy efficiency
Tandem multiscroll technology

Multiscroll technology combined with electronic expansion valves (EEVs) and EC radial fans (Plug&Fan) enable us to achieve maximum energy efficiency standards with a robust, reliable solution.

With this solution, immediate benefits are gained in the operation of facilities in shopping centres and large department stores, creating synergies that enable substantial savings up to 30% of the energy consumed.

The seasonal efficiency of tandem multiscroll unit based on four AC scroll compressors is similar to that of equipment with inverter compressors. For units with fewer than four compressors, a high SEER is achieved thanks to the Inverter technology with refrigerant flow regulation.



PERSEA EURO

EC plug fan and tandem compressor version

ErP 2018 ErP 2021 **100 - 351 kW**

KCR model			4100	5120	5135	5140	5150	5170	6200	6230	7260	7300	7330	7360
Cooling only version (R)														
Cooling Mode	Cooling capacity (1)	kW	106.0	123.8	144.1	149.9	160.0	182.4	209.2	230.8	270.9	300.3	325.7	351.2
		TR	30.5	35.5	41	43	45.5	52	59.5	66	77	85.5	93	100
		kBTU/hr	361.6	422.4	491.8	511.6	545.9	622.3	713.8	787.6	924.5	1024.6	1111.4	1198.2
	Power input (2)	kW	34.0	37.8	44.5	46.8	49.5	61.7	70.6	78.6	91.2	103.9	113.7	124.4
	EER (3)	W/W	3.4	3.5	3.5	3.4	3.5	3.2	3.2	3.2	3.2	3.2	3.1	3.1
		BTU/(Wxhr)	10.6	11.2	11.0	10.9	11.0	10.1	10.1	10.0	10.1	9.9	9.8	9.6
	SEER (4)		4.3	4.6	4.6	4.6	4.5	4.1	4.0	4.0	4.2	4.2	4.2	3.9
	ηs,c (5)		170%	181%	181%	181%	179%	162%	159%	156%	165%	167%	167%	154%
	IEER (6)	BTU/(Wxhr)	15.18	15.61	15.73	15.71	15.67	14.12	14.13	14.38	14.33	14.57	14.08	13.73
Heat pump version (I)														
Cooling mode	Cooling capacity (1)	kW	99.9	119.1	134.2	144.6	155.3	173.7	200.9	219.0	261.6	289.1	314.2	337.1
	Power input (2)	kW	34.1	42.7	48.2	52.1	53.1	61.5	70.7	83.4	96.2	109.6	119.7	133.7
	EER (3)	W/W	3.2	3.0	3.0	3.0	3.1	3.0	3.1	2.9	2.9	2.9	2.8	2.7
	SSER (4)		4.1	3.9	4.0	4.0	4.1	4.0	3.9	3.6	3.8	3.9	3.9	3.5
	ηs,c (5)		160%	153%	156%	156%	161%	155%	153%	140%	151%	152%	152%	138%
Heating mode	Heating capacity (7)	kW	102.8	118.6	142.1	148.8	158.3	180.4	209.7	231.6	285.9	307.6	334.3	360.6
	Power input (2)	kW	34.0	37.2	44.0	47.1	50.2	57.5	69.0	77.5	87.8	95.7	100.8	110.4
	COP (3)	W/W	3.3	3.4	3.5	3.4	3.4	3.4	3.3	3.3	3.6	3.6	3.6	3.6
	SCOP average climate (4)		3.2	3.1	3.3	3.2	3.3	3.1	3.2	3.1	3.2	3.1	3.2	2.9
	ηs,h average climate (5)		124%	120%	130%	126%	128%	122%	123%	121%	124%	123%	124%	115%
Technical characteristics														
Power supply			400 V/III/50 HZ with neutral								400 V/III/50 HZ without neutral			
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088											
	Type of compressor		Hermetic scroll, tandem version											
	No. circuits/compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	3/6	3/6	3/6	3/6
	No. power stages		4	4	4	4	4	4	4	4	6	6	6	6
Indoor fan	Supply airflow	m^3/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
	Nominal available pressure	Pa	150	150	150	150	150	150	150	150	180	180	180	180
	No. x Type of fan		2 x EC plug fan	3 x EC plug fan				4 x EC plug fan			5 x EC plug fan		4 x EC plug fan	
	Power input	kW	2.99	2.59	3.12	3.30	3.69	4.32	5.43	7.49	7.42	10.12	8.35	10.43
Outdoor fan	Outdoor airflow	m^3/h	40000	56000	56000	56000	56000	80000	80000	80000	120000	120000	120000	120000
	No. x Type of fan	N x mm	2 x Axial 800 AC	4 x Axial 800 AC							6 x Axial 800 AC			
Equipment sound pressure of Lp10 (8)		dB(A)	59	61	62	63	63	62	62	65	66	70	71	71
Weight		kg	1560	2024	2093	2223	2140	2285	2579	2646	3660	3765	3915	3955
Characteristics with active heat reclaim option														
20% outdoor air	Cooling capacity (1)	kW	126.1	148.1	168.1	183.4	192.8	215.4	254.7	262.0	308.3	329.1	351.9	374.5
	Heating capacity (7)	kW	145.5	170.4	199.2	210.7	228.8	263.3	296.6	299.6	359.6	382.6	403.1	421.1
	EER/COP (3)		3.6/4.7	3.7/4.6	3.6/4.8	3.5/4.5	3.6/4.5	3.8/4.7	3.6/4.6	3.1/4.4	3.0/4.1	3.4/4.6	3.1/4.6	3.2/4.5
	ηs,c (5)		203%	191%	196%	199%	201%	192%	193%	167%	175%	171%	169%	152%
	ηs,h average climate (5)		170%	162%	174%	164%	167%	171%	171%	154%	143%	168%	167%	151%
40% outdoor air	Cooling capacity (1)	kW	132.3	155.2	176.1	192.2	202.0	227.3	267.0	274.9	325.5	346.5	369.8	392.8
	Heating capacity (7)	kW	148.6	173.7	203.1	214.9	233.4	268.8	302.9	306.2	366.6	390.4	411.4	429.7
	EER/COP (3)		3.7/4.8	3.9/4.7	3.7/4.9	3.7/4.6	3.7/4.6	4.0/4.8	3.8/4.8	3.3/4.5	3.1/4.2	3.5/4.7	3.3/4.7	3.3/4.6
	ηs,c (5)		204%	192%	197%	199%	201%	192%	194%	168%	175%	172%	170%	152%
	ηs,h average climate (5)		175%	167%	179%	169%	172%	176%	177%	159%	147%	174%	172%	156%
60% outdoor air	Cooling capacity (1)	kW	137.2	160.9	182.6	199.3	209.4	237.3	277.0	285.3	339.9	360.9	384.4	407.6
	Heating capacity (7)	kW	151.8	177.1	207.2	219.3	238.1	274.5	309.2	313.0	373.8	398.4	419.9	438.4
	EER/COP (3)		3.9/4.9	4.0/4.8	3.9/5.0	3.8/4.7	3.9/4.7	4.1/4.9	3.9/4.9	3.4/4.6	3.3/4.3	3.7/4.9	3.4/4.8	3.4/4.7
	ηs,c (5)		203%	191%	196%	198%	200%	191%	192%	167%	174%	171%	169%	151%
	ηs,h average climate (5)		180%	171%	184%	174%	178%	182%	182%	164%	152%	179%	178%	161%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll											
Return fan	Airflow	m^3/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
	Nominal available pressure	Pa	120	120	120	120	120	120	120	120	144	144	144	144
	No. x Type of fan		2 x EC plug fan	3 x EC plug fan							4 x EC plug fan			
	Power input	kW	1.96	1.78	2.04	2.13	2.39	1.87	2.57	3.79	3.55	4.70	5.62	7.02

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

PERSEA EURO

version with electronic fans and electronic expansion valve

ErP 2018 ErP 2021

27 - 98 kW

KCR model			0026	0030	0035	0039	1039	1044	2050	2060	3070	3080	4090
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	27.0	31.9	35.3	38.9	43.4	48.4	55.4	69.3	77.9	84.8	98.2
		TR	8	9.5	10	11.5	12.5	14	16	20	22.5	24.5	28
		kBTU/hr	92.2	109.0	120.3	132.7	148.1	165.2	189.1	236.5	265.7	289.3	335.0
	Power input (2)	kW	7.6	8.9	10.9	12.0	13.1	14.0	16.9	18.8	20.7	23.5	28.4
	EER (3)	W/W	3.8	3.8	3.4	3.4	3.6	3.8	3.5	4.0	4.1	3.9	3.7
		BTU/(Wxhr)	12.2	12.2	11.0	11.1	11.3	11.8	11.2	12.6	12.8	12.3	11.8
	SEER (4)		3.7	3.7	3.6	3.6	3.7	3.9	4.0	4.5	4.5	4.4	4.5
	ηs,c (5)		143%	143%	141%	142%	143%	149%	157%	175%	178%	172%	175%
	IEER (6)	BTU/(Wxhr)	15.52	15.39	14.94	14.94	15.38	16.06	15.53	17.18	17.75	17.11	17.29
Heat pump version (I)													
Cooling Mode	Cooling capacity (1)	kW	26.8	31.7	34.9	38.4	42.7	48.3	54.0	61.7	74.7	81.0	94.0
	Power input (2)	kW	7.6	9.0	10.9	12.0	13.4	14.6	17.1	18.8	20.8	23.4	28.4
	EER (3)	W/W	3.8	3.7	3.4	3.4	3.4	3.6	3.4	3.5	3.9	3.7	3.6
	SSER (4)		3.6	3.6	3.6	3.6	3.6	3.7	3.9	4.0	4.4	4.2	4.3
	ηs,c (5)		142%	142%	141%	140%	137%	142%	152%	156%	171%	165%	168%
Heating mode	Heating capacity (7)	kW	27.3	32.4	37.9	42.1	41.5	48.2	55.2	63.1	74.1	80.3	93.8
	Power input (2)	kW	7.0	8.3	10.6	11.8	11.5	12.8	15.6	18.4	20.4	23.1	27.8
	COP (3)		4.1	4.2	3.8	3.8	3.9	4.1	3.8	3.7	3.9	3.8	3.6
	SCOP average climate (4)		3.3	3.3	3.3	3.3	3.2	3.4	3.4	3.4	3.7	3.5	3.4
	ηs,h average climate (5)		129%	131%	130%	131%	125%	132%	131%	134%	145%	138%	134%
Technical characteristics													
Power supply			400 V/III/50 HZ with neutral										
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088										
	Type of compressor		Hermetic scroll, single version										
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		1	1	1	1	1	1	2	2	2	2	2
Indoor fan	Supply airflow	m³/h	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
	Nominal available pressure	Pa	100	100	100	100	100	100	120	120	120	120	120
	No. x Type of fan		1 x EC plug fan						2 x EC plug fan				
	Power input	kW	0.44	0.47	0.55	0.64	0.92	1.03	1.17	1.35	1.54	1.77	1.99
Outdoor fan	Outdoor airflow	m³/h	20000	20000	20000	20000	20000	20000	40000	40000	40000	40000	40000
	No. x Type of fan	N x mm	1 x Axial 800 EC						2 x Axial 800 EC				
Equipment sound pressure of Lp10 (8)		dB(A)	46	49	58	61	62	57	57	57	51	52	58
Characteristics with active heat reclaim option													
20% outdoor air	Cooling capacity (1)	kW	34.5	43.0	44.4	48.6	52.8	60.7	68.1	76.3	94.6	99.6	109.3
	Heating capacity (7)	kW	36.9	46.0	48.3	52.9	58.2	69.4	75.8	89.5	107.1	113.7	128.8
	EER/COP (3)		3.9/4.7	4.3/5.2	3.8/4.6	3.7/4.6	4.1/5.7	3.8/5.5	4.3/4.9	4.1/4.9	4.4/5.2	4.1/5.1	3.6/4.9
	ηs,c (5)		172%	180%	167%	166%	162%	170%	190%	190%	213%	199%	190%
	ηs,h average climate (5)		159%	178%	173%	172%	195%	192%	185%	196%	213%	187%	186%
40% outdoor air	Cooling capacity (1)	kW	36.2	45.0	46.5	50.9	55.2	63.6	71.3	79.9	99.1	104.3	115.3
	Heating capacity (7)	kW	37.7	47.0	49.3	54.0	59.4	70.9	77.4	91.4	109.5	116.1	131.6
	EER/COP (3)		4.1/4.8	4.5/5.3	4.0/4.7	3.9/4.7	4.3/5.8	3.9/5.7	4.4/5.1	4.2/5.1	4.6/5.4	4.2/5.2	3.7/5.1
	ηs,c (5)		171%	179%	166%	165%	161%	169%	190%	191%	214%	199%	190%
	ηs,h average climate (5)		164%	183%	178%	178%	201%	198%	191%	202%	220%	194%	192%
60% outdoor air	Cooling capacity (1)	kW	37.5	46.7	48.2	52.7	57.2	65.9	74.0	82.8	102.7	108.1	120.4
	Heating capacity (7)	kW	38.5	48.0	50.4	55.1	60.6	72.4	79.0	93.2	112.0	118.6	134.4
	EER/COP (3)		4.3/4.9	4.7/5.4	4.1/4.8	4.1/4.8	4.5/5.9	4.1/5.8	4.6/5.2	4.4/5.2	4.7/5.5	4.4/5.3	3.9/5.2
	ηs,c (5)		168%	177%	164%	163%	159%	167%	190%	190%	213%	198%	189%
	ηs,h average climate (5)		169%	188%	183%	183%	207%	205%	196%	208%	227%	200%	199%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll										
Return fan	Airflow	m³/h	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
	Nominal available pressure	Pa	80	80	80	80	80	80	96	96	96	96	96
	No. x Type of fan		1 x EC plug fan										2xEC plug fan
	Power input	kW	0.44	0.47	0.55	0.61	0.70	0.79	1.01	1.63	0.80	1.29	1.39

The data provided in this table was calculated with single version compressors, outdoor electronic axial fans, indoor EC plug fans and an electronic expansion valve.
The heat reclaim data is calculated for unit with return in upper module (xSF assemblies) and the EC return plug fan option.

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

PERSEA EURO

version with electronic fans and electronic expansion valve

ErP 2018 ErP 2021 103 - 361 kW

KCR model			4100	5120	5135	5140	5150	5170	6200	6230	7260	7300	7330	7360
Cooling only version (R)														
Cooling	Cooling capacity (1)	kW	108.8	129.3	150.5	156.7	167.5	187.2	214.7	237.0	278.1	308.2	334.4	360.5
		TR	31	37	43	45	48	53.5	61.5	67.5	79.5	88	95.5	102.5
		kBTU/hr	371.2	441.1	513.5	534.8	571.6	638.8	732.7	808.7	948.9	1051.7	1140.9	1230.1
	Power input (2)	kW	32.6	35.2	44.6	43.5	46.2	59.2	67.8	75.7	87.5	99.9	109.4	119.8
	EER (3)	W/W	3.7	4.0	3.6	3.9	3.9	3.4	3.4	3.5	3.5	3.4	3.3	3.3
		BTU/(Wxhr)	11.4	12.5	11.5	12.3	12.4	10.8	10.8	10.7	10.8	10.5	10.4	10.3
	SEER (4)		4.8	5.1	4.7	5.1	5.0	4.6	4.5	4.4	4.7	4.5	4.5	4.3
	ηs,c (5)		189%	200%	185%	199%	196%	181%	176%	173%	185%	176%	176%	170%
	IEER (6)	BTU/(Wxhr)	16.53	16.96	15.56	17.02	16.92	15.42	15.34	15.55	15.67	15.46	14.91	14.82
Heat pump version (I)														
Cooling Mode	Cooling capacity (1)	kW	102.6	124.4	140.4	151.3	162.7	178.4	206.2	224.9	268.6	296.8	322.5	346.0
	Power input (2)	kW	32.8	39.8	48.0	48.4	49.5	58.9	67.9	80.3	92.3	105.4	115.2	128.8
	EER (3)	W/W	3.4	3.3	3.1	3.4	3.5	3.3	3.3	3.1	3.2	3.1	3.0	2.9
	SSER (4)		4.5	4.3	4.1	4.3	4.5	4.4	4.3	3.9	4.3	4.1	4.1	3.9
	ηs,c (5)		179%	168%	160%	171%	176%	174%	170%	154%	169%	160%	161%	151%
Heating mode	Heating capacity (7)	kW	104.6	119.5	143.3	149.9	159.8	183.5	213.4	235.8	290.7	312.8	340.1	366.9
	Power input (2)	kW	32.7	34.7	44.1	43.9	46.9	55.1	66.3	74.7	84.1	92.0	96.9	106.3
	COP (3)		3.5	3.7	3.5	3.7	3.7	3.6	3.5	3.5	3.8	3.8	3.8	3.8
	SCOP average climate (4)		3.5	3.4	3.4	3.5	3.6	3.4	3.5	3.4	3.5	3.3	3.3	3.2
	ηs,h average climate (5)		136%	131%	132%	138%	139%	135%	135%	131%	136%	128%	129%	124%
Technical characteristics														
Power supply			400 V/III/50 HZ with neutral								400 V/III/50 HZ without neutral			
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088											
	Type of compressor		Hermetic scroll, tandem version											
	No. circuits/compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	3/6	3/6	3/6	3/6
	No. power stages		4	4	4	4	4	4	4	4	6	6	6	6
Indoor fan	Supply airflow	m³/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
	Nominal available pressure	Pa	150	150	150	150	150	150	150	150	180	180	180	180
	No. x Type of fan		2 x EC plug fan	3 x EC plug fan				4 x EC plug fan			5 x EC plug fan		4 x EC plug fan	
	Power input	kW	2.99	2.59	3.12	3.30	3.69	4.32	5.43	7.49	7.42	10.12	8.35	10.43
Outdoor fan	Outdoor airflow	m³/h	40000	80000	80000	80000	80000	80000	80000	80000	120000	120000	120000	120000
	No. x Type of fan		2 x Axial 800 AC	4 x Axial 800 AC							6 x Axial 800 AC			
Equipment sound pressure of Lp10 (8)		dB(A)	58	54	55	56	56	61	61	64	65	69	70	70
Characteristics with active heat reclaim option														
20% outdoor air	Cooling capacity (1)	kW	129.5	154.7	175.8	191.7	201.8	221.2	261.5	269.1	316.5	337.8	361.2	384.4
	Heating capacity (7)	kW	148.1	172.2	201.5	213.0	231.6	268.0	302.0	305.1	365.8	389.3	410.4	428.8
	EER/COP (3)		3.8/5.0	4.2/5.1	3.8/4.8	4.0/5.0	4.0/4.9	4.0/5.0	3.9/4.9	3.3/4.7	3.2/4.4	3.6/4.9	3.4/4.9	3.4/4.8
	ηs,c (5)		226%	211%	201%	218%	220%	215%	215%	184%	196%	181%	179%	167%
	ηs,h average climate (5)		185%	178%	179%	180%	182%	187%	186%	166%	156%	176%	174%	164%
40% outdoor air	Cooling capacity (1)	kW	135.8	162.1	184.2	200.9	211.4	233.4	274.1	282.3	334.1	355.6	379.5	403.2
	Heating capacity (7)	kW	151.4	175.7	205.6	217.6	236.4	273.7	308.4	311.9	373.1	397.4	418.9	437.6
	EER/COP (3)		4.0/2.1	4.3/5.2	3.9/4.9	4.2/5.1	4.2/5.1	4.2/5.1	4.0/5.1	3.5/4.8	3.4/4.5	3.8/5.1	3.5/5.0	3.5/4.9
	ηs,c (5)		227%	211%	202%	218%	220%	215%	215%	184%	196%	181%	179%	167%
	ηs,h average climate (5)		191%	184%	184%	186%	189%	193%	192%	172%	161%	181%	180%	169%
60% outdoor air	Cooling capacity (1)	kW	140.9	168.0	190.9	208.3	219.1	243.7	284.3	293.0	348.9	370.4	394.5	418.3
	Heating capacity (7)	kW	154.6	179.2	209.9	222.2	241.2	279.4	315.0	318.9	380.5	405.7	427.7	446.6
	EER/COP (3)		4.2/5.2	4.5/5.3	4.1/5.0	4.3/5.2	4.4/5.2	4.4/5.3	4.2/5.2	3.6/4.9	3.5/4.6	3.9/5.2	3.7/5.1	3.6/5.0
	ηs,c (5)		226%	211%	201%	217%	220%	215%	214%	183%	195%	181%	179%	166%
	ηs,h average climate (5)		196%	189%	190%	192%	195%	200%	199%	178%	166%	187%	186%	174%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll											
Return fan	Airflow	m³/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
	Nominal available pressure	Pa	120	120	120	120	120	120	120	120	144	144	144	144
	No. x Type of fan		2 x EC plug fan	3 x EC plug fan							4 x EC plug fan			
	Power input	kW	1.96	1.78	2.04	2.13	2.39	1.87	2.57	3.79	3.55	4.70	5.62	7.02

The data provided in this table was calculated with tandem version compressors, outdoor electronic axial fans, indoor EC plug fans and an electronic expansion valve.
The heat reclaim data is calculated for unit with return in upper module (xSF assemblies) and the EC return plug fan option.

PERSEA COMFORTER

centrifugal fan version

18 - 96 kW

KCR model			0017	0020	0022	0026	0030	0035	0039	1039	1044	2050	2060	3070	3080	4090
Cooling only version (R)																
ErP 2018	Cooling capacity (1)	kW	17.8	20.7	23.1	25.8	30.5	34.2	37.5	41.3	46.2	52.6	66.4	74.3	80.8	95.5
		TR	5.5	6	7	7.5	9	10	11	12	13.5	15	19	21.5	23	27.5
		kBTU/hr	60.7	70.6	78.8	88.2	104.1	116.7	128.0	140.9	157.6	179.5	226.6	253.5	275.7	325.9
	Power input (2)	kW	5.8	6.7	7.4	8.0	9.6	11.4	12.6	13.1	13.8	17.6	19.5	22.0	24.7	28.7
Cooling	EER (3)	W/W	3.1	3.1	3.1	3.2	3.2	3.0	3.0	3.2	3.4	3.0	3.4	3.4	3.3	3.3
		BTU/(Wxhr)	10.5	10.5	10.6	11.0	10.9	10.2	10.2	10.7	11.4	10.2	11.6	11.5	11.2	11.4
	SEER (4)		3.1	3.1	3.2	3.2	3.3	3.1	3.2	3.2	3.4	3.2	3.6	3.6	3.4	3.8
	ηs,c (5)		119%	121%	124%	126%	127%	122%	125%	127%	131%	126%	139%	141%	133%	149%
	IEER (6)	BTU/(Wxhr)	14.20	14.15	14.22	14.43	14.36	13.86	13.90	14.35	15.01	14.00	15.60	16.45	15.91	15.96
Heat pump version (I)																
	Cooling capacity (1)	kW	17.7	20.6	23.0	25.6	30.3	33.9	37.1	40.6	46.0	52.2	60.1	71.3	77.1	91.4
	Power input (2)	kW	5.8	6.7	7.4	8.0	9.6	11.4	12.6	13.5	14.5	17.6	19.5	22.0	24.7	28.7
Cooling Mode	EER (3)	W/W	3.1	3.1	3.1	3.2	3.2	3.0	3.0	3.0	3.2	3.0	3.1	3.2	3.1	3.2
	SSER (4)		3.0	3.1	3.2	3.2	3.2	3.1	3.2	3.1	3.2	3.1	3.2	3.5	3.3	3.6
	ηs,c (5)		117%	119%	123%	125%	125%	121%	124%	121%	125%	122%	124%	135%	128%	143%
	Heating capacity (7)	kW	16.2	18.6	21.0	23.3	27.7	32.1	35.5	40.4	47.0	54.2	62.1	73.4	79.6	92.4
	Power input (2)	kW	6.8	7.6	9.0	9.3	11.5	13.9	15.5	12.3	14.4	15.8	18.9	21.8	24.3	28.1
Heating mode	COP (3)		2.4	2.5	2.3	2.5	2.4	2.3	2.3	3.3	3.3	3.4	3.3	3.4	3.3	3.3
	SCOP average climate (4)		2.1	2.2	2.3	2.3	2.2	2.3	2.3	2.9	3.0	2.8	2.8	3.0	2.8	3.0
	ηs,h average climate (5)		82%	87%	88%	89%	87%	88%	88%	112%	118%	108%	109%	117%	110%	116%
Technical characteristics																
Power supply			400 V/III/50 HZ with neutral													
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088													
	Type of compressor		Hermetic scroll, single version													
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		1	1	1	1	1	1	1	1	1	2	2	2	2	2
Indoor fan	Supply airflow	m³/h	3300	3700	4000	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
	Nominal available pressure	Pa	80	80	100	100	100	100	100	100	100	120	120	120	120	120
	No. x Type of fan		1 x Centrifugal													2 x Centrif.
	Power input	kW	0.38	0.42	0.43	0.53	0.61	0.80	0.75	0.98	1.17	1.40	1.82	2.52	3.11	2.09
Outdoor fan	Outdoor airflow	m³/h	14000	14000	14000	14000	14000	20000	20000	20000	20000	40000	40000	28000	28000	40000
	No. x Type of fan	N x mm	1 x Axial 800 AC									2 x Axial 800 AC				
Equipment sound pressure of Lp10 (8)		dB(A)	50	51	51	53	57	59	62	63	58	58	58	59	59	59
Weight		kg	474	480	489	505	522	544	569	622	640	930	1056	1137	1191	1338
Characteristics of Heat Pump Version with active Recovery option																
ErP 2021	Cooling capacity (1)	kW	24.5	28.9	30.2	33.0	41.1	43.2	47.3	51.4	59.2	66.3	74.4	90.4	95.0	106.5
	Heating capacity (7)	kW	27.0	31.9	33.5	36.4	45.5	47.4	51.9	57.1	68.1	74.4	87.9	105.5	112.1	126.5
	EER/COP (3)		3.3/4.1	3.8/4.7	3.6/4.5	3.5/4.3	3.8/4.8	3.5/4.3	3.5/4.3	3.9/5.3	3.5/5.2	3.9/4.6	3.8/4.6	3.9/4.8	3.6/4.6	3.3/4.6
20% outdoor air	ηs,c (5)		153%	157%	151%	151%	159%	144%	146%	143%	150%	153%	152%	171%	155%	161%
	ηs,h average climate (5)		141%	154%	157%	142%	159%	152%	154%	174%	172%	152%	159%	173%	151%	162%
	Cooling capacity (1)	kW	25.7	30.3	31.7	34.6	43.1	45.3	49.5	53.8	62.0	69.5	77.9	94.7	99.5	112.4
	Heating capacity (7)	kW	27.5	32.6	34.1	37.2	46.5	48.4	53.0	58.3	69.6	76.0	89.6	107.8	114.5	129.3
40% outdoor air	EER/COP (3)		3.5/4.2	3.9/4.8	3.8/4.6	3.6/4.4	4.0/4.9	3.7/4.4	3.6/4.4	4.0/5.4	3.7/5.3	4.1/4.7	3.9/4.7	4.1/4.9	3.8/4.7	3.5/4.7
	ηs,c (5)		152%	156%	150%	150%	158%	143%	145%	142%	149%	153%	151%	170%	154%	161%
	ηs,h average climate (5)		145%	158%	161%	146%	163%	156%	159%	180%	178%	157%	164%	178%	155%	167%
	Cooling capacity (1)	kW	26.7	31.5	32.8	35.9	44.7	47.0	51.3	55.7	64.2	72.1	80.8	98.2	103.2	117.3
	Heating capacity (7)	kW	28.1	33.3	34.8	37.9	47.4	49.5	54.1	59.5	71.0	77.5	91.5	110.2	116.8	132.0
60% outdoor air	EER/COP (3)		3.6/4.3	4.1/4.9	3.9/4.7	3.8/4.5	4.2/5.0	3.8/4.5	3.8/4.5	4.2/5.5	3.8/5.4	4.2/4.8	4.1/4.8	4.2/5.0	3.9/4.8	3.6/4.9
	ηs,c (5)		150%	154%	148%	148%	156%	141%	143%	140%	147%	151%	150%	168%	153%	159%
	ηs,h average climate (5)		149%	163%	166%	150%	167%	160%	164%	185%	183%	161%	169%	183%	160%	173%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll													
	Airflow	m³/h	3300	3700	4000	4600	5100	6000	6800	7790	8400	9300	10300	12000	13300	15400
Return fan	Nominal available pressure	Pa	64	64	80	80	80	80	80	80	80	96	96	96	96	96
	No. x Type of fan		1 x Centrifugal													2 x Centrif.
	Power input	kW	0.75	0.75	0.75	0.75	0.75	1.10	1.10	1.10	1.10	2.20	2.20	3.00	4.00	2.20

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

PERSEA COMFORTER

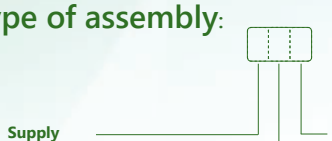
centrifugal fan version

100 - 351 kW

KCR model			4100	5120	5135	5140	5150	5170	6200	6230	7260	7300	7330	7360
Cooling only version (R)														
ErP 2018	Cooling capacity (1)	kW	106.0	123.8	144.1	149.9	160.0	182.4	209.2	230.8	270.9	300.3	325.7	351.2
		TR	30.5	35.5	41	43	45.5	52	59.5	66	77	85.5	93	100
		kBTU/hr	361.6	422.4	491.8	511.6	545.9	622.3	713.8	787.6	924.5	1024.6	1111.4	1198.2
	Power input (2)	kW	33.9	38.5	45.9	48.0	51.2	62.4	71.4	79.7	91.2	103.1	115.8	125.0
Cooling	EER (3)	W/W	3.4	3.5	3.5	3.4	3.5	3.2	3.2	3.2	3.2	3.2	3.1	3.1
		BTU/(Wxhr)	10.7	11.0	10.7	10.6	10.7	10.0	10.0	9.9	10.1	9.9	9.6	9.6
	SEER (4)		4.0	4.1	3.9	4.0	3.8	3.7	3.6	3.5	3.8	3.9	3.7	3.5
	ηs,c (5)		155%	160%	154%	155%	150%	146%	141%	136%	151%	152%	146%	139%
	IEER (6)	BTU/(Wxhr)	15.18	15.61	15.73	15.71	15.67	14.12	14.13	14.38	14.33	14.57	14.08	13.73
Heat pump version (I)														
	Cooling capacity (1)	kW	99.9	119.1	134.2	144.6	155.3	173.7	200.9	219.0	261.6	289.1	314.2	337.1
	Power input (2)	kW	34.0	43.4	49.6	53.4	54.8	62.1	71.5	84.6	96.2	108.8	121.8	134.3
Cooling Mode	EER (3)	W/W	3.2	3.0	3.0	3.0	3.1	3.0	3.1	2.9	2.9	2.9	2.8	2.7
	SSER (4)		3.7	3.5	3.4	3.5	3.5	3.6	3.5	3.1	3.5	3.5	3.4	3.2
	ηs,c (5)		147%	136%	133%	135%	137%	140%	136%	122%	138%	139%	134%	124%
	Heating capacity (7)	kW	102.8	118.6	142.1	148.8	158.3	180.4	209.7	231.6	285.9	307.6	334.3	360.6
	Power input (2)	kW	33.9	37.9	45.4	48.4	51.9	58.2	69.8	78.7	87.8	95.0	102.9	111.1
Heating mode	COP (3)		3.3	3.4	3.5	3.4	3.4	3.4	3.3	3.3	3.6	3.6	3.6	3.6
	SCOP average climate (4)		3.0	2.8	3.0	2.9	2.9	2.9	2.9	2.8	3.0	3.0	2.9	2.7
	ηs,h average climate (5)		117%	110%	115%	114%	113%	113%	113%	109%	117%	115%	112%	107%
Technical characteristics														
Power supply			400 V/III/50 HZ with neutral								400 V/III/50 HZ without neutral			
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088											
	Type of compressor		Hermetic scroll, tandem version											
	No. circuits/compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4	2/4	3/6	3/6	3/6	3/6
	No. power stages		4	4	4	4	4	4	4	4	6	6	6	6
Indoor fan	Supply airflow	m^3/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
	Nominal available pressure	Pa	150	150	150	150	150	150	150	150	180	180	180	180
	No. x Type of fan		2 x Centrifugal								3 x Centrifugal			
	Power input	kW	2.89	3.27	4.55	4.55	5.39	5.00	6.23	8.67	7.44	9.40	10.44	11.09
Outdoor fan	Outdoor airflow	m^3/h	40000	56000	56000	56000	56000	80000	80000	80000	120000	120000	120000	120000
	No. x Type of fan	N x mm	2 x Axial 800 AC	4 x Axial 800 AC							6 x Axial 800 AC			
Equipment sound pressure of Lp10 (8)		dB(A)	59	61	62	63	63	62	62	65	66	70	71	71
Weight		kg	1541	2006	2075	2205	2121	2266	2561	2627	3642	3747	3896	3936
Characteristics of Heat Pump Version with active Recovery option														
ErP 2021	Cooling capacity (1)	kW	126.1	148.1	168.1	183.4	192.8	215.4	254.7	262.0	308.3	329.1	351.9	374.5
	Heating capacity (7)	kW	145.5	170.4	199.2	210.7	228.8	263.3	296.6	299.6	359.6	382.6	403.1	421.1
	EER/COP (3)		3.6/4.7	3.7/4.6	3.6/4.8	3.5/4.5	3.6/4.5	3.8/4.7	3.6/4.6	3.1/4.4	3.0/4.1	3.4/4.6	3.1/4.6	3.2/4.5
20% outdoor air	ηs,c (5)		187%	172%	171%	175%	173%	173%	173%	149%	163%	158%	149%	138%
	ηs,h average climate (5)		160%	150%	157%	149%	150%	159%	157%	141%	136%	157%	150%	139%
	Cooling capacity (1)	kW	132.3	155.2	176.1	192.2	202.0	227.3	267.0	274.9	325.5	346.5	369.8	392.8
	Heating capacity (7)	kW	148.6	173.7	203.1	214.9	233.4	268.8	302.9	306.2	366.6	390.4	411.4	429.7
40% outdoor air	EER/COP (3)		3.7/4.8	3.9/4.7	3.7/4.9	3.7/4.6	3.7/4.6	4.0/4.8	3.8/4.8	3.3/4.5	3.1/4.2	3.5/4.7	3.3/4.7	3.3/4.6
	ηs,c (5)		187%	171%	170%	174%	172%	173%	172%	149%	162%	157%	149%	137%
	ηs,h average climate (5)		164%	154%	161%	154%	155%	164%	162%	145%	140%	162%	155%	144%
	Cooling capacity (1)	kW	137.2	160.9	182.6	199.3	209.4	237.3	277.0	285.3	339.9	360.9	384.4	407.6
	Heating capacity (7)	kW	151.8	177.1	207.2	219.3	238.1	274.5	309.2	313.0	373.8	398.4	419.9	438.4
60% outdoor air	EER/COP (3)		3.9/4.9	4.0/4.8	3.9/5.0	3.8/4.7	3.9/4.7	4.1/4.9	3.9/4.9	3.4/4.6	3.3/4.3	3.7/4.9	3.4/4.8	3.4/4.7
	ηs,c (5)		185%	170%	168%	172%	170%	171%	170%	147%	161%	156%	147%	136%
	ηs,h average climate (5)		169%	158%	166%	158%	160%	169%	167%	150%	145%	167%	160%	148%
Heat reclaim circuit	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Type of compressor		Hermetic scroll											
	Airflow	m^3/h	17700	19800	22700	23500	24900	28600	31900	36000	40000	45000	48000	50700
Return fan	Nominal available pressure	Pa	120	120	120	120	120	120	120	120	144	144	144	144
	No. x Type of fan		2 x Centrifugal								3 x Centrifugal			
	Power input	kW	2.20	4.40	6.00	6.00	6.00	6.00	8.00	11.00	9.00	12.00	12.00	12.00

PERSEA
assemblies

Type of assembly:



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

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

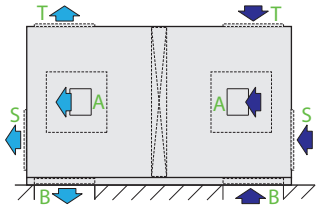
Type of assembly
- **0** - Standard
- **B** - Axial return
- **D** - Dynamic heat reclaim
- **F** - Active heat reclaim with return fan
- **Z** - EC radial return
- **A** - Two-way mixing chamber
- **C** - Centrifugal return
- **E** - Axial extraction
- **P** - Rotary exchanger
- **T** - Outdoor air intake

Supply air | N New air | Adjustable damper

Return air | E Extraction air | Overpressure damper

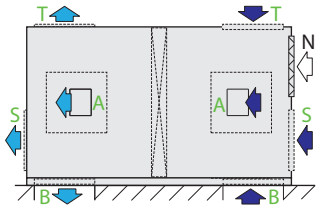
ASSEMBLIES WITHOUT FREE-COOLING

0 - Standard



0

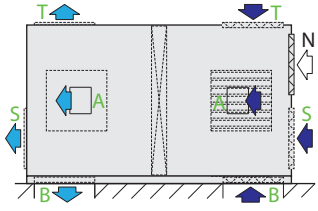
T - Outdoor air intake



T

ASSEMBLIES WITH FREE-COOLING WITH NO RETURN FAN

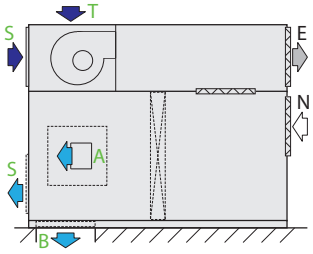
A-Two-way mixing chamber



A

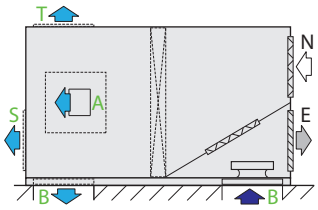
ASSEMBLIES WITH FREE-COOLING AND RETURN FAN

C - Return in upper module



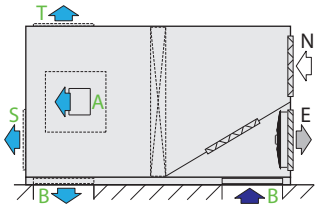
C

Z - EC radial return



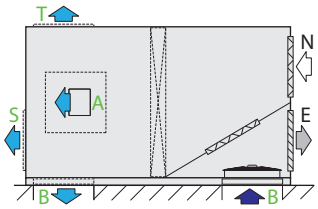
B Z

E - Axial extraction



B E

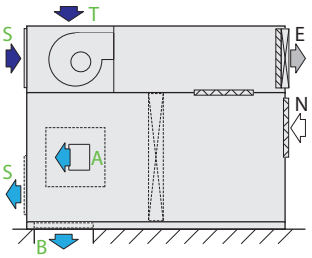
B - Axial return



B B

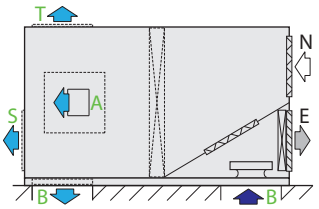
ASSEMBLIES WITH FREE-COOLING AND HEAT RECOVERY

_F / _D - Active/Dynamic heat reclaim



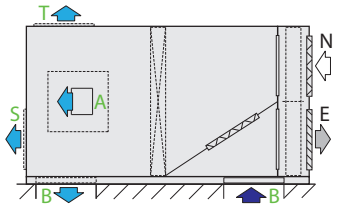
F **D**

BF/BD - Active/Dynamic heat reclaim with lower return fan



B F **B D**

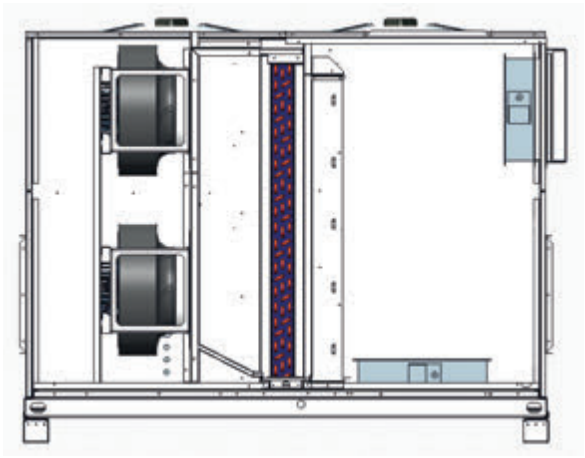
P - Rotary heat exchanger



B P

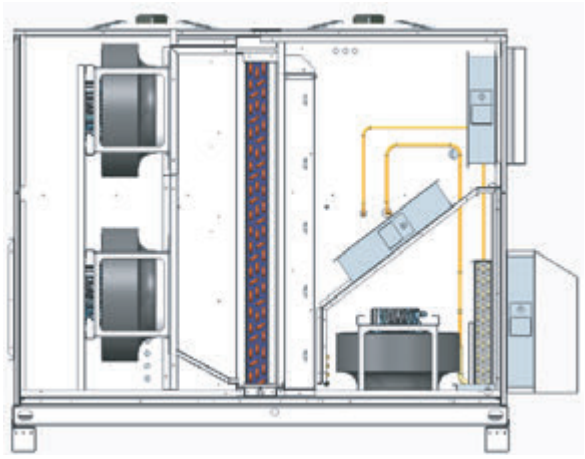
PERSEA
assemblies

Two-way mixing chamber



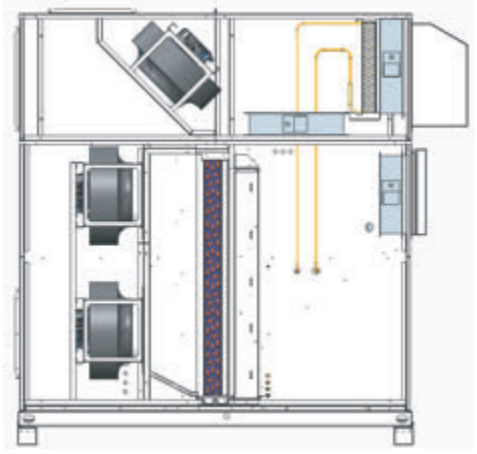
0	Fresh air damper
T	Two-way mixing chamber with intake for fresh air that may be manually adjusted
A	Automatic fresh air control of the two-way mixing chamber

Three-way mixing chamber with return fan



B Z	Radial
B E	Axial extraction fan
B B	Axial
B F	Radial & active heat reclaim
B D	Radial & dynamic heat reclaim
B P	Rotary wheel heat reclaim

Three-way mixing chamber with return fan and upper module



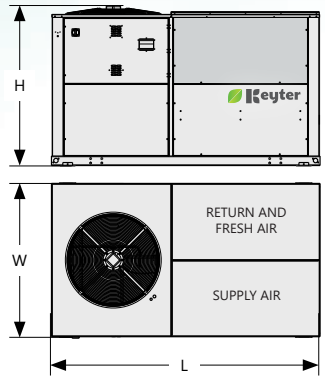
* C	Centrifugal return fan
* F	Centrifugal return fan & active heat reclaim
* D	Centrifugal return fan & dynamic heat reclaim
* P	Centrifugal return fan & rotary heat reclaim

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

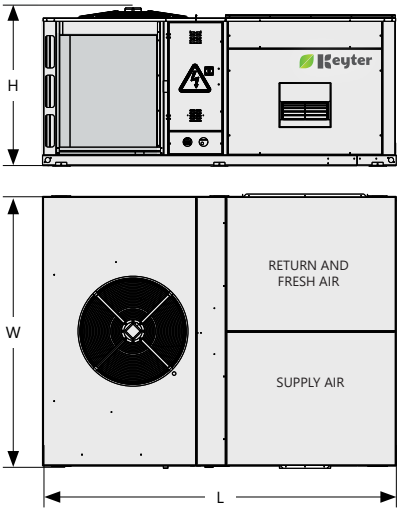
PERSEA
dimensions

Dimensions:

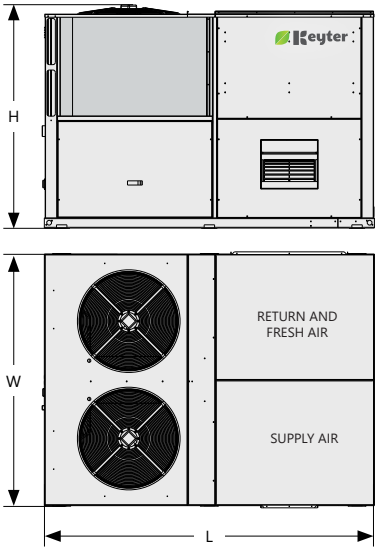
series 0



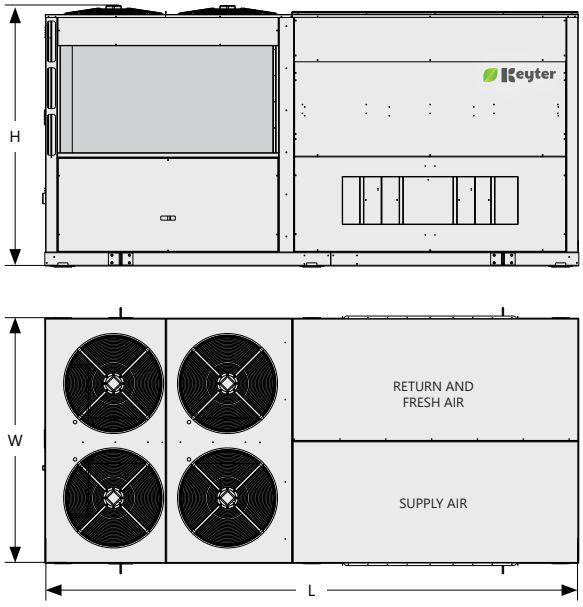
series 1



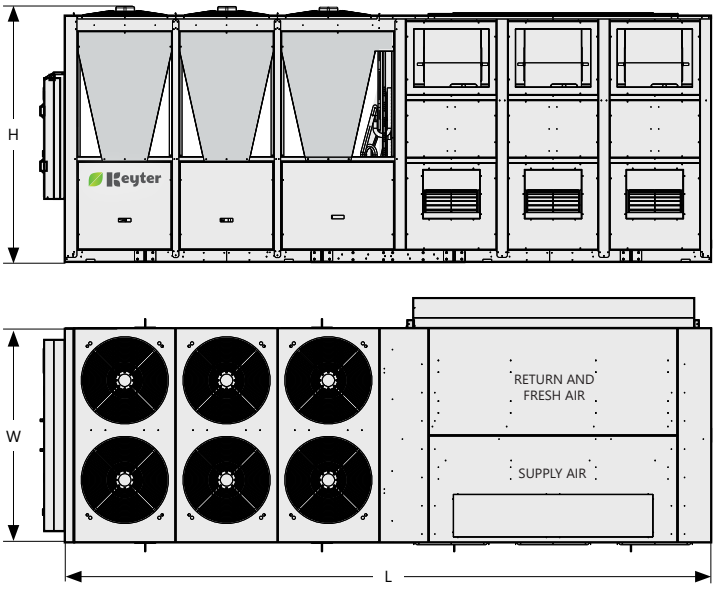
series 2-4



series 5-6



series 7

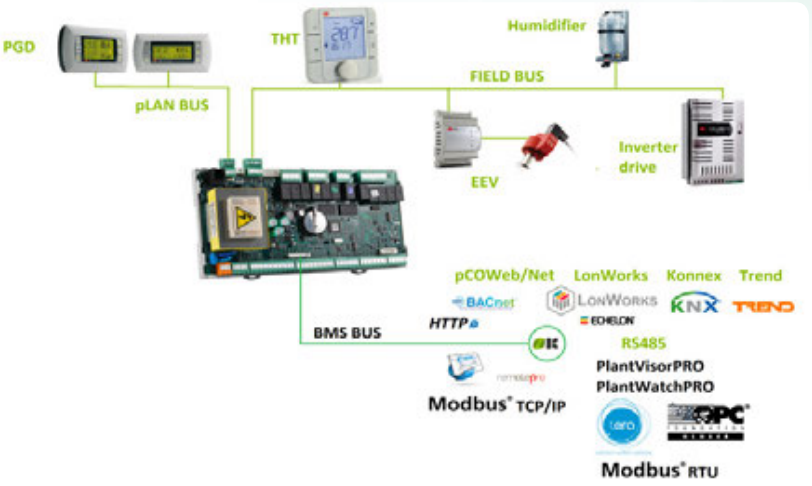


Standard units dimensions (mm)								
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7
L	2400	2755	2755	2755	3055	4575	4575	6360
W	1370	2100	2100	2100	2100	2100	2100	2107
H	1432	1230	1608	1861	1862	2232	2497	2497
Equipment dimensions with upper module (SC and SF assemblies) (mm)								
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7
L	2400	2755	2755	2755	3055	4575	4575	6360
W	1370	2100	2100	2100	2100	2100	2100	2107
H	2052	1832	2232	2488	2488	2497	2497	2497

PERSEA
regulation and control

Control via an electronic microprocessor, KEYTER CLIMANAGER, developed for the management of the KEYTER air-to-air units. This control meets market needs in terms of energy management and simple operation and maintenance.

Main functions:
- Selection of operating modes
- Selection of the summer or winter mode
- Regulation of Condensation and Evaporation pressure
- Supply temperature limit
- Time programming
- Fault diagnosis and alarms
- Defrosting management in heat pump units
- Optional function management (free-cooling, heat reclaim, etc.)



CONTROLLER OF TH-Tune TERMINAL

The THT controller is an user terminal.
It is supplied as an option and is complementary to the pGD1 terminal.
The main characteristics of the controller are:
-Standard power supply voltage (24 Vac/dc...230 Vac)
- Minimum cable section of 1.5 mm^2
- Cable type: AWG20/22 plus screen
- Valid for controlling temperature and/or humidity
- Possibility of night-time or delay operation
- Can be used in addition to other pGD1 terminals

pGD1 TERMINAL

The pGD1 terminal is an 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.

European Directive

ISO 9001:2008
ISO 14001:2004

Eurovent Certification

EcoDesign

PERSEA
heat reclaim

Active heat reclaim

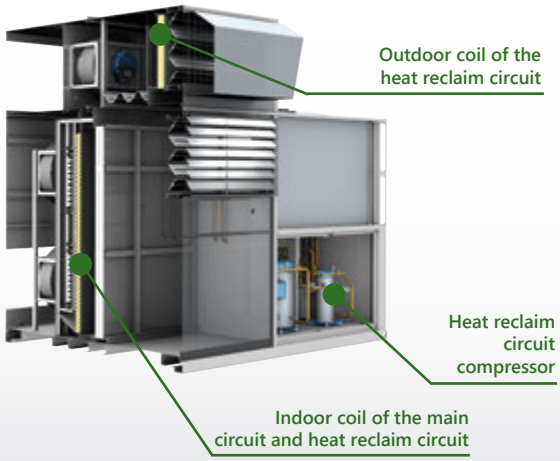
up to 431 kW

Active heat reclaim is a system of extraction air heat reclaim used to comply with the requirements of the energy efficiency regulations for buildings and heating facilities, incorporating an additional refrigerant circuit in the unit.

This system enables an increase in the nominal capacity, which increases its compactness.

In addition, given that this additional circuit exchanges heat between the fresh air and the extraction air, in favourable temperature and humidity conditions, a high cooling performance is obtained.

This increases the nominal performance of the unit and the seasonal performance under partial loads.

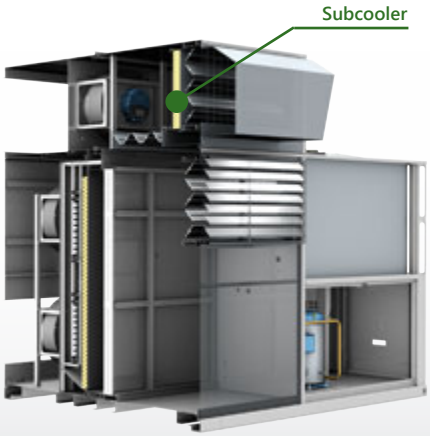


Dynamic heat reclaim

It is an extraction air energy reclaim system that uses an additional exchange coil (subcooler) placed in serie with the air condenser unit, resulting in significant improvement to equipment efficiency regarding the reduction of compressor electrical consumption.

In addition, this system is advantageous compared to static heat reclaim systems, as it prevents higher consumption from the supply and return fans, due to high pressure drop from these plate or rotary heat exchangers.

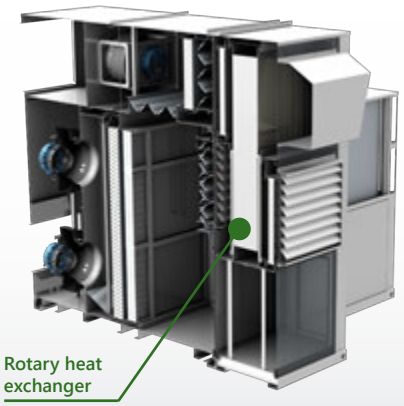
This system enables its installation on a rooftop with return fan or extraction fan, which converts it into a very practical energy reclaim system for both commercial and industrial applications.



Rotary heat reclaim

Rotary heat reclaim involves a system of extraction air energy reclaim that uses a rotary wheel, which enables the exchange of energy and mass between the extraction air and the fresh air, with a large exchange surface.

Its high efficiency and the possibility to exchange heat and humidity enables an increase in the equipment's nominal capacity.



PERSEA
auxiliary heating

Auxiliary electrical heater

Heating auxiliary electrical heater option in two stages of on/off power.

Auxiliary hot water coil

Auxiliary hot water coil option with control via a three-way proportional valve and with water anti-freeze protection.

Gas burner

Condensation gas burners.
Low NOx emissions, class A, thanks to its pre-mixing and diffuser system.
High level of efficiency.
Modulation of power from 10 to 100%.

Available in various options:

- Rooftop unit with gas burner as an independent module.

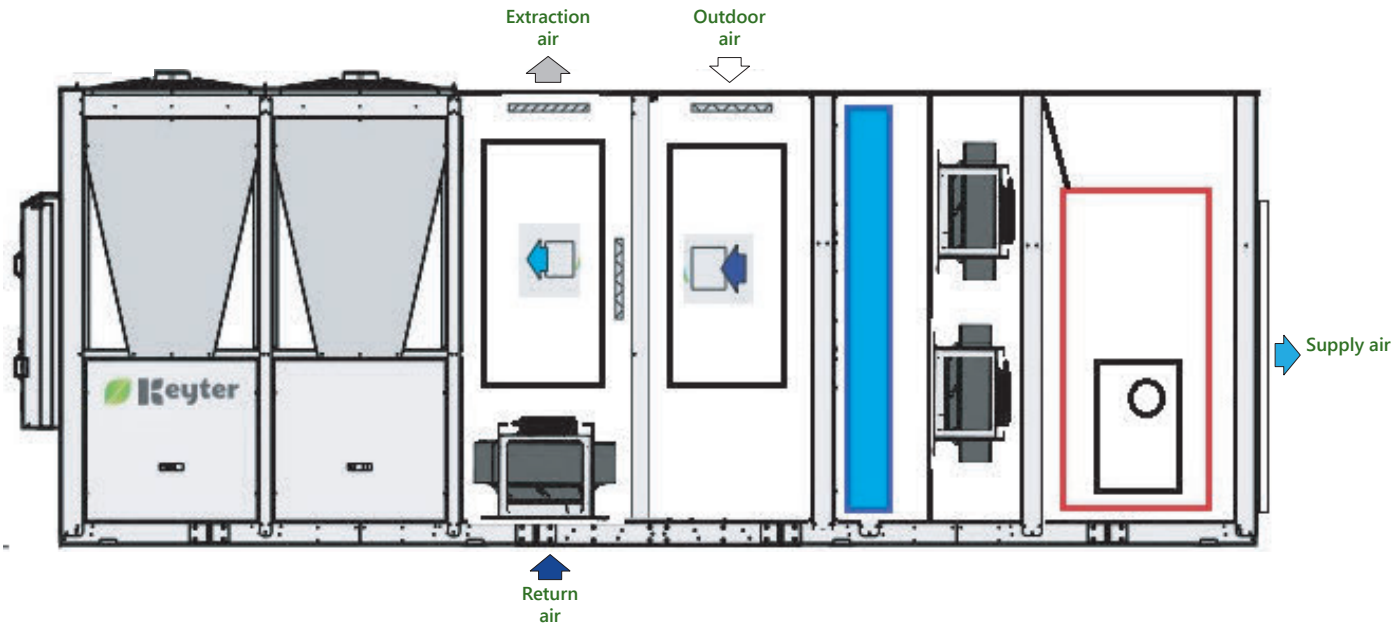
Independent module of self-supporting sheet with gas burner attached to the roof-top unit.

- Rooftop unit with gas burner integrated inside the equipment:

KCR model		0030 *	1041 *	1045 *	2050	2060	3080	4100	5080	5100	5120	5150	6200	7300
Gas burner type	Burner power (kW)													
Gas burner with Low NOx emissions	50	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	60	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		
	90								✓	✓	✓	✓	✓	
	180										✓	✓	✓	✓
Gas burner	76								✓	✓	✓	✓	✓	
	126								✓	✓	✓	✓	✓	✓

* Models KCR-0030, 1041 and 1045 with an option for a built-in gas burner have to be manufactured as chassis 2.

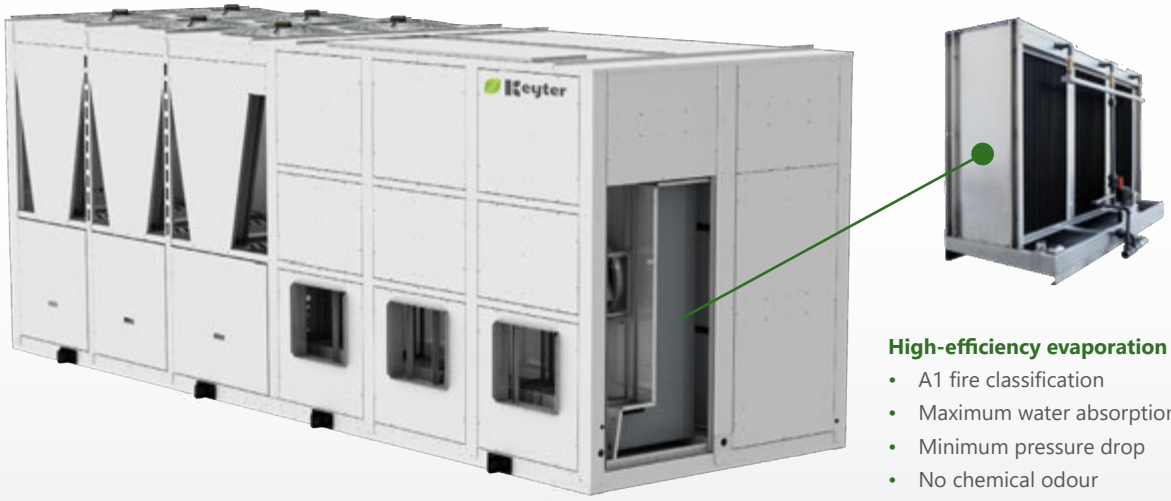
- Rooftop unit with tunnel configuration:



PERSEA
adaptation

Keyter PERSEA for temperature and humidity control

Keyter PERSEA units has an optional version with a humidifier and condensing coil for post-heating indoor air, for applications requiring rooftop unit with temperature and humidity control.



High-efficiency evaporation panel

- A1 fire classification
- Maximum water absorption
- Minimum pressure drop
- No chemical odour
- Healthy, may be used in industrial and comfort facilities

Keyter PERSEA all-outdoor-air version

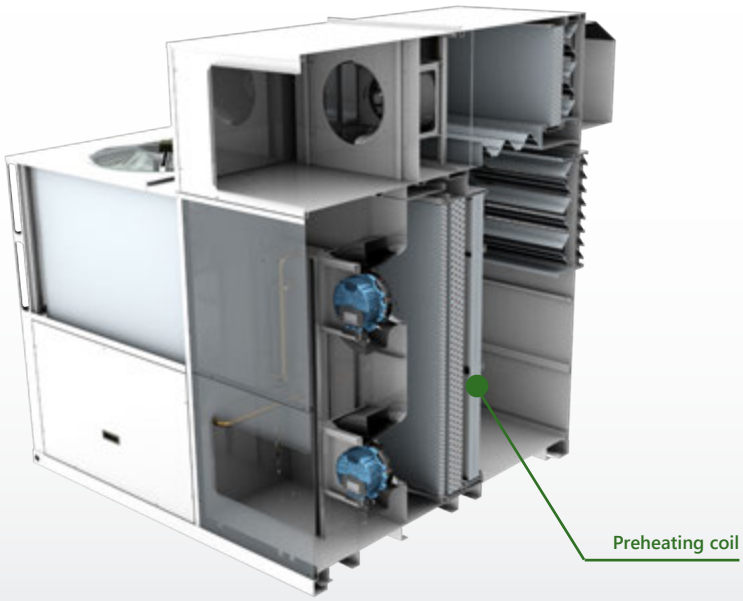
Version able to treat 100% of outdoor air, without mixing with extraction air, thanks to optimised equipment selection in each case and depending on the weather conditions, with the possibility of a sandwich panel, rotary heat exchanger, electronic expansion valve and fans with EC technology.

These units were designed specifically for catering applications, shopping centres, cinemas, industrial warehouses, smoking rooms, rooms for the movement of people, hospitals, clean rooms, critical rooms, etc., where it is necessary to take in the same amount of outdoor air as expelled air.

PERSEA adaptation

Keyter PERSEA with preheating coil

Optional version with air preheating coil, via heat reclaim from the condensation of another commercial cooling unit for hot water, freon, transcritical CO_2 or HFO.

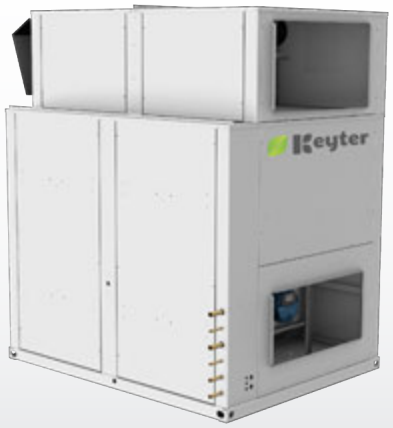


Keyter PERSEA in Split version

The PERSEA KCR series fully adapts to the facility's needs for space, thanks to the availability of a split construction version (consult plant in each case).
The split version is available with all the options of the packaged version, which enables you to have split unit with heat reclaim.

KDR outdoor unit

KPR indoor unit



PERSEA
high air-flow adaptation

Keyter PERSEA high airflow version

KCR model			6160	6240	7360
Cooling only version (R)					
Cooling	Cooling capacity (1)	kW	155.2	241.9	353.5
		TR	44.5	69	100.5
		kBTU/hr	529.4	825.5	1206
	Power input (2)	kW	56.3	87.0	131.3
	EER (3)	W/W	3.4	3.2	3.0
		BTU/(Wxhr)	9.4	9.5	9.2
	SEER (4)		3.6	4.2	4.1
	ηs,c (5)		141%	164%	162%
	IEER (6)	BTU/(Wxhr)	14.0	14.1	13.4
Heat pump version (I)					
Cooling Mode	Cooling capacity (1)	kW	149.3	229.5	339.3
	Power input (2)	kW	62.3	92.1	140.9
	EER (3)	W/W	2.9	2.8	2.7
	SSER (4)		3.1	3.7	3.7
	ηs,c (5)		121%	147%	144%
Heating mode	Heating capacity (7)	kW	132.3	240.1	366.4
	Power input (2)	kW	27.7	69.0	106.3
	COP (3)	W/W	7.6	4.1	4.0
	SCOP average climate (4)		4.0	3.5	3.1
	ηs,h average climate (5)		157%	137%	121%
Technical characteristics					
Power supply			400 V/III/50 HZ with neutral		
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088		
	Type of compressor		Hermetic scroll, tandem assembly		
	No. circuits/compressors		2/4	2/4	3/6
	No. power stages		4	4	6
Indoor fan	Supply airflow	m^3/h	54000	54000	66000
	Nominal available pressure	Pa	300	300	300
	Type of fan		High pressure EC Plug fan		
	Number of fans		5	5	6
	Power input	kW	10.3	10.9	13.8
Outdoor fan	Outdoor airflow	m^3/h	80000	80000	120000
	No. x Type of fan	N x mm	4 x Axial 800 AC		6 x Axial 800 AC
Equipment sound pressure of Lp10 (8)		dB(A)	62	65	71
Dimensions	Length	mm	4575	4575	6360
	Width	mm	2100	2100	2107
	Height	mm	2497	2497	2497
Weight		kg	2679	2746	4045

The Keyter PERSEA range has a high flow rate version specifically designed for applications where the ventilation airflow requirements are higher than in conventional facilities, such as shopping centres or buildings with high occupancy.

Available in three models.

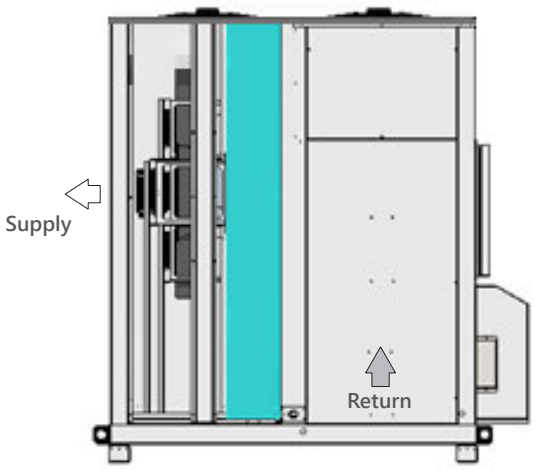
Capacity range between 155 and 354 kW

Supply airflows:

- Up to 54000 m^3/hr in chassis 6
- Up to 66000 m^3/hr in chassis 7

They can also be adapted to storage, industry or energy applications, where the occupancy levels are relatively low.

PERSEA high flow units



(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Keyter PERSEA reduced air return version

Air conditioning and ventilation units for industrial facilities where overpressure of the air conditioned premises is required, able to provide an supply airflow that is much higher than the return airflow.

This version was specifically designed for applications such as laboratories, the food industry, processing rooms and spaces that require a high number of air changes per hour.

PERSEA
new gases

R410A
ODP: 0
GWP: 2088
HFC: A1

R513A
ODP: 0
GWP: 573
HFO: A1

Please ask us for further information

NATURAL REFRIGERANT COMPATIBILITY

ODP: 0
GWP: 0
A3

0 kW — 50 kW — 100 kW — 150 kW — 200 kW

KCR0040	KCR1050	KCR2060	KCR3080	KCR4100	KCR5120	KCR5160	KCR6200

new **PERSEA ECO R513A**

R513A

SEILA

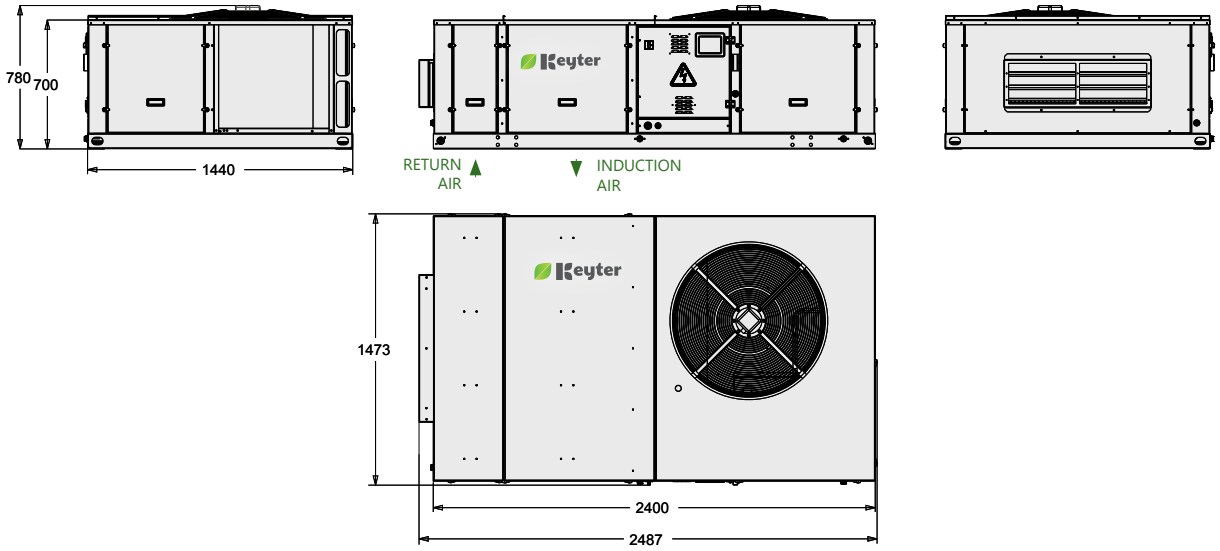
ROOFTOP UNITS
air-to-air, low height

23 - 37 kW
25 - 40 kW

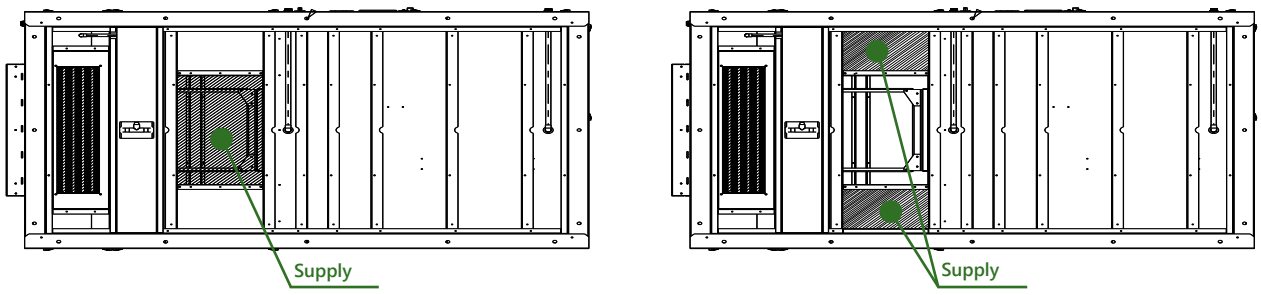
Multi-Scroll | EC | 50 Hz / 60 Hz

R410A

Low height



Adaptation of the assembly for boarding bridges and containers



Possibility of Free-cooling

SEILA
technical data

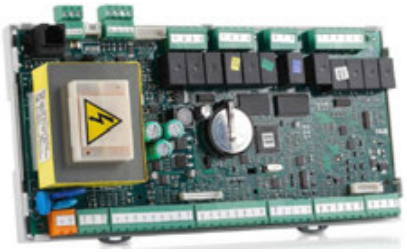
23 - 37 kW

KCRP model			020	030	035
Cooling only version (R)					
Cooling	Cooling capacity (1)	kW	23.4	32.6	37.3
		TR	7	9.5	11
		kBTU/hr	79.9	111.2	127.1
	Power input (2)	kW	6.5	9.6	11.3
	EER (3)	W/W	3.6	3.4	3.3
		BTU/(Wxhr)	12.3	11.6	11.3
Heat pump version (I)					
Cooling Mode	Cooling capacity (1)	kW	23.4	32.6	37.3
	Power input (2)	kW	6.5	9.6	11.3
	EER (3)	W/W	3.6	3.4	3.3
Heating mode	Heating capacity (4)	kW	25.4	35.5	40.8
	Power input (2)	kW	5.9	8.6	10.2
	COP (3)	W/W	4.3	4.1	4.0
Technical characteristics					
Power supply				400 V/III/50 HZ with neutral	
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2		R410A/2088	
	Type of compressor			Hermetic scroll	
	No. circuits/No. compressors		1/1	1/1	1/1
	No. power stages		1	1	1
Indoor fan	Supply airflow	m^3/h	4000	6000	7600
	Nominal available pressure	Pa	100	120	140
	Type of fan			Centrifugal	
Outdoor fan	Outdoor airflow	m^3/h	13000	16000	16000
	Number x Fan diameter	N x mm		1 x Axial 800 AC	
	Fan rotation speed	(r/min.)	670 / 900	670 / 900	670 / 900
Equipment sound pressure of Lp10 (5)		dB(A)	50	55	58
Evacuation of condensates Ø				Nipple 1 1/4"	
Weight		kg	505	535	555

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Electronic control:

Keyter SEILA units include as standard CLIMANAGER programmable electronic control, specifically developed for the management of air-to-air equipment and optionally the TH-Tune user terminal.



CLIMANAGER

TH-Tune controller (option)

Options:

- Electronic expansion valve
- Radial supply fans with EC technology
- Axial fans, outdoor unit with EC technology
- F filtration section
- Thermal and enthalpic free-cooling
- Auxiliary electrical heater
- Auxliary hot water coil with three-way valve
- Clogged filter detector
- Smoke detector
- Ambient/duct CO2 or VOC sensor
- Ambient temperature sensor
- Polyurethane coating on the outdoor and/or indoor coil
- Anti-corrosion treatments of the coils (BLUECOAST, ALUCOAST, GREYCOAST, BLYGOLD AND COPPERFIN)
- Other electrical voltages (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)
- RS485 card for communication in MODBUS protocol
- THT controller
- PlantVisor/Plant Watch Pro
- BACNET/LONWORKS communication

TROPIK

ROOFTOP PACKAGED UNITS
cooling only units

18 - 106 kW
5 - 30 TR

Multi-Scroll
EC
50 Hz
60 Hz

R410A

Adaptation and Versatility

- Fully adaptable and configurable rooftop units thanks to OPTIONS
- Condensing pressure control option for year-round operation
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Low speed condensation axial fans
- As an option, they may be equipped with AxiTop diffusers with EC axial fans, improving the efficiency of the fans whilst reducing their noise levels

Easy control

- Electronic regulation and DIXELL supervision for simple use and high performance
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Tandem multiscroll to improve seasonal energy efficiency
- Electronic fans and electronic expansion valve for minimum consumption
- Designs with Free-cooling mixing section
- Compliance with ErP 2018

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Industry | Retail & Shopping centres | Education | Entertainment

and other applications, please consult us

TROPIK
technical data

5 - 30 TR
18 - 106 kW

KCB model			0005	0007	0010	1015	2020	2025	2030
Cooling only version (R)									
Cooling	Cooling capacity (1)	kW	17.6	26.4	35.2	52.8	70.3	87.9	105.5
		TR	5	7.5	10	15	20	25	30
		kBTU/hr	60	90	120	180	240	300	360
	Power input (2)	kW	5.6	7.7	10.0	12.7	19.0	23.5	32.0
	EER (3)	W/W	3.1	2.8	3.2	3.5	3.4	3.6	3.1
		BTU/(Wxhr)	10.8	11.6	12.0	14.2	12.6	12.8	11.3
	SEER (4)		3.0	2.7	3.3	3.4	3.4	3.8	3.7
	ηs,c (5)		116%	106%	128%	134%	131%	149%	143%
	IEER (6)	BTU/(Wxhr)	17.2	15.8	18.9	19.9	19.4	21.5	20.7
Technical characteristics									
Power supply			220 V/I/60 Hz + N	220 V/III/60 Hz with neutral					
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088						
	Type of compressor		Hermetic scroll, single version						
	No. circuits/No. compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2
	No. power stages		1	1	1	1	2	2	2
Indoor fan	Supply airflow	m^3/h	2650	3100	3900	6000	8800	12000	14000
	Nominal available pressure	Pa	80	100	100	100	120	120	150
	No. x Type of fan		1 x Centrifugal					2 x Centrifugal	
	Power input	kW	0.3	0.3	0.4	0.7	1.4	1.5	2.0
Outdoor fan	Outdoor airflow	m^3/h	5000	5000	5000	5000	40000	40000	40000
	No. x Type of fan		1 x Axial 450 EC			1 x Axial 800 AC	2 x Axial 800 AC		
Equipment sound pressure of Lp10 (7)		dB(A)	50	53	59	59	59	59	59
Dimensions	Length	mm	2400	2400	2400	2755	3000	3000	3000
	Width	mm	1440	1440	1440	2100	2100	2100	2100
	Height	mm	780	780	780	1230	2375	2375	2375
Weight		kg	565	585	605	690	1075	1210	1560

(1) Nominal cooling capacity under AHRI conditions at 60 Hz.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER calculated based on regulation EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor calculated based on regulation EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Standard equipments of the range:

- Full charged of refrigerant R410A
- Self-supporting chassis of galvanized steel
- Self-supporting unit base made of galvanised steel
- Scroll compressors (single assembly) with anti-vibration mounts
- Thermostatic expansion valve
- Outdoor axial fans with AC technology
- Centrifugal supply fan
- Cleanable G4 prefilter
- Indoor condensate drain pan
- General switch on electrical cabinet
- Thermal-magnetic protection for compressors and fans
- PREMIUM phase control relay, with phase failure detection and rotation direction protection
- Fully-wired electrical cabinet, with IP54 protection
- TROPIKMANAGER electronic control
- FIBOX window on electrical cabinet

Options:

- Equipment without refrigerant charge
- Thermosetting polyester paint treatment cured in a furnace at the base of the unit
- Insulation in the indoor unit: 10 mm thick
- Panels for closed compressor compartment
- Compressor acoustic jacket
- Anti-corrosion treatments of the coils (BLUECOAST, ALUCOAST, GREYCOAST, BLYGOLD AND COPPERFIN)
- Droplet separator in indoor coil
- Free-cooling, two dampers (assembly A)
- Auxiliary electrical heater (2 stages)
- Hot gas post-heating coil (HUMDRY)
- Condensing pressure control
- Pressure transducers
- User terminal
- Other electrical voltages (230 V/I ph/50 Hz, 230 V/III ph/50 Hz, 380 V/III ph/60 Hz, 400 V/III ph/60 Hz, 460 V/III ph/60 Hz)
- Electronic control options (see technical manual)
- EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection
- Ambient temperature sensor
- Clogged filter detector
- Differential switches
- Insulated electrical cabinet
- Forced ventilation of the electrical cabinet
- Tropicalised electrical cabinet
- Leak detection
- Anti-vibration supports
- Packaging for maritime transportation

ATENEA

ROOFTOP UNITS
water-to-air

44 - 255 kW
49 - 276 kW

Multi-Scroll
EC
50 Hz
60 Hz
AER
DER
ACS
R410A
R452B

Adaptation and Versatility

- Fully adaptable and configurable rooftop units with OPTIONS and a wide variety of ASSEMBLIES
- Maximum accessibility and easy maintenance via removable panels
- Condensing pressure control as standard for all year operation
- Versions that can be adapted to suit the needs of each facility

Low noise level

- Acoustic insulation of compressors in a closed compartment and EC indoor fans for a minimum noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- The Rooftop water-to-air units are one of the most energy efficient solutions in large spaces for centralised facilities with a water loop due to the high energy performance coefficients
- Optimised extraction air Heat Recovery systems
- Tandem multiscroll technology to improve seasonal energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Compliance with ErP 2018 and ErP 2021

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Industry
Retail & Shopping centres
Education & Culture
Entertainment

and other applications, please consult us

ATENEA
technical data

44 - 255 kW

KGR model			1039	1041	1044	1045	2050	2060	3070	3080	4090
Cooling only version (R)											
Cooling Mode	Cooling capacity (1)	kW	43.6	45.2	47.0	47.7	58.1	68.5	77.9	85.8	99.9
		TR	12.5	13	13.5	14	16.5	19.5	22.5	24.5	28.5
		kBTU/hr	148.8	154.2	160.4	162.8	198.2	233.7	265.8	292.8	340.9
	Power input (2)	kW	13.6	14.3	15.8	16.1	17.6	22.1	25.0	28.7	32.2
	EER (3)	W/W	3.2	3.2	3.0	3.0	3.3	3.1	3.1	3.0	3.1
		BTU/(Wxhr)	10.9	10.8	10.1	10.1	11.3	10.6	10.6	10.2	10.6
Heat pump version (I)											
Cooling mode	Cooling capacity (1)	kW	43.6	45.2	47.0	47.7	58.1	68.5	77.9	85.8	99.9
	Power input (2)	kW	13.6	14.3	15.8	16.1	17.6	22.1	25.0	28.7	32.2
	EER (3)	W/W	3.2	3.2	3.0	3.0	3.3	3.1	3.1	3.0	3.1
Heating mode	Heating capacity (4)	kW	48.9	50.7	54.6	55.5	65.0	76.5	90.6	100.3	113.1
	Power input (2)	kW	14.5	15.2	17.0	17.3	19.0	23.6	26.7	30.8	35.1
	COP (3)	W/W	3.4	3.3	3.2	3.2	3.4	3.2	3.4	3.3	3.2
	Heating capacity (5)	kW	43.8	45.7	49.7	49.6	58.0	68.4	80.7	89.1	101.0
	Power input (2)	kW	12.8	13.6	15.8	15.6	16.8	20.5	23.4	27.0	30.2
	COP (3)	W/W	3.4	3.4	3.1	3.2	3.5	3.3	3.4	3.3	3.3
Technical characteristics											
Power supply		kW	400 V/III/50 HZ with neutral								
Refrigerant circuit	Refrigerant fluid/GWP		R410A/2088								
	Type of compressor		Hermetic scroll								
	No. circuits/No. compressors		1/1	1/2	1/1	1/2	2/2	2/2	2/2	2/2	2/2
	No. power stages		1	2	1	2	2	2	2	2	2
Indoor fan	Supply airflow	m³/h	6800	6800	7400	7400	8950	10300	12000	13300	15400
	Nominal available pressure	(Pa)	100	100	100	100	120	120	120	120	150
	No. x Type of fan		1 x EC plug fan				2 x EC plug fan				
	Power input	kW	0.92	0.82	1.03	0.90	1.17	1.35	1.54	1.77	1.99
Outdoor water circuit	Water flow	m³/h	9.7	10.1	10.6	10.8	12.8	15.4	17.4	19.4	22.4
	No./type of heat exchanger		1 x Welded plate heat exchanger								
Equipment sound pressure of Lp10 (6)		dB(A)	54	53	55	54	55	55	55	54	56
Weight		kg	471	487	501	510	701	791	829	891	921

KGR model			4095	4100	5120	5135	5140	5150	5170	6200	6230
Cooling only version (R)											
Cooling mode	Cooling capacity (1)	kW	98.8	111.0	136.2	147.0	161.8	170.2	194.5	216.2	254.5
		TR	28.5	32	39	42	46	48.5	55.5	61.5	72.5
		kBTU/hr	337.1	378.7	464.7	501.6	552.1	580.7	663.7	737.7	868.4
	Power input (2)	kW	23.6	27.0	32.6	36.9	38.8	41.4	47.4	54.7	64.4
	EER (3)	W/W	4.2	4.1	4.2	4.0	4.2	4.1	4.1	4.0	4.0
		BTU/(hrxW)	14.3	14.0	14.3	13.6	14.2	14.0	14.0	13.5	13.5
Heat pump version (I)											
Cooling mode	Cooling capacity (1)	kW	98.8	111.0	136.2	147.0	161.8	170.2	194.5	216.2	254.5
	Power input (2)	kW	23.6	27.0	32.6	36.9	38.8	41.4	47.4	54.7	64.4
	EER (3)	W/W	4.2	4.1	4.2	4.0	4.2	4.1	4.1	4.0	4.0
Heating mode	Heating capacity (4)	kW	114.0	124.4	146.4	175.8	185.6	195.0	224.1	244.5	275.5
	Power input (2)	kW	32.4	37.8	47.0	48.9	53.9	57.7	62.6	72.2	82.1
	COP (3)	W/W	3.5	3.3	3.1	3.6	3.4	3.4	3.6	3.4	3.4
	Heating capacity (5)	kW	102.0	114.0	132.6	157.6	166.2	175.0	200.7	221.7	246.6
	Power input (2)	kW	32.0	35.4	43.8	46.9	50.5	54.2	58.8	68.3	77.4
	COP (3)	W/W	3.2	3.2	3.0	3.4	3.3	3.2	3.4	3.2	3.2
Technical characteristics											
Power supply		kW	400 V/III/50 HZ with neutral								
Refrigerant circuit	Refrigerant fluid/GWP		R410A/2088								
	Type of compressor		Hermetic scroll								
	No. circuits/No. compressors		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
Indoor fan	Supply airflow	m³/h	15400	17700	19800	22700	23500	24900	28600	31900	36000
	Nominal available pressure	Pa	150	150	150	150	150	150	150	150	150
	No. x Type of fan		2 x EC plug fan		3 x EC plug fan				4 x EC plug fan		
	Power input	kW	2.19	2.99	2.59	3.12	3.30	3.69	4.32	5.43	7.49
Outdoor water circuit	Water flow	m3/h	20.7	23.2	28.6	31.1	33.9	35.8	40.9	45.7	53.6
	No./type of heat exchanger		1 x Welded plate heat exchanger								
Equipment sound pressure of Lp10 (6)		dB(A)	56	57	58	59	59	58	58	60	61
Weight		kg	1100	1210	1630	1639	1695	1726	1803	2036	2211

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors in units with standard assembly.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Nominal heating capacity for indoor air temp. 20ºC and water inlet/outlet temp. 15/10ºC.
(5) Nominal heating capacity for indoor air temp. 20ºC and water inlet/outlet temp. 10/5ºC.
(6) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

***Keyter GR units have the same dimensions as the corresponding model in the Keyter CR PERSEA series.**

WALL-TOP UNITS

MONOBLOCK UNITS
air-to-air, wall mounted

12 - 46 kW
13 - 47 kW

Multi-Scroll
EC
50 Hz
60 Hz
DER
R410A

Adaptation and Versatility

- The wall-top units have a new packaged, lightweight design and are easy to mount on the wall
- Many configuration options thanks to OPTIONS and a wide variety of ASSEMBLIES for correct air distribution
- Maximum accessibility and easy maintenance via removable panels
- Adaptation to air conditioning needs as per RITE

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Optimised dynamic extraction air heat reclaim systems via additional exchange coils that increase subcooling, resulting in a substantial improvement in the unit's efficiency
- Design with mixing section, Free-cooling and an increase in subcooling
- Electronic fans and electronic expansion valve available for minimal energy consumption
- Compliance with ErP 2018

Low noise level

- Compressors in insulated, closed compartment available with acoustic jacket
- Low speed condensation axial fans

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

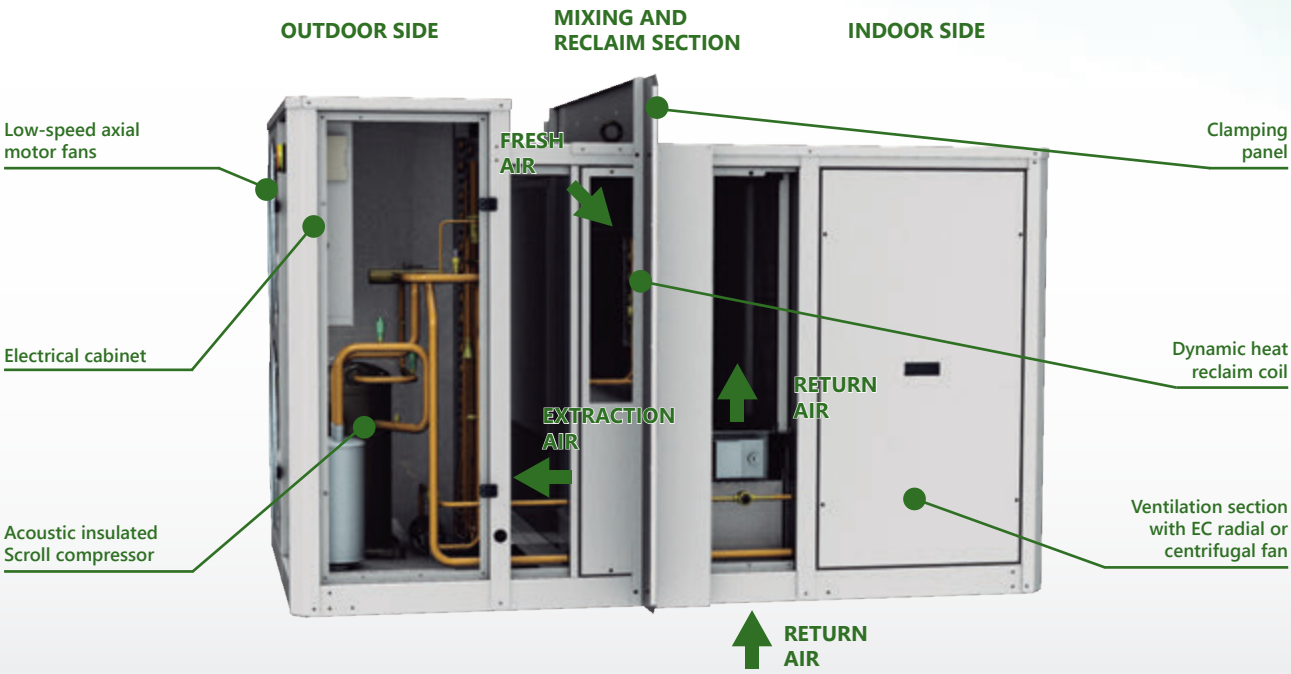
Applications

Industry
Supermarkets
Entertainment

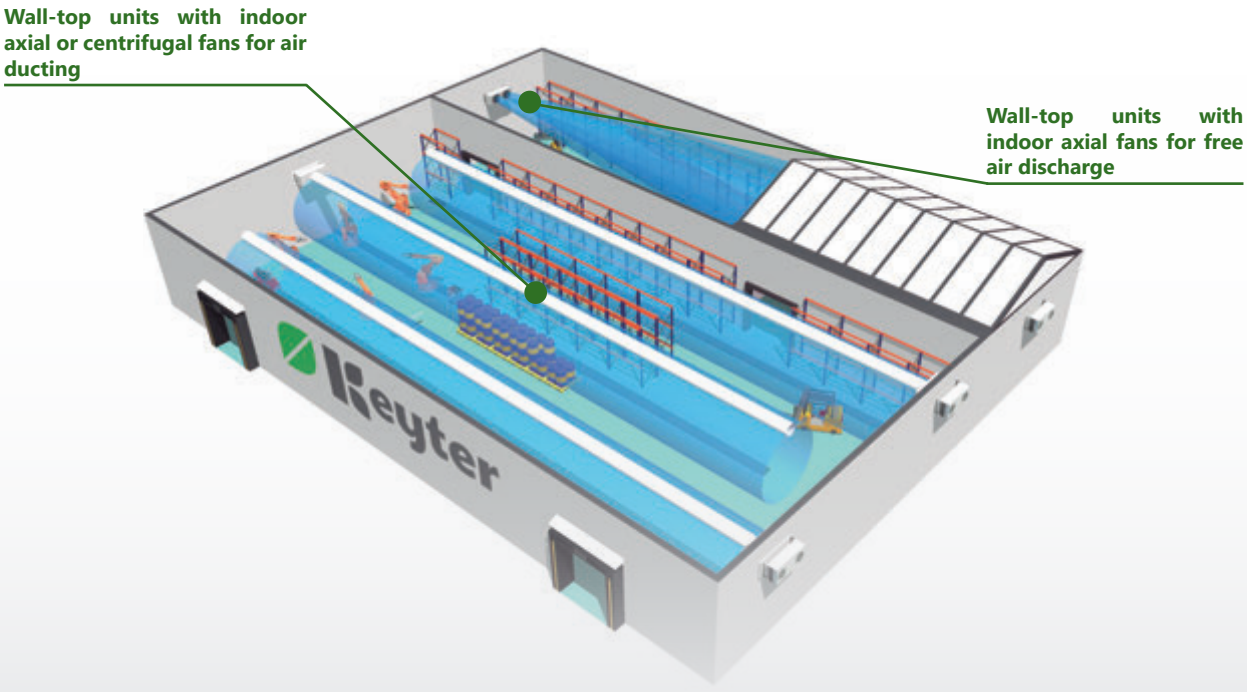
and other applications, please consult us

WALL-TOP UNITS
assembly

Construction - Keyter WALL-TOP units



Assembly types - Keyter WALL-TOP units



WALL-TOP UNITS
technical data

12 - 46 kW

KCH model			2013	2022	4045	2013	2022	4045
				EURO			COMFORTER	
Cooling only version (R)								
Cooling	Cooling capacity (1)	kW	12.5	21.5	46.9	12.2	21.1	45.6
		TR	3.5	6	13	3.5	6	13
		kBTU/hr	42.6	73.4	160.0	41.6	72.0	155.6
	Power input (2)	kW	4.5	7.6	15.2	4.5	7.7	14.8
	EER (3)	W/W	2.8	2.8	3.1	2.7	2.7	3.1
		BTU/(Wxhr)	9.4	9.6	10.5	9.3	9.4	10.5
	SEER (4)		3.3	3.3	3.5	2.6	2.7	2.9
	ηs,c (5)		130%	129%	139%	100%	104%	112%
Heat pump version (I)								
Cooling mode	Cooling capacity (1)	kW	12.0	20.8	44.8	12.0	20.8	44.8
	Power input (2)	kW	4.7	7.8	15.6	4.7	7.9	15.2
	EER (3)	W/W	2.7	2.8	3.1	2.6	2.6	2.9
	SEER (4)		3.2	3.2	3.3	2.5	2.6	2.8
	ηs,c (5)		124%	123%	129%	97%	100%	111%
Heating mode	Heating capacity (6)	kW	13.1	23.1	46.8	13.1	23.1	46.8
	Power input (2)	kW	4.7	8.2	14.2	4.7	8.3	13.8
	COP (3)	W/W	2.9	2.9	3.6	2.8	2.8	3.4
	SCOP average climate (4)		3.0	3.0	3.1	2.4	2.5	2.8
	ηs,h average climate (5)		119%	117%	121%	94%	97%	107%
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral			400 V/III/50 HZ with neutral		
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088			R410A/2088		
	Type of compressor		Hermetic scroll			Hermetic scroll		
	No. circuits/No. compressors		1/1	1/1	1/1	1/1	1/1	1/1
	No. power stages		1	1	1	1	1	1
Indoor fan	Supply airflow	m^3/h	2100	4000	8000	2100	4000	8000
	Nominal available pressure	Pa	50	62	75	50	62	75
	No. x Type of fan		1 x EC plug fan			1 x Centrifugal		
	Motor unit power	kW	2.68	2.68	2.68	0.25	0.75	1.1
	Power input	kW	0.32	0.39	0.95	0.18	0.49	0.69
Outdoor fan	Outdoor airflow	m^3/h	4200	8400	18200	4200	8400	18200
	No. x Type of fan	N x (mm)	2 x Axial 450 EC	2 x Axial 450 AC	2 x Axial 630 AC	2 x Axial 450 EC	2 x Axial 450 AC	2 x Axial 630 AC
Equipment sound pressure of Lp10 (7)		dB(A)	32	35	42	32	35	42
Weight		kg	292	348	461	294	350	465

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Electronic control:

Keyter WALL-TOP units includes as standard CLIMANAGER programmable electronic control, specifically developed for the management of air-to-air units, with TH-Tune user terminal in the standard version and pGD1 user and maintenance terminal in equipment with free-cooling or heat reclaim.

CLIMANAGER

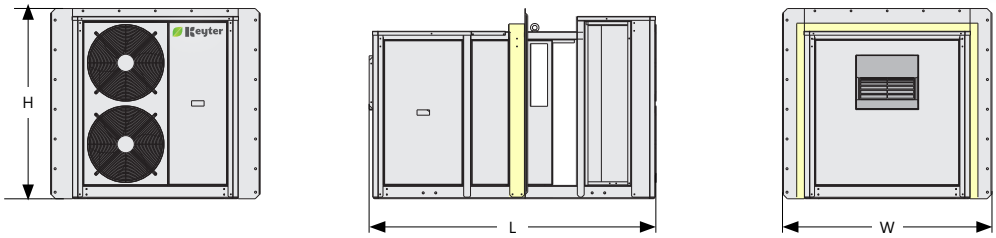
TH-Tune controller

pGD1 controller

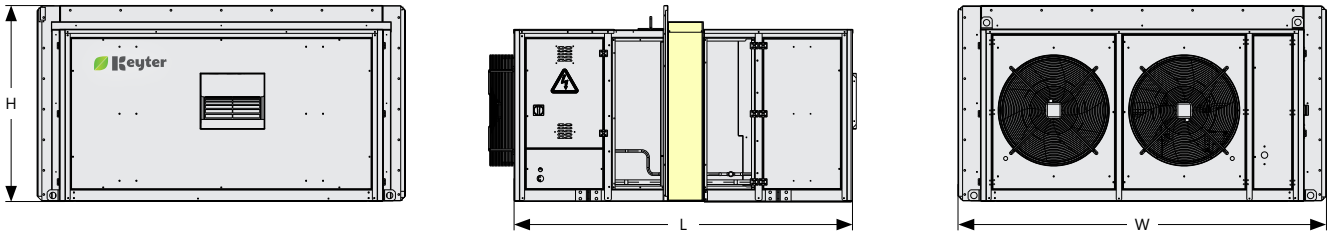
WALL-TOP UNITS dimensions

Dimensions (units with free-cooling or heat reclaim):

series 2



series 4



Standard units dimensions (mm)		
	Series 2	Series 4
L	1833	2285
W	1339	2290
H	1216	1220

Options:

- Dynamic heat reclaim
- Electronic expansion valve
- Radial supply fans with EC technology
- Axial fans, outdoor unit with EC technology
- F filtration section
- Thermal and enthalpic free-cooling
- Auxiliary electrical heater
- Auxliary hot water coil with three-way valve
- Clogged filter detector
- Smoke detector
- Ambient/duct CO2 or VOC sensor
- Ambient temperature sensor
- Anti-corrosion treatments of the coils (BLUECOAST, ALUCOAST, GREYCOAST, BLYGOLD AND COPPERFIN)
- Forced ventilation of the electrical cabinet
- Other electrical voltages (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)
- RS485 card for communication in MODBUS protocol
- PlantVisor/Plant Watch Pro
- BACNET/LONWORKS communication
- KCH units may be manufactured in split version on request

COVERED SWIMMING POOL | RINCÓN DE LA VICTORIA - SPORTS CENTRE GRANADA FOOTBALL CLUB | GRANADA - GENERAL BASIC NON-COMMISSIONED OFFICERS ACADEMY | LERIDA

L'ILLA SPORTS CENTRE | BENIDORM

OCEAN

DEHUMIDIFIERS

11kg/hr | 2700 m3/hr - 166kg/hr | 48000m3/hr
13 - 156 kW | 8 - 130 kW

Multi-Scroll EC 50 Hz 60 Hz

AER+ ACS

R410A

Adaptation and Versatility

- Fully adaptable and configurable units thanks to OPTIONS and with a wide variety of ASSEMBLIES with a mixing, free-cooling and energy reclaim section
- Units equipped with sandwich panel painted on two faces with M0 mineral wool insulation (50 mm thick)
- Flexibility of assembly, both in indoor and outdoor machine rooms to suit the needs of each facility
- Combination of a compact design with maximum accessibility and easy maintenance via panels that are easy to disassemble
- Reduced height for installation in galleries of covered pools

Easy control

- Conditioned air temperature and humidity control
- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Applications

Industry | Entertainment | Swimming pools

and other applications, please consult us

Energy efficiency

- Extraction air energy reclaim with reversible active heat reclaim or via a cross-flow plate heat exchanger
- Heat reclaim to heat the pool water
- Free-cooling and dehumidification by outdoor air
- Electronic expansion valve and electronic plug fans as option for minim energy consumption

Environment

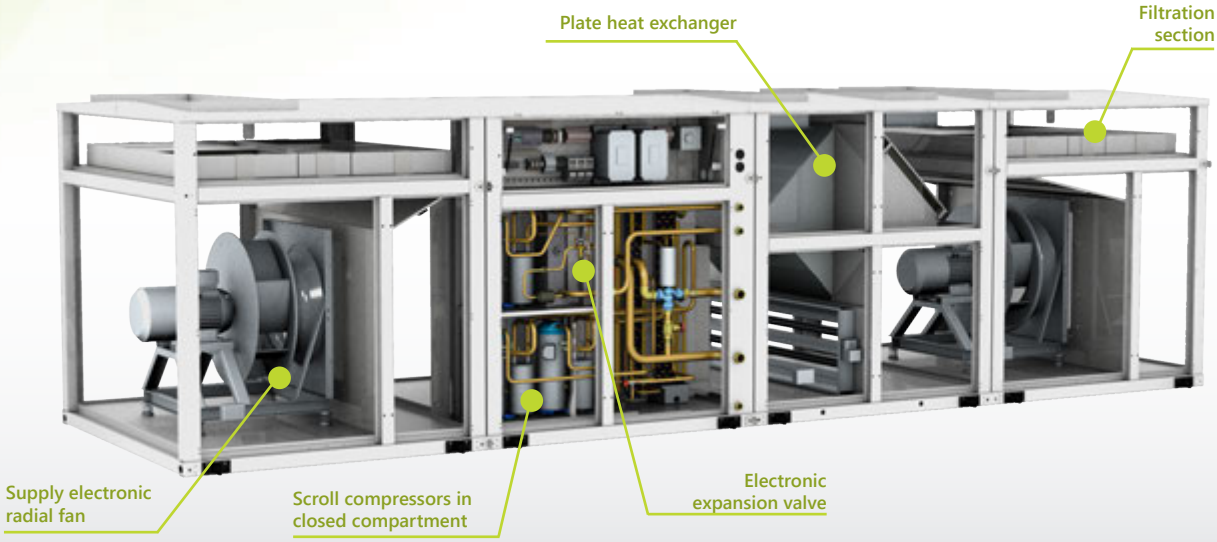
- Optimised design for very reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Corrosion resistance

- Cooling compartment isolated from the airflow
- Plate heat exchanger to recover condensation heat
- Fans protected with high strength plastic or epoxy paint
- BLUECOAST treatment of series produced coils
- Hydraulic connections made of high strength cross-linked polyethylene
- Removable stainless steel condensate drain pan

OCEAN

Keyter OCEAN DTS



Temperature and humidity control for air conditioning in indoor swimming pools

Ventilation

Two or three-damper mixing sections

Centrifugal extraction/return and supply fans with a wide range of flow rates and available pressures

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 unit for the needs of each facility based on the combination of the dehumidification capacity of the outdoor air and the dehumidification produced by the refrigerant circuits

Refrigeration

Free-cooling with outdoor air

Possibility to evacuate the installation excess heat that cannot be used in the facility via integrated or remote condensers

Heating

Pre-heating of the supply air via condensation heat reclaim

Auxliary hot water coil of the heat production system, equipped with proportional three-way valve

Pre-heating pool water

Pool water pre-heating through condensation heat reclaim

Energy Efficiency

High performance units to significantly reduce energy consumption compared to conventional systems

Casing with double face painted sandwich panel with mineral wool insulation (50 mm thick)

Electronic plug fans in option

Free-cooling/dehumidification by outdoor air

Total condensation heat reclaim in the supply air circuit and in the swimming pool water heating circuit

Heat recovery from extraction air with plate heat exchangers or active heat reclaim

Partial heat reclaim from compressor discharge. Hot gas recovery for sanitary water preheating

OCEAN
technical data

7 - 311 kg/hr | 11 - 194 kW

DTS model			1007	1009	2009	2012	2015	2020	3027	3035	3045
Dehumidification with 30% fresh air (1)		kg/hr	15.7	21.5	22.8	30.3	36.7	43.4	57.8	75.4	96.4
Dehumidification with 0% fresh air (2)		kg/hr	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 input		kW	2.7	4.3	3.0	3.9	4.9	5.7	7.1	9.9	13.7
Total power input (3)		kW	3.3	5.1	4.1	5.4	7.1	8.7	9.3	13.9	19.2
Technical characteristics											
Power supply			400 V-III-50 HZ with neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088								
	Type of compressor		Hermetic scroll								
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2
Indoor fan (nominal flow)	Nominal airflow	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
	Motor power	kW	0.55	0.75	1.1	1.5	2.2	3	2.2	4	5.5
	Fan power input	kW	0.4	0.6	0.6	1.1	1.4	2.4	1.6	2.6	3.4
Indoor fan (maximum flow)	Maximum airflow	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
	Motor power	kW	0.75	1.5	1.5	2.2	3	5.5	4	5.5	7.5
	Fan power input	kW	0.5	0.9	1.1	1.7	2.3	4.8	2.6	4.4	5.3
Water recovery circuit	Recovered heating capacity (4)	kW	-	-	10	14	16	18	15	21	27
	Nominal water flow	m^3/h	-	-	1.8	2.4	2.73	3.15	2.6	3.68	4.8
	Presure drop	kPa	-	-	32.3	25.6	32.5	41.1	20.9	36.8	29.9
	Hydraulic connections		-	-	1 1/4"	1 1/4"	11/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"
Auxliary hot water coil	Heating capacity (80-65ºC) (5)	kW	22.1	26.5	26.5	31.7	35.2	38.9	88.1	104	121
	Water flow	m^3/h	1.3	1.6	1.6	1.9	2.1	2.3	5.2	6.1	7.1
	Presure drop	kPa	3	4	4	3	3	4	22	27	36
	Hydraulic connections		1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"
Weight		kg	283	295	481	502	518	539	768	787	812

DTS model			3060	3070	3075	4080	4090	4100	4120	4140
Dehumidification with 30% fresh air (1)		kg/hr	110.8	122.0	138.7	163.3	184.0	201.2	225.6	310.6
Dehumidification with 0% fresh air (2)		kg/hr	58.6	68.2	74.5	78.3	95.5	102.9	117.8	143.2
Heating capacity		kW	64.5	80.4	81.5	87.7	98.9	110.3	125.6	149.1
Cooling capacity		kW	81.9	95.1	103.3	115.3	129.7	143.8	163.0	193.7
Compressor power input		kW	16.7	20.7	21.9	16.9	19.4	23.4	26.6	31.3
Total power input (3)		kW	22.2	28.2	32.9	27.9	30.4	34.4	37.6	61.3
Technical characteristics										
Power supply			400 V-III-50 HZ with neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088							
	Type of compressor		Hermetic scroll							
	No. circuits/compressors		2/2	2/3	2/3	3/3	3/3	3/3	3/3	3/3
Indoor fan (nominal flow)	Nominal airflow	m^3/h	13200	15500	16500	21000	23600	25000	28000	43500
	Available static pressure	Pa	150	150	150	180	180	180	180	180
	Motor power	kW	5.5	7.5	11	11	11	11	11	30
	Fan power input	kW	4.5	6.3	7.0	8.4	7.6	6.9	10.0	22.2
Indoor fan (maximum flow)	Maximum airflow	m^3/h	15900	18000	19000	25000	28500	32400	34000	48000
	Available static pressure	Pa	150	150	150	180	180	180	180	180
	Motor power	kW	11	11	15	15	15	15	18.5	30
	Fan power input	kW	7.3	9.8	11.2	12.7	11.2	12.9	13.0	26.2
Water recovery circuit	Recovered heating capacity (4)	kW	33	34	43	44	49	56	63	74
	Nominal water flow	m^3/h	5.8	6.0	7.4	7.6	8.5	9.6	10.9	12.9
	Pressure drop	kPa	5.8	20.6	22.4	29.7	28.0	34.2	35.8	28.0
	Hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2 1/2"	2 1/2"	2 1/2"
Auxliary hot water coil	Heating capacity (80-65ºC) (5)	kW	131	143	148	240	258	267	286	363
	Water flow	m^3/h	7.8	8.4	8.7	13.4	14.3	14.8	15.8	20.0
	Pressure drop	kPa	43	49	52	12	14	14	15	23
	Hydraulic connections		1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"
Weight		kg	883	955	1016	1756	1805	1848	1880	2125

(1) Dehumidification capacity with 30% fresh air temp. 7ºC/90%RH and 70% return air temp. 28ºC/65% RH as per UNE 100011.
(2) Dehumidification capacity of the unit with evaporator air intake under conditions 28ºC/65% RH, without freh air.
(3) Nominal power input by compressors and fans.
(4) Heating capacity recovered in the water condenser with inlet/outlet temp. 28/33ºC.
(5) Heating capacity in auxiliary hot water coil with water inlet/outlet temp. 80/65ºC and air intake temp. 20ºC.
(6) Weight of the refrigerant and ventilation module.

OCEAN
range specification

		OCEAN
General characteristics		
Refrigerant	R410A	✓
	Full charge of refrigerant	✓
	Leak detection	●
Casing	Self-supporting chassis of high-strength galvanized steel with oven cured polyester paint treatment	✓
	Self-supporting chassis of stainless steel or aluminium with oven cured polyester paint treatment	●
	Customisable colour to meet the needs of the facility	●
	Anti-vibration supports	●
	Closures with improved hinges	✓
	Double face painted sandwich panel with mineral wool insulation 20 mm thick (DTS-1 series)	✓
	Double face painted sandwich panel with mineral wool insulation 50 mm thick (DTS-2 - 4 series)	✓
Compressors	Scroll type hermetic compressors	✓
	Refrigerant core mounted in a compartment isolated from the airflow (series 2-4)	✓
	Soft starter	●
	High-performance acoustic jacket	●
	Original manufacturer acoustic jacket	●
	Compressor anti-vibration mounts	✓
Expansion valves	Thermostatic expansion valves in main circuits	✓
	Electronic expansion valves in main circuits	●
	Electronic expansion valves in the heat reclaim circuit	✓
Ventilation		
Supply fans	Indoor centrifugal fans with epoxy paint protection	●
	Plastic or metal indoor EC plug fans with epoxy paint	✓
	High-pressure plastic or metal indoor EC plug fans with epoxy paint	●
Return fans	Indoor centrifugal fans with epoxy paint protection	●
	Plastic or metal indoor EC plug fans with epoxy paint	✓
	Plastic or metal high pressure EC return plug fans with epoxy paint	●
Heat exchangers		
Coils	Copper tube and aluminium fin coils pre-lacquered with polyurethane (BLUECOAST)	✓
	ALUCOAST: CrMg high strength alloy Aluminium fins/Copper tubes	●
	PAINTCOAST: Copper tubes/Aluminium fins, post-lacquered with epoxy	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating	●
	COPPERFIN: Copper tubes/Copper fins	●
	Droplet separator in indoor coil	●
Heat exchangers	SMO stainless steel plate heat exchanger for condensation heat reclaim	✓
	Titanium heat exchanger for direct exchange of swimming pool water	●
Air quality		
Filtration	Cleanable G4 prefilter	✓
	Cleanable prefilter with very low pressure drop	●
	Cleanable G2 and G3 prefilters	●
	F filtration, from F6 to F9	●
	Double F filtration stage	●
	Return F filtration	●

✓ Included as standard ● Option – Not applicable

Codification:

DTS — **Series**

Size

Dehumidification capacity

I - Reversible
R - Not reversible

NS4W

S - Equipment free-cooling/Recovery configuration
S - Standard unit / **F** - Equipment with Free-cooling
R - Equipment with active heat reclaim / **E** - Equipment with plate heat exchanger

4 - 400 V/III/50 Hz with neutral

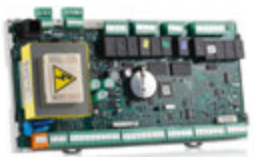
W - Refrigerant R-410A

Series version
N - With Scroll compressor

			OCEAN
Energy			
Energy reclaim	Active heat reclaim	DTS-2 to 4 series	●
	Full reclaim of condensation heat in air and/or water		✓
	Static heat reclaim via cross-flow plate heat exchanger		●
	Partial heat reclaim of hot discharge gases from the compressor to preheat the sanitary hot water		●
Free-cooling	Free-cooling, two dampers		●
	Free-cooling, three dampers with centrifugal return fan		●
	Replacement of standard thermal free-cooling with enthalpic or thermo-enthalpic free-cooling via an ambient sensor		●
	Replacement of standard thermal free-cooling with enthalpic or thermo-enthalpic free-cooling via a duct sensor		●
	Replacement of standard thermal free-cooling with enthalpic or thermo-enthalpic free-cooling via a THT controller		●
	Droplet separator in outdoor air damper		✓
Installation			
Auxiliary heating	Auxliary hot water coil and three-way valve		●
	Auxiliary electrical heater (2 stages)		●
Condensate pan	Removable indoor stainless steel condensate drain 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/without neutral, depending on model)		✓
	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 (see other options)		●
Packaging	Packaging for maritime transportation		●
Control			
Electronic control and communication	DN33 controller	units with 1 circuit without options	✓
		units with 1 circuit + auxiliary coil or electrical heater	✓
	DRYMANAGER electronic control (Carel µPC)	units with 1 circuit + free-cool.	✓
		units with more than 1 circuit	✓
	TH-Tune user terminal		●
	pGD1 user and maintenance terminal in units with DRYMANAGER control		✓
	Temperature and humidity control		✓
	Hot water temperature control		●
	Clogged filter detector		●
	RS485 card for Modbus communication, with DRYMANAGER control		●
	Plant Visor/Watch PRO/tERA supervision with DRYMANAGER control		●
	BACNET/LONWORKS communication with DRYMANAGER control		●
Additional control and safety elements	General switch on electrical cabinet		✓
	Thermal-magnetic protection 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 CO_2 sensor		●
	Duct/ambient VOC sensor		●
	Ambient temperature sensor		●
	Energy meter		●
Electrical cabinet	Fully-wired electrical cabinet, with IP54 protection		✓
	Tropicalised electrical cabinet with protective varnish		●
	Forced ventilation of the electrical cabinet		●
	FIBOX inspection window on electrical cabinet		●
	Antifreeze electrical heater in electrical cabinet		●

Electronic control:

DRYMANAGER control with pGD1 terminal



DN33 control

OCEAN
assemblies

Type of assembly:

Supply
- S - Frontal
- T - Top
- R - Right (EC Radial Fan)
- L - Left (EC Radial Fan)

Return
- S - Frontal
- T - Top
- R - Right
- L - Left

Fresh air
- T - Top
- R - Right
- L - Left

Extraction air
- T - Top
- R - Right
- L - Left

Connection side
- R - Right
- L - Left

Type of assembly
- S - Standar
- A - Free-cooling, two dampers
- C - Free-cooling, three dampers
- R - Free-cooling, three dampers + Active Reclaim
- E - Free-cooling, three dampers, with cross-flow heat exchanger

Supply air

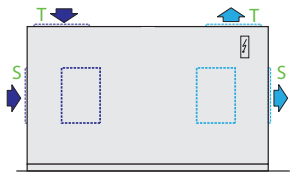
Return air

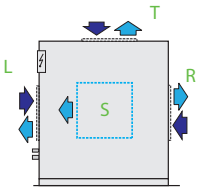
N
Fresh air

E
Extraction air

STANDARD ASSEMBLY - S

S - Standar

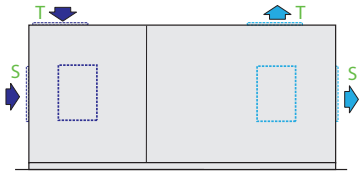


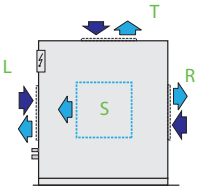


Front view, from the supply side

ASSEMBLY A

A - Free-cooling, two dampers

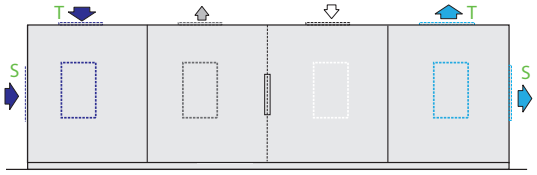


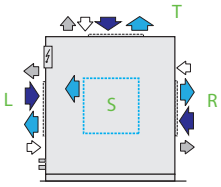


Front view, from the supply side

ASSEMBLY C / R

C - Free-cooling, three dampers
R - Free-cooling, three dampers + Active Reclaim

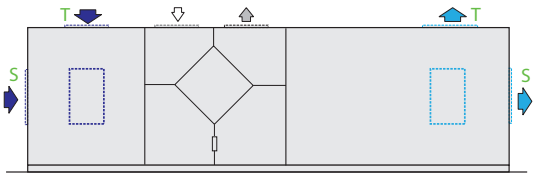


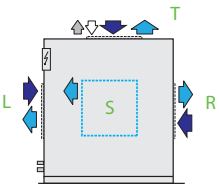


Front view, from the supply side

ASSEMBLY E

E - Free-cooling, three dampers, with cross-flow heat exchanger



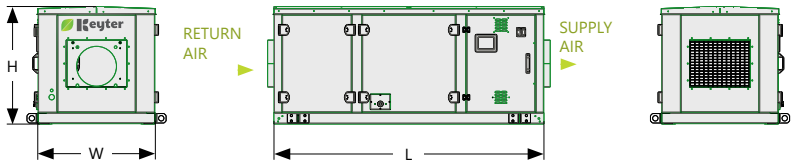


Front view, from the supply side

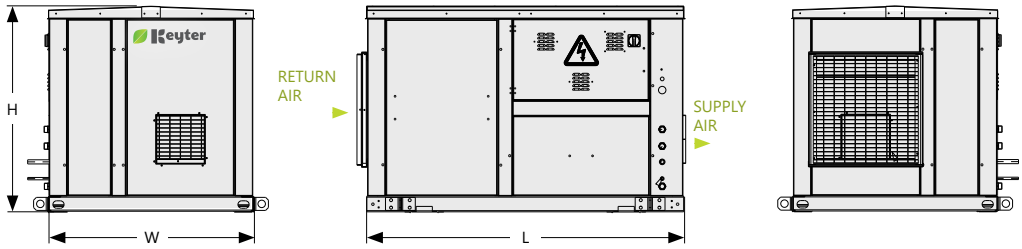
OCEAN dimensions

Standard series dimensions (refrigerant and ventilation module):

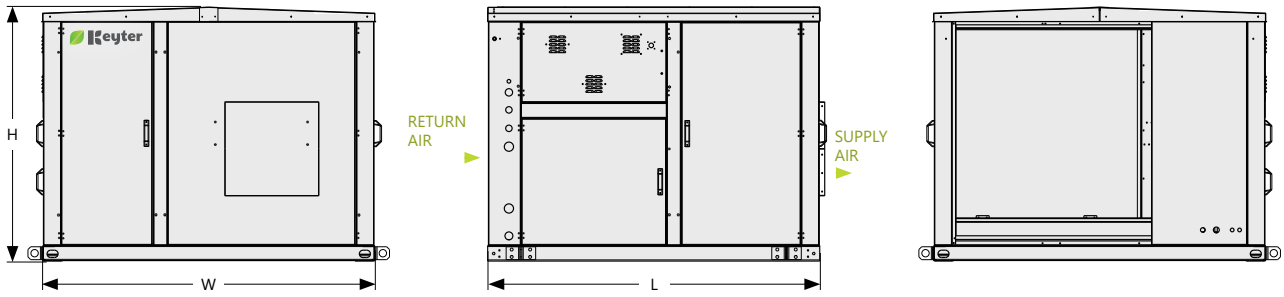
series 1



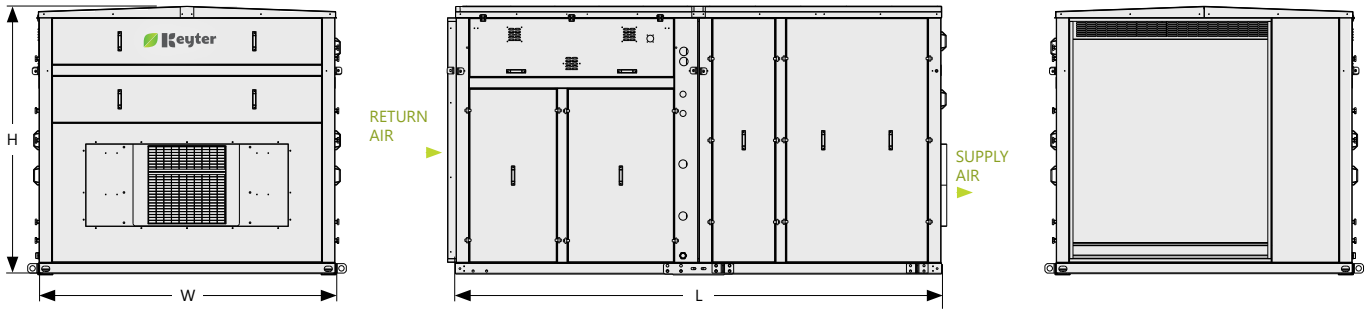
series 2



series 3

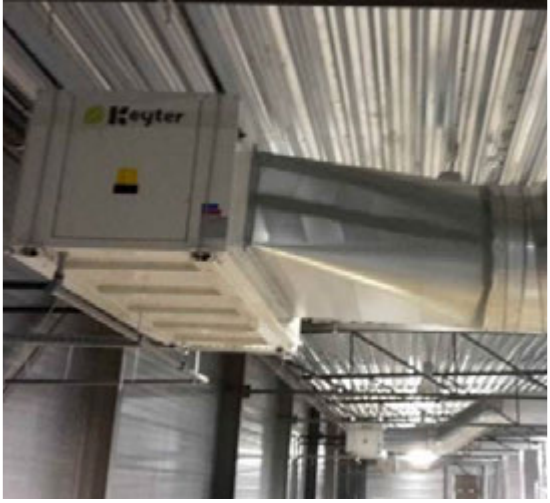


series 4



Dimensions (mm) (cooling + ventilation module)				
	Series 1	Series 2	Series 3	Series 4
L	1500	1700	1800	3600
W	870	1100	1800	2200
H	720	1100	1400	2000

* Check dimensions in units with additional optional modules



HOTEL NOVOTEL | SENEGAL - CARREFOUR | COSTA DE MARFIL - SHOPPING CITY PIATRA NEAMT | ROMANIA - CORTEFIEL | SPAIN

GRANADA UNIVERSITY | SPAIN - PADDOCK MOTO GP | TOURING - SHOPPING CENTRE, BARONES | HOLLAND - DELAVIUDA | SPAIN

GAS NATURAL FENOSA | SPAIN - LEROY MERLIN | VARIOUS - CEMEX SPAIN OPERATIONS | SPAIN - ARENA SHOPPING CENTRE | SPAIN

autonomous units

EIRENE

VERTICAL PACKAGED UNITS
air-to-air

23 - 108 kW
25 - 109 kW

Inverter · Multi-Scroll · EC · 50 Hz 60 Hz

R410A · R134a

Adaptation and Versatility

- Vertically constructed equipment enabling a flexible connection for facilities connected to a duct network
- Fully adaptable and configurable units via OPTIONS and with a wide variety of ASSEMBLIES with the possibility of including a mixing and free-cooling section
- Condensing pressure control as standard for all year operation
- Maximum accessibility and easy maintenance via removable panels
- Adaptability to the facility offering a wide range of models
- Versions suitable for extreme conditions with refrigerant R-134a for high temperatures up to +55°C

Low noise level

- Compressors in insulated, closed compartment available with acoustic isolation jacket
- Variable speed electronic fans as standard (EURO and INVERTER versions)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW VRF INVERTER range with Full Inverter technology for maximum energy efficiency
- NEW EURO range with tandem multiscroll compressors, EC fans as standard and, optionally, an electronic expansion valve for minimal energy consumption and improvement of seasonal energy efficiency

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Industry · Retail & Shopping centres · Education & Culture · Entertainment

and other applications, please consult us

EIRENE VRF INVERTER technical data

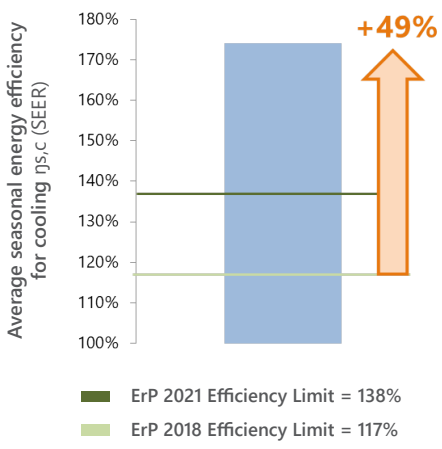
23 - 108 kW

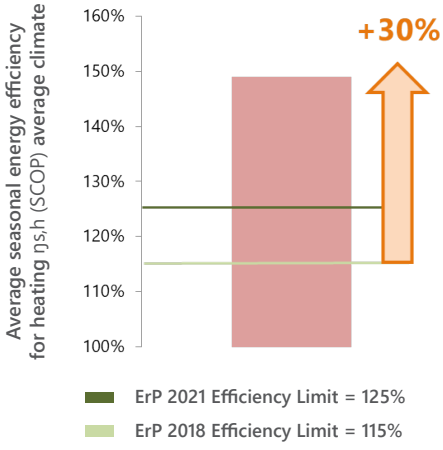
KCV INVERTER model			1022	2039	3045	4060	5080	6090
Cooling only version (R)								
Cooling mode	Cooling capacity (1)	kW	22.9	35.9	54.1	74.1	89.8	108.3
		TR	6.5	10.5	15.5	21.5	25.5	31
		kBTU/hr	78.1	122.4	184.6	252.7	306.6	369.6
	Power input (2)	kW	7.4	11.8	14.6	19.9	23.5	32.5
	EER (3)	W/W	3.1	3.0	3.7	3.7	3.8	3.3
		BTU/(hrxW)	10.6	10.4	12.6	12.7	13.1	11.4
	SEER (4)		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
	Power input (2)	kW	7.4	11.8	14.6	19.9	23.5	32.5
	EER (3)	W/W	3.1	3.0	3.7	3.7	3.8	3.3
	SEER (4)		4.0	4.0	4.7	4.7	4.9	4.2
	ηs,c (5)		159%	156%	186%	186%	192%	167%
Heating mode	Heating capacity (6)	kW	23.2	37.6	54.3	72.6	91.3	109.0
	Power input (2)	kW	6.3	11.9	13.5	17.4	21.1	27.6
	COP (3)	W/W	3.7	3.2	4.0	4.2	4.3	4.0
	SCOP (4)		3.8	3.2	3.8	4.0	4.1	3.8
	ηs,h warmer climate (5)		148%	127%	150%	156%	162%	148%
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral					
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088					
	Type of compressor		Inverter compressor					
	No. circuits/compressors		1/1	1/1	2/2	2/2	2/2	2/2
	Power stage control		Modulating control 25 - 100%		Modulating control 12.5 - 100%			
Indoor fan	Supply airflow	m³/h	4500	6200	9000	10500	12000	17000
	Nominal available pressure	Pa	80	80	100	100	100	100
	No. x Type of fan		1 x EC plug fan		2 x EC plug fan			
	Power input	kW	1.07	1.10	2.20	2.80	2.14	3.40
Outdoor fan	Outdoor airflow	m³/h	7000	11500	14000	20000	25000	28000
	Nominal available pressure	Pa	70	70	80	90	120	120
	No. x Type of fan		1 x EC plug fan		2 x EC plug fan			
	Power input	kW	1.20	2.94	2.42	4.28	5.54	8.78
Equipment sound pressure (Lp10) (7)		dB(A)	69	72	73	75	75	76
Weight		kg	556	567	824	1005	1087	1099

All data provided in this table corresponds to standard units without options.

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Seasonal energy efficiency





EIRENE EURO technical data

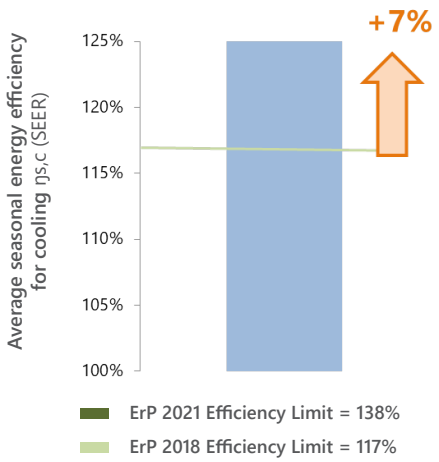
18 - 92 kW

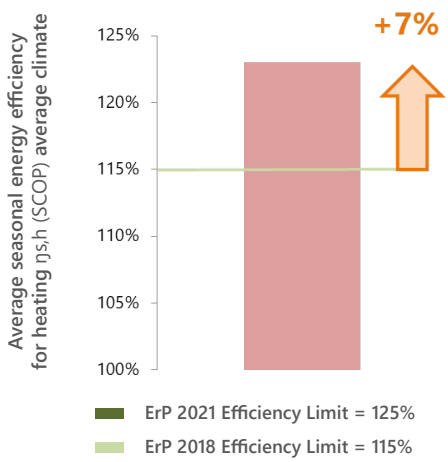
KCV EURO model			1017	1022	2026	2030	2035	2039	3045	4050	4060	5070	5080	6080	6090
Cooling only version (R)															
Cooling	Cooling capacity (1)	kW	18.0	22.7	25.6	30.1	32.9	35.6	45.0	52.6	61.6	71.5	74.7	80.6	92.3
		TR	5.5	6.5	7.5	9	9.5	10.5	13	15	17.5	20.5	21.5	23	26.5
		kBTU/hr	61.5	77.6	87.2	102.6	112.3	121.5	153.5	179.5	210.1	244.1	254.9	275.0	314.8
	Power input (2)	kW	6.6	8.2	9.0	10.7	11.6	13.1	16.6	17.8	22.3	25.4	26.3	29.0	37.3
	EER (3)	W/W	2.7	2.8	2.9	2.8	2.8	2.7	2.7	3.0	2.8	2.8	2.8	2.8	2.5
		BTU/(hrxW)	9.3	9.5	9.7	9.6	9.6	9.3	9.3	10.1	9.4	9.6	9.7	9.5	8.4
	SEER (4)		3.0	3.1	3.2	3.1	3.1	3.0	3.0	3.3	3.0	3.1	3.1	3.4	3.0
	ηs,c (5)		117%	120%	123%	121%	122%	117%	117%	127%	119%	121%	122%	132%	117%
Heat pump version (I)															
Cooling mode	Cooling capacity (1)	kW	18.0	22.7	26.2	30.8	33.7	36.5	45.0	52.6	61.6	71.5	74.7	80.6	92.3
	Power input (2)	kW	6.6	8.2	9.2	11.0	11.9	13.4	16.6	17.8	22.3	25.4	26.3	29.0	37.3
	EER (3)	W/W	2.7	2.8	2.9	2.8	2.8	2.7	2.7	3.0	2.8	2.8	2.8	2.8	2.5
	SEER (4)		3.0	3.1	3.5	3.4	3.4	3.3	3.0	3.3	3.0	3.1	3.1	3.4	3.0
	ηs,c (5)		117%	120%	135%	133%	134%	129%	117%	127%	119%	121%	122%	132%	117%
Heating mode	Heating capacity (6)	kW	18.6	23.4	27.8	31.5	34.9	39.5	47.0	53.8	62.9	73.5	79.0	84.2	98.1
	Power input (2)	kW	5.7	7.0	9.0	11.9	13.5	15.1	15.1	17.6	19.5	23.0	23.6	28.0	35.1
	COP (3)	W/W	3.3	3.3	3.1	2.6	2.6	2.6	3.1	3.1	3.2	3.2	3.3	3.0	2.8
	SCOP (4)		3.2	3.2	3.6	3.1	3.0	3.0	3.0	2.9	3.1	3.1	3.2	3.5	3.2
	ηs,h warmer climate (5)		123%	126%	140%	119%	116%	118%	117%	115%	121%	121%	126%	136%	126%
Technical characteristics															
Power supply			400 V/III/50 HZ with neutral												
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088												
	Type of compressor		Hermetic scroll												
	No. circuits/compressors, R version		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2	2/4	2/4
	No. power stages, R version		1	1	1	1	1	1	2	2	2	2	2	4	4
	No. circuits/compressors, I version		1/1	1/1	1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/2	2/2	2/4	2/4
	No. power stages, I version		1	1	2	2	2	2	2	2	2	2	2	4	4
Indoor fan	Supply airflow	m³/h	3500	4500	5000	6000	6100	6200	9000	10000	10500	12000	12000	14000	17000
	Nominal available pressure	Pa	80	80	80	80	80	80	100	100	100	100	100	100	100
	No. x Type of fan		1 x EC plug fan						2 x EC plug fan						
	Power input	kW	0.61	1.07	1.27	1.03	1.06	1.10	2.20	2.62	2.80	2.14	2.14	2.30	3.40
Outdoor fan	Outdoor airflow	m³/h	6000	7000	8500	10000	11000	11500	14000	16000	20000	22000	25000	25000	28000
	Nominal available pressure	Pa	70	70	70	70	70	70	80	90	90	120	120	120	120
	No. x Type of fan		1 x EC plug fan						2 x EC plug fan						
	Power input	kW	0.85	1.20	1.53	2.08	2.63	2.94	2.42	2.80	4.28	4.76	5.54	6.58	8.78
Equipment sound pressure (Lp10) (7)		dB(A)	70	69	70	71	72	72	73	74	75	75	75	75	76
Weight		kg	500	540	480	486	514	514	800	976	976	1050	1055	1067	1067

All data provided in this table corresponds to standard units without options.

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Seasonal energy efficiency





EIRENE COMFORTER technical data

18 - 90 kW

KCV COMFORTER model			1017	1022	2026	2030	2035	2039	3045	4050	4060	5070	5080	6080	6090
Cooling only version (R)															
Cooling mode	Cooling capacity (1)	kW	17.9	22.6	25.4	29.9	32.7	35.4	44.7	52.3	61.2	71.1	74.2	78.2	89.5
		TR	5.5	6.5	7.5	8.5	9.5	10.5	13	15	17.5	20.5	21.5	22.5	25.5
		kBTU/hr	61.1	77.1	86.7	102.0	111.6	120.8	152.5	178.5	208.8	242.6	253.3	266.8	305.4
	Power input (2)	kW	6.9	8.5	9.3	11.1	12.1	13.6	17.2	18.5	23.2	26.4	27.3	29.4	37.8
	EER (3)	W/W	2.6	2.7	2.7	2.7	2.7	2.6	2.6	2.8	2.6	2.7	2.7	2.7	2.4
		BTU/(hrxW)	8.9	9.1	9.3	9.2	9.2	8.9	8.9	9.6	9.0	9.2	9.3	9.1	8.1
	SEER (4)		2.8	2.8	2.9	2.9	2.9	2.8	2.8	3.0	2.8	2.9	2.9	2.8	2.5
	ηs,c (5)		107%	110%	113%	111%	112%	107%	107%	117%	109%	111%	112%	110%	97%
Heat pump version (I)															
Cooling mode	Cooling capacity (1)	kW	17.9	22.6	25.4	29.9	32.7	35.4	44.7	52.3	61.2	71.1	74.2	78.2	89.5
	Power input (2)	kW	6.9	8.5	9.3	11.1	12.1	13.6	17.2	18.5	23.2	26.4	27.3	29.4	37.8
	EER (3)	W/W	2.6	2.7	2.7	2.7	2.7	2.6	2.6	2.8	2.6	2.7	2.7	2.7	2.4
	SEER (4)		2.8	2.8	2.9	2.9	2.9	2.8	2.8	3.0	2.8	2.9	2.9	2.8	2.5
	ηs,c (5)		107%	110%	113%	111%	112%	107%	107%	117%	109%	111%	112%	110%	97%
Heating mode	Heating capacity (6)	kW	18.6	23.5	26.8	30.4	33.7	38.1	47.1	53.9	63.0	73.7	79.2	81.2	94.6
	Power input (2)	kW	5.9	7.3	8.2	10.9	12.4	13.8	15.7	18.3	20.3	23.9	24.6	25.6	32.1
	COP (3)	W/W	3.2	3.2	3.3	2.8	2.7	2.8	3.0	2.9	3.1	3.1	3.2	3.2	2.9
	SCOP (4)		2.9	3.0	3.0	2.6	2.5	2.5	2.8	2.7	2.9	2.8	3.0	2.9	2.7
	ηs,h warmer climate (5)		113%	115%	117%	99%	97%	98%	107%	105%	111%	110%	115%	113%	105%
Technical characteristics															
Power supply			400 V/III/50 HZ with neutral												
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088												
	Type of compressor		Hermetic scroll												
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2	2/2	2/2
	No. power stages		1	1	1	1	1	1	2	2	2	2	2	2	2
Indoor fan	Supply airflow	m^3/h	3500	4500	5000	6000	6100	6200	9000	10000	10500	12000	12000	14000	17000
	Nominal available pressure	Pa	80	80	80	80	80	80	100	100	100	100	100	100	100
	No. x Type of fan		1 x Centrifugal						2 x Centrifugal						
	Power input	kW	0.62	1.02	1.19	1.85	1.94	2.02	2.11	2.46	2.76	2.80	2.80	2.48	3.67
Outdoor fan	Outdoor airflow	m^3/h	6000	7000	8500	10000	11000	11500	14000	16000	20000	22000	25000	25000	28000
	Nominal available pressure	Pa	70	70	70	70	70	70	80	90	90	120	120	120	120
	No. x Type of fan		1 x Centrifugal						2 x Centrifugal						
	Power input	kW	1.15	1.71	1.63	2.45	3.15	3.15	2.64	3.00	2.53	4.15	4.57	5.60	7.32
Equipment sound pressure (Lp10) (7)		dB(A)	70	69	70	71	72	72	73	74	75	75	75	75	76
Weight		kg	485	524	466	471	499	499	782	958	957	1032	1036	1049	1048

Split version option

EIRENE units may be delivered as an option in a split version, outdoor KDV unit and indoor KPH unit.
The standard split version is delivered without refrigerant charge. The service valve option and the refrigerant charge option must be requested.

The unit refrigerant charge depends on the total cooling line distance between the indoor unit and outdoor unit. To ask for this option, see the technical documentation of the range for the charge required based on the existing distance at each facility.

KDR outdoor unit model		1017	1022	2026	2030	2035	2039	3045	4050	4060	5070	5080	6080	6090
KDR indoor unit model		1017	1022	2026	2030	2035	2039	3045	4050	4060	5070	5080	6080	6090
Refrigerant connections	Liquid line of each circuit	1/2"	1/2"	1/2"	5/8"	5/8"	5/8"	1/2"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Gas line of each circuit	7/8"	7/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	7/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
No. refrigerant circuits		1	1	1	1	1	1	2	2	2	2	2	2	2
Maximum distance between indoor and outdoor unit		50 m												
Maximum geometric height between indoor and outdoor unit		15 m												

The size of the refrigerant connections provided in this table is valid up to a maximum line distance of 10 m. For longer distances, it is necessary to consult the technical documentation for the change in diameter size of the cooling pipes.
For refrigerant distances between the indoor and outdoor units longer than 15 metres, it is mandatory to include the suction accumulator option in the cooling only version (this component is included as standard in heat pump units).

KDV outdoor unit

KPH indoor unit

EIRENE
range specification

		INVERTER	EURO	COMFORTER
General characteristics				
Refrigerant	R410A	✓	✓	✓
	Full charge of refrigerant	✓	✓	✓
	Leak detection	●	●	●
Casing	Self-supporting chassis of galvanized steel with oven cured polyester paint treatment	✓	✓	✓
	Self-supporting chassis of stainless steel or aluminium with oven cured polyester paint treatment	●	●	●
	Insulation in the indoor unit	✓	✓	●
	Anti-vibration supports	●	●	●
Compressors	Scroll technology	–	✓	✓
	Multiscroll technology, tandem version, series 2 and 6	–	✓	–
	Inverter technology	✓	–	–
	Soft starter	●	●	●
	Acoustic jacket	●	●	●
	Original manufacturer high-performance acoustic jacket	●	●	●
	Compressor anti-vibration mounts	✓	✓	✓
Expansion valves	Thermostatic expansion valves	–	✓	✓
	Electronic expansion valves	✓	●	●
Ventilation				
Outdoor fans	Centrifugal fans	–	–	✓
	EC plug fans	✓	✓	●
Indoor fans	Centrifugal supply fans	–	–	✓
	Indoor EC plug fans	✓	✓	●
Heat exchangers				
Coils	Heat exchangers with copper tubes and aluminium fins	✓	✓	✓
	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)	●	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)	●	●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)	●	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating	●	●	●
	COPPERFIN: Copper tubes/Copper fins	●	●	●
	Droplet separator in outdoor unit (*)	●	●	●
Air quality				
Filtration	Cleanable G4 prefilter	✓	✓	✓
	Cleanable prefilter with very low pressure drop	●	●	●
	Cleanable G2 and G3 prefilters	●	●	●
	F filtration, from F6 to F9	●	●	●
Air quality sensors	Duct/ambient CO2 sensor	●	●	●
	Duct/ambient VOC sensor	●	●	●

(*) In technical rooms it is necessary to select the droplet separator option in the outdoor unit.

Codification:

Packaged unit

KCV (Series) | ☐☐☐ (Size, Capacity) | **NS4W**

- **I** - Reversible heat pump
- **R** - Cooling only
- **Q** - Heating only

- **S** - Standard unit
- **4** - 400 V/III/50 Hz
- **W** - Refrigerant R410A / **Y** - R134a

Series version
- **N** - EURO version with Scroll compressor
- **V** - INVERTER version
- **C** - COMFORTER version with Scroll compressor

Split version

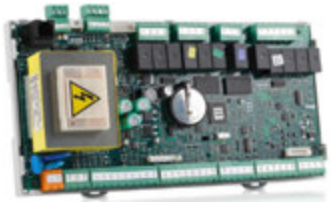
Outdoor unit: **KDV** ☐☐☐ **NS4W**

Indoor unit: **KPH** ☐☐☐ **NS4W**

			INVERTER	EURO	COMFORTER
Energy					
Free-cooling	Free-cooling, two dampers		●	●	●
	Free-cooling, three thermal/enthalpic or thermo-enthalpic dampers		●	●	●
	Droplet separator in outdoor air damper		●	●	●
Installation					
Auxiliary heating	Auxliary hot water coil in-duct		●	●	●
	Three-way valve for auxiliary hot water coil, ON/OFF or with proportional actuator		●	●	●
	Electrical heaters in air supply frames built in coated galvanised steel	1 or 2 stages	●	●	●
Condensate pan	Condensate drain pans with asphalt paint		✓	✓	✓
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)		●	●	●
Power supply	400 V/III ph/50 Hz (with/without neutral, depending on model)		✓	✓	✓
	220 V/III ph/60 Hz; 380 V/III ph/60 Hz; 400 V / III ph / 60Hz; 460 V / III ph / 60 Hz		●	●	●
	Other electrical voltages (consult)		●	●	●
Control					
Electronic control and communication	Climanager (Carel µPC)	series 1 and 2	✓	✓	●
		series 3 to 6	✓	✓	✓
	TH-Tune user terminal	series 1 and 2	✓	✓	●
	pGD1 user and maintenance terminal	series 1 and 2	●	●	●
		series 3 to 6	✓	✓	✓
	Aquamicro with microAD user terminal	series 1 and 2	–	–	✓
	Condensing pressure control with transducers		✓	✓	●
	Master-slave management		●	●	●
	RS485 card for Modbus communication		●	●	●
	Plant Visor/Plant Watch PRO/tERA supervision		●	●	●
	BACNET/LONWORKS communication		●	●	●
Defrosting	Defrosting via cycle inversion via a 4-way valve		✓	✓	✓
Additional control and safety elements	General switch on electrical cabinet		✓	✓	✓
	Thermal-magnetic protection for compressors and fans		✓	✓	✓
	PREMIUM phase control relay (phase failure detection and rotation direction protection)		✓	✓	●
	EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection		●	●	●
	Differential switches		●	●	●
	Pressure switch for airflow control (mandatory with option of electrical heater)		●	●	●
	Clogged filter detector		●	●	●
	Smoke detector		●	●	●
	Ambient temperature sensor		●	●	●
	Energy meter		●	●	●
Electrical cabinet	Fully-wired electrical cabinet		✓	✓	✓
	Forced ventilation of the electrical cabinet		●	●	●
	FIBOX inspection window on electrical cabinet		●	●	●
	Antifreeze electrical heater in electrical cabinet for low temperatures		●	●	●

✓ Included as standard ● Option – Not applicable

Electronic control:



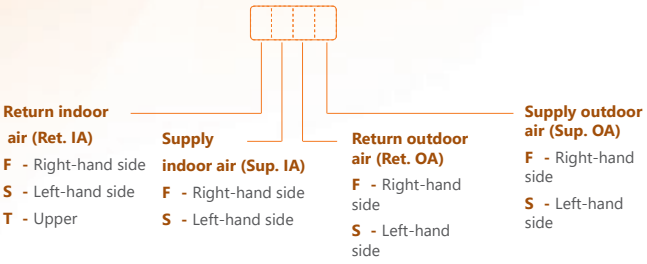
CLIMANAGER

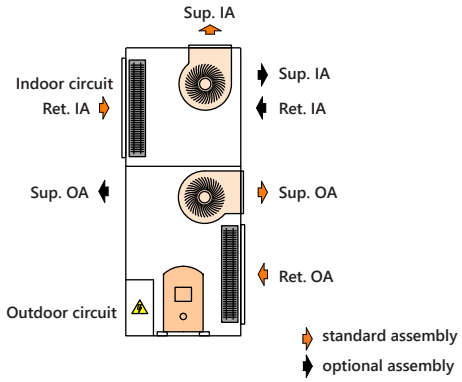
TH-Tune terminal

pGD1 terminal

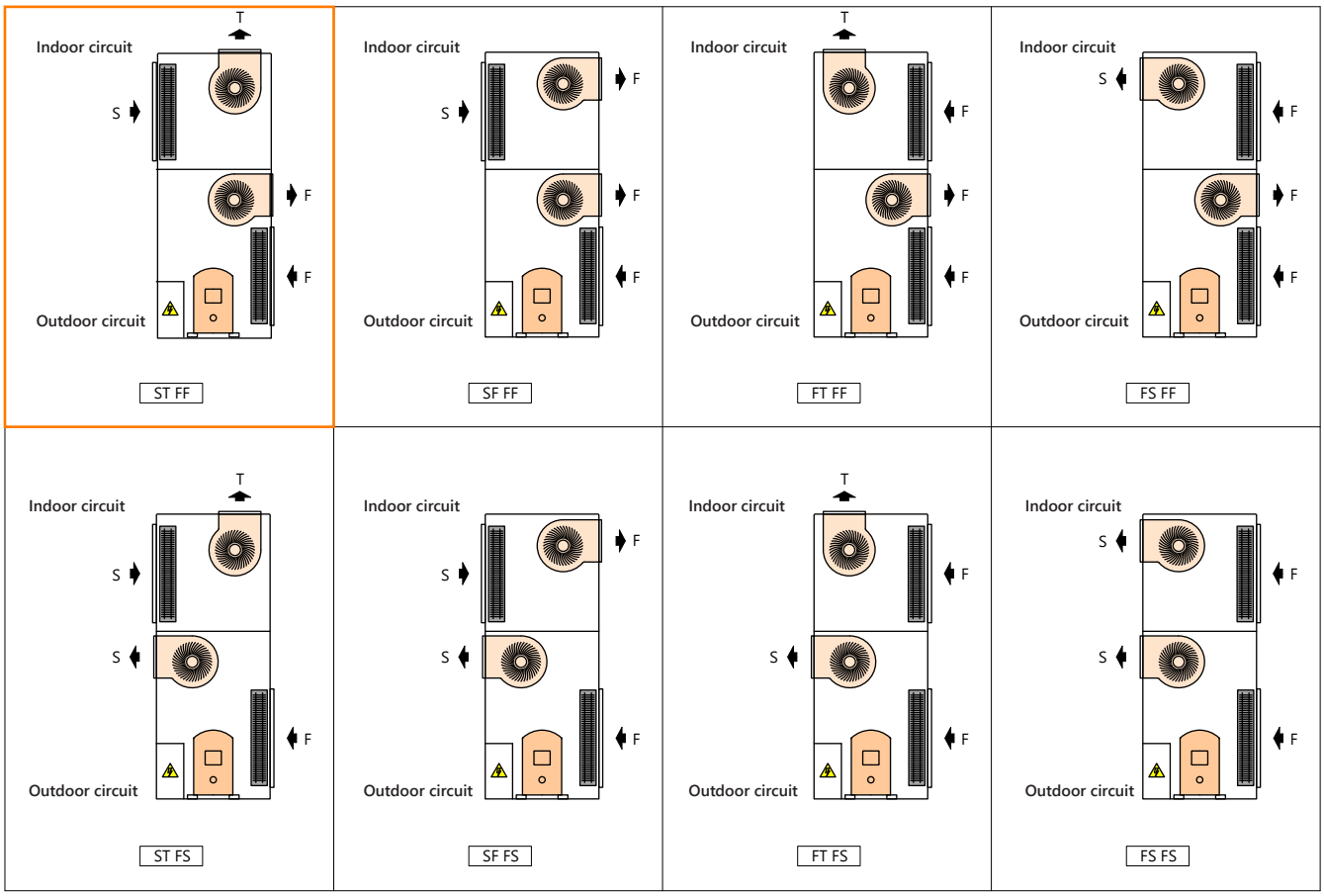
EIRENE assemblies

Type of assembly:





STANDARD ASSEMBLY



Free-cooling options:

Free-cooling, two dampers

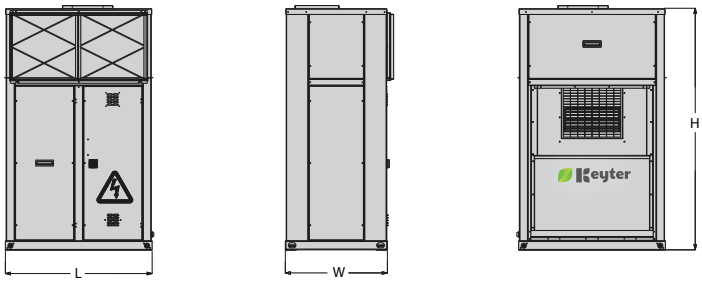
Free-cooling, three dampers

EIRENE dimensions

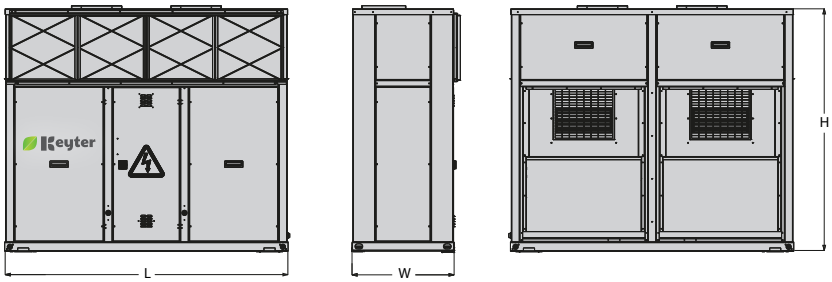
Dimensions:

Keyter CV packaged unit

Series 1-2



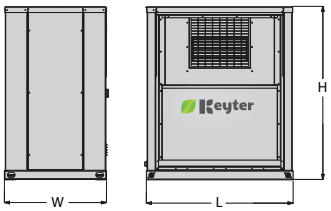
Series 3-6



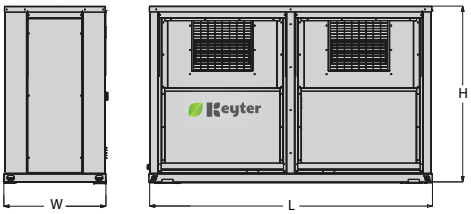
Keyter DV-PH split version

Keyter DV outdoor unit

Series 1-2

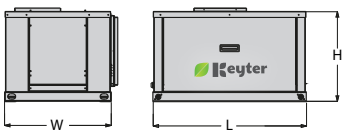


Series 3-6

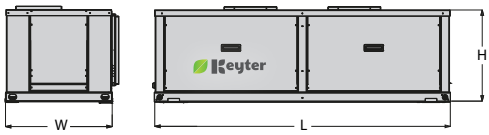


Keyter PH indoor unit

Series 1-2



Series 3-6



Packaged unit dimensions (KCV)						
	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	1136	1339	2106	2556	2556	2556
W	806	806	806	806	856	856
H	1958	1958	1958	1958	2258	2557
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
Outdoor unit dimensions (KDV)						
	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	1331	1331	1334	1334	1629	1629

ASTRIA

HORIZONTAL PACKAGED UNITS
air-to-air

19 - 32 kW
18 - 32 kW

Inverter · Multi-Scroll · EC · 50 Hz 60 Hz

R410A · R134a

Adaptation and Versatility

- Horizontally-constructed unit enabling a flexible connection for facilities connected to a duct network
- Fully adaptable and configurable units via OPTIONS and with a wide variety of ASSEMBLIES with the possibility of including a mixing section
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Versions suitable for extreme conditions with refrigerant R-134a for high temperatures up to +55°C

Low noise level

- Compressors in insulated, closed compartment available with acoustic isolation jacket
- Variable speed electronic fans as standard (EURO and INVERTER versions)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW VRF INVERTER range with Full Inverter technology for maximum energy efficiency
- NEW EURO range with Scroll compressors, EC fans as standard and, optionally, an electronic expansion valve for minimum energy consumption and improvement of seasonal energy efficiency

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Culture · Retail & Shopping centres · Education · Entertainment

and other applications, please consult us

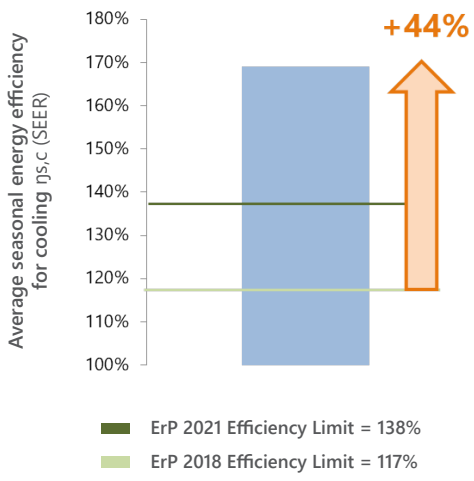
ASTRIA VRF INVERTER technical data

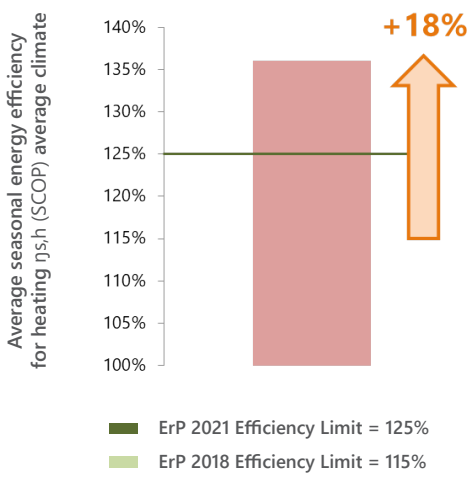
17 - 32 kW

KCT INVERTER model			2017	3022	3026	4030
Cooling only version (R)						
Cooling	Cooling capacity (1)	kW	18.6	23.8	26.4	31.7
		TR	5.5	7	7.5	9
		kBTU/hr	63.6	81.2	90.2	108.2
	Power input (2)	kW	5.4	7.4	8.3	9.3
	EER (3)	W/W	3.4	3.2	3.2	3.4
		BTU/(hrxW)	11.7	11.1	10.9	11.6
	SEER (4)		4.5	4.2	4.1	4.4
	ηs,c (5)		175%	165%	163%	174%
Heat pump version (I)						
Cooling mode	Cooling capacity (1)	kW	17.4	22.4	25.4	30.7
	Power input (2)	kW	5.6	7.7	8.9	10.1
	EER (3)	W/W	3.1	2.9	2.9	3.0
	SEER (4)		4.0	3.8	3.7	3.9
	ηs,c (5)		158%	148%	145%	155%
Heating mode	Heating capacity (6)	kW	17.7	22.3	25.2	31.1
	Power input (2)	kW	5.2	6.6	7.5	9.3
	COP (3)	W/W	3.4	3.4	3.3	3.4
	SCOP (4)		3.5	3.5	3.5	3.5
	ηs,h average climate (5)		137%	137%	135%	135%
Technical characteristics						
Power supply			400 V/III/50 HZ with neutral			
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088			
	Type of compressor		Inverter compressor			
	No. circuits/compressors		1/1	1/1	1/1	1/1
	Power stage control		Modulating control 25 - 100%			
Indoor fan	Supply airflow	m^3/h	3100	4500	5200	5700
	Nominal available pressure	Pa	50	75	75	100
	No. x Type of fan		1 x EC plug fan			
	Power input	kW	0.50	1.04	1.39	1.01
Outdoor fan	Outdoor airflow	m^3/h	4800	6600	7200	10000
	Nominal available pressure	Pa	75	75	75	100
	No. x Type of fan		1 x EC plug fan			
	Power input	kW	0.76	0.85	1.05	1.68
Equipment sound pressure (Lp10) (7)		dB(A)	69	69	70	70
Weight		kg	289	445	447	497

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Seasonal energy efficiency





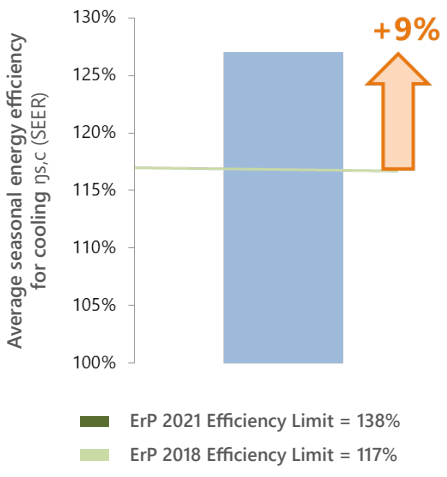
ASTRIA EURO technical data

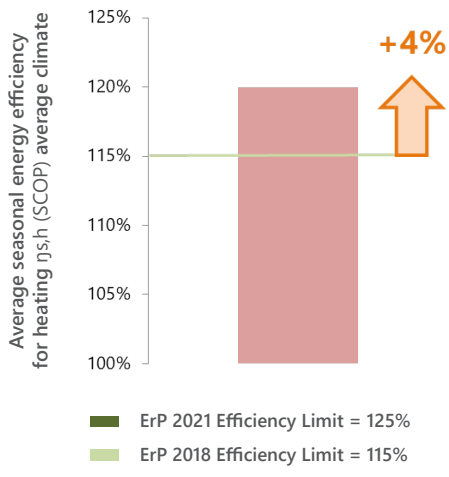
18 - 32 kW

KCT EURO model			2017	3020	3022	3026	4030
Cooling only version (R)							
Cooling	Cooling capacity (1)	kW	18.5	21.5	23.6	26.3	31.5
		TR	5.5	6.5	7	7.5	9
		kBTU/hr	63.2	73.5	80.7	89.6	107.5
	Power input (2)	kW	6.1	7.3	8.2	9.2	10.4
	EER (3)	W/W	3.1	2.9	2.9	2.8	3.0
		BTU/(hrxW)	10.4	10.0	9.9	9.7	10.3
	SEER (4)		3.37	3.25	3.19	3.14	3.34
	ηs,c (5)		132%	127%	125%	122%	131%
Heat pump version (I)							
Cooling mode	Cooling capacity (1)	kW	17.7	20.8	22.7	25.8	31.1
	Power input (2)	kW	6.2	7.7	8.5	9.8	11.1
	EER (3)	W/W	2.9	2.7	2.7	2.6	2.8
	SEER (4)		3.3	3.1	3.1	3.0	3.2
	ηs,c (5)		127%	120%	119%	117%	124%
Heating mode	Heating capacity (6)	kW	18.2	21.1	23.0	26.0	32.1
	Power input (2)	kW	5.7	6.5	7.2	8.3	10.2
	COP (3)	W/W	3.2	3.3	3.2	3.1	3.2
	SCOP (4)		3.1	3.1	3.1	3.0	3.0
	ηs,h warmer climate (5)		120%	122%	120%	118%	118%
Technical characteristics							
Power supply			400 V/III/50 HZ with neutral				
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088				
	Type of compressor		Hermetic scroll				
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1
	No. power stages		1	1	1	1	1
Indoor fan	Supply airflow	m^3/h	3100	3900	4500	5200	5700
	Nominal available pressure	Pa	50	75	75	75	100
	No. x Type of fan		1 x EC plug fan				
	Power input	kW	0.50	0.80	1.04	1.39	1.01
Outdoor fan	Outdoor airflow	m^3/h	4800	6000	6600	7200	10000
	Nominal available pressure	Pa	75	75	75	75	100
	No. x Type of fan		1 x EC plug fan				
	Power input	kW	0.76	0.71	0.85	1.05	1.68
Equipment sound pressure (Lp10) (7)		dB(A)	69	69	69	70	70
Weight		kg	281	416	432	434	483

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance (SCOP) for heating, calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Seasonal energy efficiency





ASTRIA COMFORTER technical data

17 - 31 kW

KCT COMFORTER model			2017	3020	3022	3026	4030
Cooling only version (R)							
Cooling	Cooling capacity (1)	kW	18.4	21.4	23.5	26.1	31.3
		TR	5.5	6.5	7	7.5	9
		kBTU/hr	62.8	73.0	80.2	89.1	106.8
	Power input (2)	kW	6.3	7.6	8.5	9.6	10.8
	EER (3)	W/W	2.9	2.8	2.8	2.7	2.9
		BTU/(hrxW)	10.0	9.6	9.4	9.3	9.9
	SEER (4)		3.1	3.0	2.9	2.9	3.1
	ηs,c (5)		121%	116%	114%	112%	120%
Heat pump version (I)							
Cooling mode	Cooling capacity (1)	kW	17.2	20.3	22.1	25.1	30.3
	Power input (2)	kW	6.5	8.1	8.9	10.3	11.7
	EER (3)	W/W	2.6	2.5	2.5	2.4	2.6
	SEER (4)		2.8	2.7	2.6	2.6	2.8
	ηs,c (5)		109%	103%	102%	100%	107%
Heating mode	Heating capacity (6)	kW	17.9	20.7	22.6	25.5	31.5
	Power input (2)	kW	6.0	6.8	7.6	8.7	10.7
	COP (3)	W/W	3.0	3.0	3.0	2.9	2.9
	SCOP (4)		2.7	2.8	2.7	2.7	2.7
	ηs,h warmer climate (5)		107%	109%	106%	105%	105%
Technical characteristics							
Power supply			400 V/III/50 HZ with neutral				
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088				
	Type of compressor		Hermetic scroll				
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1
	No. power stages		1	1	1	1	1
Indoor fan	Supply airflow	m^3/h	3100	3900	4500	5200	5700
	Nominal available pressure	Pa	50	75	75	75	100
	No. x Type of fan		1 x Centrifugal				
	Power input	kW	0.40	0.46	0.52	0.53	0.55
Outdoor fan	Outdoor airflow	m^3/h	4800	6000	6600	7200	10000
	Nominal available pressure	Pa	75	75	75	75	100
	No. x Type of fan		1 x Centrifugal				
	Power input	kW	0.53	1.22	1.36	1.42	1.50
Equipment sound pressure (Lp10) (7)		dB(A)	69	69	69	70	70
Weight		kg	273	404	419	421	469

Split version option

ASTRIA units may be delivered as an option in a split version, outdoor KDT unit and indoor KPT unit.

The standard split version is delivered without refrigerant charge. The service valve option and the refrigerant charge option must be requested.

The unit refrigerant charge depends on the total refrigerant distance between the indoor unit and outdoor unit. To ask for this option, see the technical documentation of the range for the charge required based on the existing distance at each facility.

KDT outdoor unit model		2017	3020	3022	3026	4030
KPT indoor unit model		2017	3020	3022	3026	4030
Refrigerant connections	Liquid line	1/2"	1/2"	1/2"	1/2"	1/2"
	Gas line	7/8"	7/8"	7/8"	7/8"	7/8"
No. refrigerant circuits		1	1	1	1	1
Maximum refrigerant distance between indoor and outdoor unit		50 m				
Maximum geometric height between indoor and outdoor unit		15 m				

The size of the refrigerant connections provided in this table is valid up to a maximum refrigerant line distance of 10 m. For longer distances, it is necessary to consult the technical documentation for the change in diameter size of the cooling pipes.

KDT outdoor unit

KPT indoor unit

ASTRIA
range specification

			INVERTER	EURO	COMFORTER
General characteristics					
Refrigerant	R410A		✓	✓	✓
	Full charge of refrigerant		✓	✓	✓
	Leak detection		●	●	●
Casing	Self-supporting chassis of galvanized steel with oven cured polyester paint treatment		✓	✓	✓
	Self-supporting chassis of stainless steel or aluminium with oven cured polyester paint treatment		●	●	●
	Insulation in the indoor unit		✓	✓	●
	Anti-vibration mounts		●	●	●
Compressors	Scroll technology		–	✓	✓
	Inverter technology		✓	–	–
	Soft starter		●	●	●
	Acoustic jacket		●	●	●
	Original manufacturer high-performance acoustic jacket		●	●	●
	Compressor anti-vibration mounts		✓	✓	✓
Expansion valves	Thermostatic expansion valves	cooling only version	–	✓	✓
		heat pump version	–	–	✓
	Electronic expansion valves	cooling only version	✓	●	●
		heat pump version	✓	✓	●
Ventilation					
Outdoor fans	Centrifugal fans with direct coupling motor		–	–	✓
	EC plug fans		✓	✓	●
Indoor fans	Centrifugal supply fans with direct coupling motor		–	–	✓
	Indoor EC plug fans		✓	✓	●
Heat exchangers					
Coils	Heat exchangers with copper tubes and aluminium fins		✓	✓	✓
	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)		●	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)		●	●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)		●	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating		●	●	●
	COPPERFIN: Copper tubes/Copper fins		●	●	●
Air quality					
Filtration	Cleanable G4 prefilter		✓	✓	✓
	Cleanable prefilter with very low pressure drop		●	●	●
	Cleanable G2 and G3 prefilters		●	●	●
	F filtration, from F6 to F9		●	●	●
Air quality sensors	Duct/ambient CO2 sensor		●	●	●
	Duct/ambient VOC sensor		●	●	●

Codification:

Packaged unit

KCT | **Series** | **Size** | **Capacity** | **NS4W**

I - Reversible heat pump
R - Cooling only
Q - Heating only

S - Standard unit
4 - 400 V/III/50 Hz
W - Refrigerant R410A / **Y** - R134a

Series version
N - EURO version with Scroll compressor
V - INVERTER version
C - COMFORTER version with Scroll compressor

Split version

Outdoor unit: **KDT** | | | **NS4W**

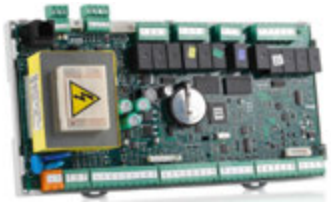
Indoor unit: **KPT** | | | **NS4W**

ASTRIA

		INVERTER	EURO	COMFORTER
Energy				
Free-cooling	Free-cooling, two dampers	●	●	●
	Droplet separator in outdoor air damper	●	●	●
Installation				
Auxiliary heating	Auxliary hot water coil in-duct	●	●	●
	Three-way valve for auxiliary hot water coil, ON/OFF or with proportional actuator	●	●	●
	Electrical heaters in air supply frames built in coated galvanised steel (1 or 2 stages)	●	●	●
Condensate pan	Condensate drain pans with asphalt paint	✓	✓	✓
Insulation	Thermal insulation in all cold metal lines (refrigerant or water)	●	●	●
Power supply	400 V/III ph/50 Hz (with/without neutral, depending on model)	✓	✓	✓
	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)	●	●	●
Control				
Electronic control and communication	Climanager (Carel µPC)	✓	✓	●
	TH-Tune user terminal	✓	✓	●
	pGD user and maintenance terminal	●	●	●
	Aquamicro with microAD user terminal	–	–	✓
	Condensing pressure control with transducers	✓	✓	●
	Master-slave management	●	●	●
	RS485 card for Modbus communication	●	●	●
	Plant Visor/Plant Watch PRO/tERA supervision	●	●	●
	BACNET/LONWORKS communication	●	●	●
Defrosting	Defrosting via cycle inversion via a 4-way valve	✓	✓	✓
Additional control and safety elements	General switch on electrical cabinet	✓	✓	✓
	Thermal-magnetic protection 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	●	●	●
	Pressure switch for airflow control (mandatory with option of electrical heater)	●	●	●
	Clogged filter detector	●	●	●
	Smoke detector	●	●	●
	Ambient temperature sensor	●	●	●
	Energy meter	●	●	●
Electrical cabinet	Fully-wired electrical cabinet	✓	✓	✓
	Forced ventilation of the electrical cabinet	●	●	●
	FIBOX inspection window on electrical cabinet	●	●	●
	Antifreeze electrical heater in electrical cabinet for low temperatures	●	●	●

✓ Included as standard ● Option – Not applicable

Electronic control:



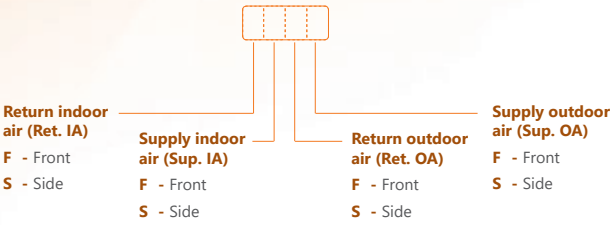
CLIMANAGER

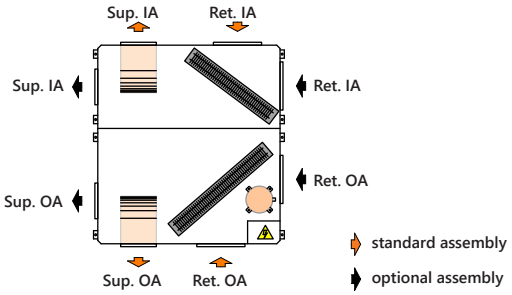
TH-Tune terminal

pGD1 terminal

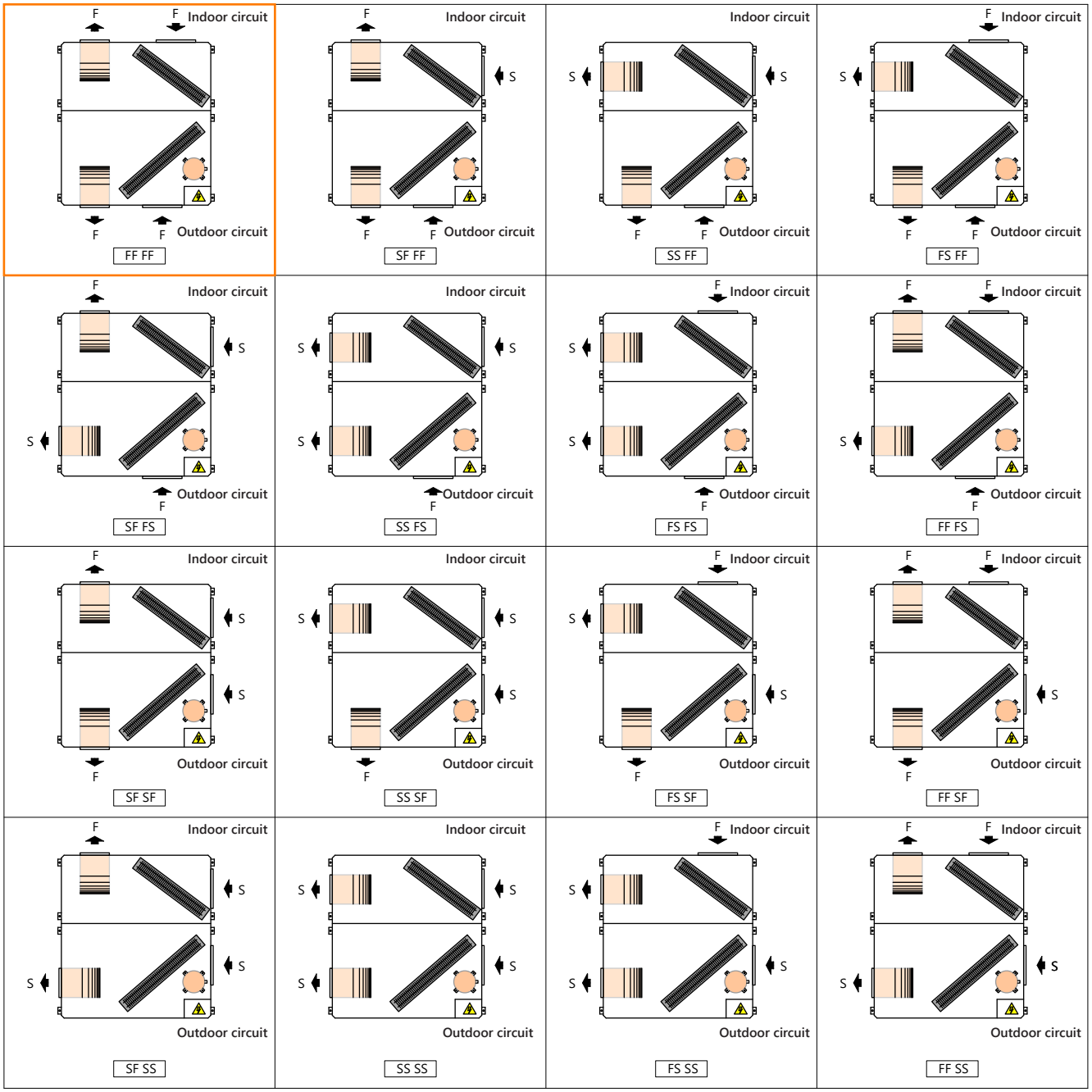
ASTRIA
assemblies

Type of assembly:





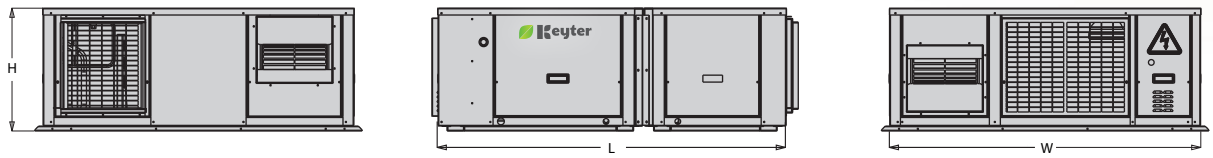
STANDARD ASSEMBLY



ASTRIA dimensions

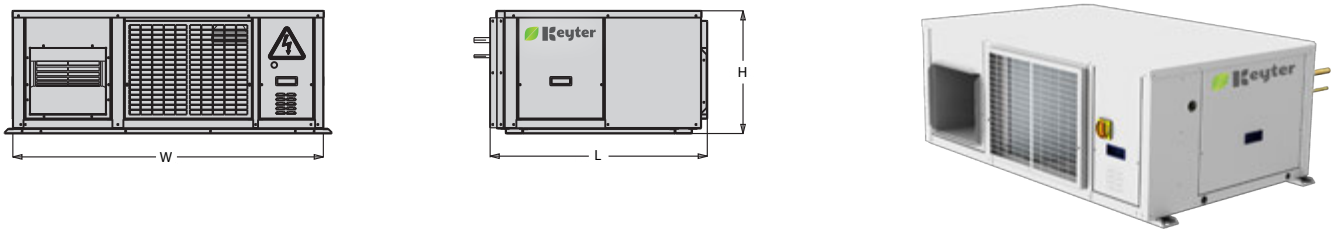
Dimensions:

KCT packaged unit

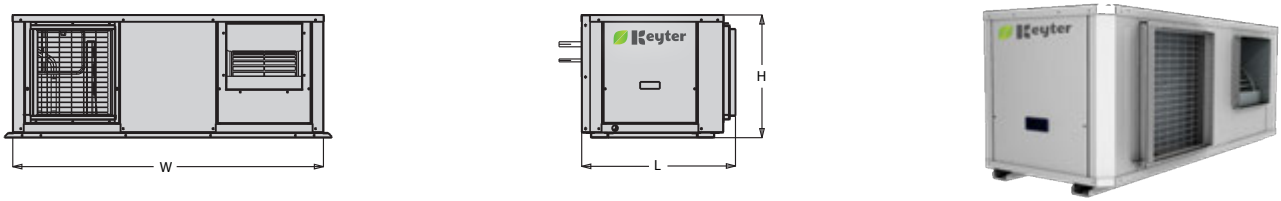


KDT-PT split version

KDT outdoor unit



KPT indoor unit



Packaged unit dimensions (KCT)			
	Series 2	Series 3	Series 4
L	1534	1775	2208
W	1370	1650	1820
H	540	630	630
Indoor unit dimensions (KPT)			
	Series 2	Series 3	Series 4
L	626	744	894
W	1370	1650	1820
H	540	630	630
Outdoor unit dimensions (KDT)			
	Series 2	Series 3	Series 4
L	903	1028	1308
W	1370	1650	1820
H	540	630	630

VERSIA

PRIMARY PACKAGED UNITS

100% fresh air-to-air

9 - 54 kW
9 - 52 kW

Inverter | Multi-Scroll | EC | 50 Hz 60 Hz

AER

R410A | R134a

Adaptation and Versatility

- Horizontally constructed unit for 100% renewal of outdoor air, especially designed to control the quality of the indoor air, enabling flexible configuration for facilities connected to a duct network
- NEW units equipped with an INVERTER compressor as standard or alternatively with a DSH compressor with an intermediate discharge valve and variable refrigerant capacity (VCR) circuit, to extend the operating range of the unit in low outdoor temperatures.
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Versions suitable for extreme conditions with refrigerant R-134a for high temperatures up to +55°C

Low noise level

- Dual acoustic insulation of the compressors with an acoustic jacket in a closed, insulated compartment
- Variable speed electronic fans as standard

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Equipment designed with an ACTIVE HEAT RECOVERY refrigerant circuit, which condenses with the extraction air of the premises, providing very high energy efficiency
- Compliance with ErP 2018 and ErP 2021
- NEW equipment with INVERTER technology to improve seasonal energy efficiency
- Electronic fans and electronic expansion valve as standard for minimal energy consumption

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Applications

Culture | Retail & Shopping centres | Education | Entertainment

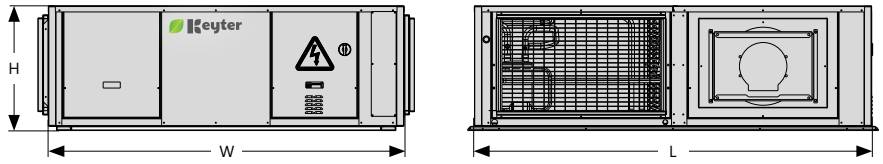
VERSIA
technical data

9 - 54 kW

KRH model			1010	1015	1025	2030	2035	3040	3050
Heat pump (I)									
Cooling mode	Cooling capacity (1)	kW	9.3	16.3	23.4	32.2	36.6	45.1	53.7
		TR	3	5	7	9.5	10.5	13	15.5
		KBTU/hr	31.7	55.6	79.8	109.9	124.9	153.9	183.2
	Power input (2)	kW	2.6	4.5	6.2	10.2	12.0	14.6	15.3
	EER (3)	W/W	4.4	4.1	3.9	3.6	3.5	3.6	4.1
		BTU/(hrxW)	12.2	12.4	13.0	10.8	10.4	10.5	12.0
Heating mode	Heating capacity (4)	kW	8.8	16.2	26.2	30.5	35.4	40.8	52.2
	Power input (2)	kW	1.8	2.9	4.8	6.0	7.0	8.1	11.0
	COP (3)	W/W	6.7	6.8	6.5	6.4	6.3	6.6	5.9
Technical characteristics									
Power supply			400 V/III/50 HZ with neutral						
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088						
	Type of compressor		Inverter						
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1
	Power stage control		Modulating control 25 - 100%						
No. x Type of outdoor and indoor fan		N x (mm)	1 x EC plug fan						
Indoor and outdoor fan airflow	Nominal	m^3/h	1440	2880	3800	4500	5040	5940	7020
	Minimum/Maximum	m^3/h	1152 / 1728	2304 / 3456	3040 / 4560	3600 / 5400	4032 / 6048	4752 / 7128	5616 / 8424
Available pressure	Indoor fan Min./Max.	Pa	70 / 175	100 / 175	100 / 175	100 / 300	100 / 250	100 / 300	125 / 250
	Outdoor fan Min./Max.	Pa	70 / 175	100 / 175	100 / 175	100 / 275	100 / 245	100 / 275	125 / 245
Equipment sound pressure of Lp10 (5)		dB(A)	52	54	55	56	59	61	62
Weight		kg	298	298	298	546	546	797	797

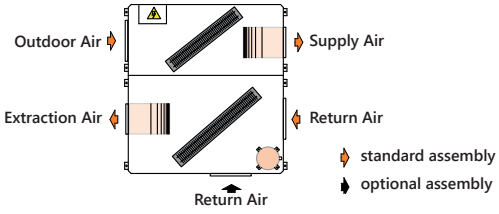
(1) Nominal cooling capacity for return air temp. 27ºC/19ºC DB and primary air temp. 35ºC/24ºC WB.
(2) Total power input by compressors and fans in the indoor and outdoor air circuit.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Nominal heating capacity for return air temp. 20ºC/12ºC DB and primary air temp. 7ºC/6ºC WB.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Dimensions:



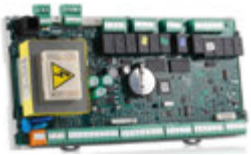
Dimensions	Series 1	Series 2	Series 3
L	1400	2010	2910
W	1400	1800	1797
H	530	630	830

Assemblies:



Electronic control:

CLEANAIRMANAGER programmable electronic control as standard, especially developed for the management of VERSIA units, with pGD1 user and maintenance terminal as standard and TH-Tune user terminal as an option.



CLEANAIRMANAGER

pGD1 terminal (standard)

TH-Tune terminal (option)

Options:

- Separate plate heat exchanger module delivered with the unit
- Double F filtration F
- Auxiliary electrical heater
- Auxiliary hot water coil in-duct
- Clogged filter detector
- Differential pressure switch for airflow control
- Anti-corrosion coatings for the indoor and/or outdoor coil
- Other electrical voltages (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)

ARAL

SPLIT SYSTEMS
air-to-air heat pump

33 - 102 kW
32 - 102 kW

Inverter | Multi-Scroll | EC | 50 Hz / 60 Hz

R410A | R134a

Adaptation and Versatility

- Outdoor condensing units compatible with indoor air conditioning units
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Condensing pressure control as standard for all year operation
- Versions for extreme conditions with refrigerant R-134a for high temperatures up to +55°C

Low noise level

- Compressors in insulated, closed compartment available with acoustic isolation jacket
- Variable speed electronic fans as standard

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- Tandem multiscroll technology to improve seasonal energy efficiency
- Electronic fans and electronic expansion valve available for minimal energy consumption
- NEW versions with VRF Full Inverter technology for maximum energy efficiency
- Compliance with ErP 2018 and ErP 2021

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Industry | Retail & Shopping centres | Education & Culture | Entertainment

and other applications, please consult us

ARAL technical data

Condensing units

KDE outdoor unit

32 - 102 kW

KDE models			2035	2039	2045	3052	3060	4070	4080	4085	4090	5100
Cooling only version (R)												
Cooling mode	Cooling capacity (1)	kW	32.6	38.2	44.9	52.9	58.8	64.1	70.4	84.8	96.0	102.3
		TR	9.5	11	13	15	17	18.5	20	24.5	27.5	29.5
		kBTU/hr	111.2	130.3	153.2	180.5	200.6	218.7	240.2	289.3	327.6	349.1
	Power input (2)	kW	11.1	12.4	13.5	15.8	18.5	21.2	23.9	27.9	26.1	32.3
	EER (3)	W/W	2.9	3.1	3.3	3.3	3.2	3.0	3.0	3.0	3.7	3.2
		BTU/(Wxhr)	10.0	10.5	11.3	11.4	10.8	10.3	10.1	10.4	12.6	10.8
Heat pump version (I)												
Cooling mode	Cooling capacity (1)	kW	32.1	37.6	44.2	52.1	58.8	63.2	70.4	83.5	94.6	102.3
	Power input (2)	kW	11.1	12.9	14.2	16.4	18.5	21.2	23.9	29.7	27.6	32.3
	EER (3)	W/W	2.9	2.9	3.1	3.2	3.2	3.0	3.0	2.8	3.4	3.2
Heating mode	Heating capacity (4)	kW	34.8	38.8	45.9	55.3	62.7	69.8	75.1	85.1	93.4	105.2
	Power input (2)	kW	9.9	11.5	12.9	15.5	17.9	20.2	22.2	24.4	26.9	31.5
	COP (3)	W/W	3.5	3.4	3.6	3.6	3.5	3.5	3.4	3.5	3.5	3.3
Technical characteristics												
Power supply			400 V/III/50 HZ with neutral									
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088									
	Type of compressor		Hermetic scroll, single									Tand. Scroll
	No. circuits/No. compressors		1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2	2/2	2/4
	No. power stages		1	1	1	2	2	2	2	2	2	4
Refrigerant connections	Liquid line per circuit		5/8"	5/8""	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Gas line per circuit		1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
	Outdoor airflow	m^3/h	14000	20000	20000	22000	22000	22500	22500	22500	22500	44000
Outdoor fan	Type of fan		Axial AC									
	Number x Fan diameter	N x (mm)	1 x 800	1 x 800	1 x 800	1 x 800	1 x 800	1 x 800	1 x 800	1 x 800	1 x 800	2 x 800
Equipment sound pressure of Lp10 (5)		dB(A)	51	50	52	50	53	54	54	55	55	56
Weight		kg	338	353	407	415	435	515	564	583	605	721

(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard UNE-EN-14511-2013.
(4) Nominal heating capacity for indoor air temp. 20ºC and outdoor air temp. 7ºC DB/6ºC WB.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source, directivity 2 and 1.5 m from the floor.

Indoor units

KPH indoor unit

KPH models			2035	2039	3044	4050	4060	5070	5080	6085	6090	6100
Indoor fan	Supply airflow	m^3/h	6100	6200	9000	10000	10500	12000	12000	16000	17000	18500
	Nominal available pressure	Pa	80	80	80	100	100	100	100	100	100	100
	Type of fan		Centrifugal									
	Number of fans		1	1	2	2	2	2	2	2	2	2
	Motor unit power	kW	2.2	2.2	1.1	1.5	1.5	1.5	1.5	1.5	2.2	3.0
Weight		kg	203	225	294	335	338	374	384	454	465	495

All data provided in these tables corresponds to standard units without options.

Table of compatibilities

KDE outdoor unit	2035	2039	2045	3052	3060	4070	4080	4085	4090	5100
KPH indoor unit	2035	2039	3044	4050	4060	5070	5080	6085	6090	6100

Codification:

Outdoor unit

KDE — Series — Size Capacity — NS4W

- I - Reversible heat pump
- R - Cooling only
- Q - Heating only

- N - Scroll compressor
- S - Standard version
- 4 - 400 V/III/50 Hz
- W - Refrigerant R410A / Y - R134a

Indoor unit

KPH — Series — Size Capacity — NS4W

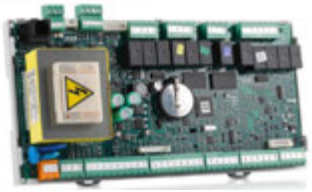
- I - Reversible heat pump
- R - Cooling only
- Q - Heating only

- N - Scroll compressor
- S - Standard version
- 4 - 400 V/III/50 Hz
- W - Refrigerant R410A / Y - R134a

ARAL
control and options

Electronic control:

Keyter ARAL units include CLIMANAGER programmable electronic control as standard, specifically developed for the management of air-to-air units with pGD1 user and maintenance terminal.



CLIMANAGER

pGD1 terminal

Options:

- Refrigerant charge
- EC axial fans in the outdoor unit
- Supply fans with EC technology
- Inverter compressor
- Electronic expansion valve
- F filtration section, with filters from F6 to F9
- Clogged filter detector
- Free-cooling, thermal, two dampers
- Free-cooling, three thermal, enthalpic or thermo-enthalpic dampers
- Auxiliary hot water coil in-duct with three-way valve
- Auxiliary electrical heater
- Differential pressure switch to control the airflow
- Oil separator
- Suction accumulator for cooling only version (required for distances longer than 15 m)
- Anti-corrosion treatments of the outdoor and/or indoor coil
- Protective metal grille on the outdoor coil
- THT user terminal
- Communication with MODBUS protocol via RS485 card
- Differential switches
- Forced ventilation of the electrical cabinet
- Other electrical voltages (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)

Optional Inverter

Split motor condensing units with inverter compressor in combination with all Keyter indoor KPS, KPH, KPV and KPT units.

- variable refrigerant volume
- from one to eight different indoor units
- heat reclaim possibility
- indoor assembly availability
- available with new low GWP gases

Cooling distances and connections

Standard Keyter ARAL unit is delivered without refrigerant charge. The service valve option and the refrigerant charge option must be requested.

The unit refrigerant charge depends on the total refrigerant line distance between the indoor unit and outdoor unit. To ask for this option, see the technical documentation of the range for the charge required based on the existing distance at each facility.

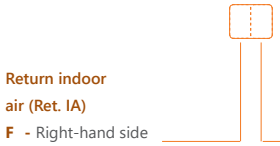
KDE outdoor unit models		2035	2039	2045	3052	3060	4070	4080	4085	4090	5100
KPH indoor unit models		2035	2039	3044	4050	4060	5070	5080	6085	6090	6100
Refrigerant connections	Liquid line of each circuit	5/8"	5/8""	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"	5/8"
	Gas line of each circuit	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"	1 1/8"
No. refrigerant circuits		1	1	1	2	2	2	2	2	2	2
Maximum refrigerant distance between indoor and outdoor unit		50 m									
Maximum geometric height between indoor and outdoor unit		15 m									

The size of the cooling connections provided in this table is valid up to a maximum refrigerant line distance of 10 m. For longer distances, it is necessary to consult the technical documentation for the change in diameter size of the refrigerant pipes.

For refrigerant distances between the indoor and outdoor units longer than 15 metres, it is mandatory to include the oil separator option and in the cooling only version unit also, the suction accumulator option (this component is included as standard in heat pump units).

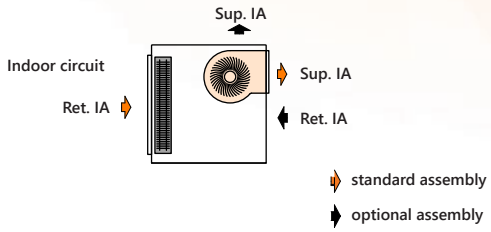
ARAL dimensions

Indoor unit assembly types:

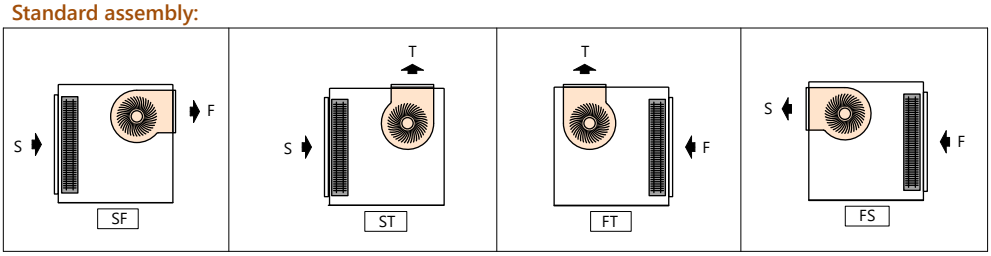


Return indoor air (Ret. IA)
- **F** - Right-hand side
- **S** - Left-hand side
- **T** - Upper

Supply indoor air (Sup. IA)
- **F** - Right-hand side
- **S** - Left-hand side



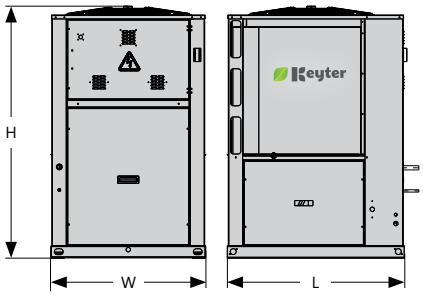
Standard assembly:



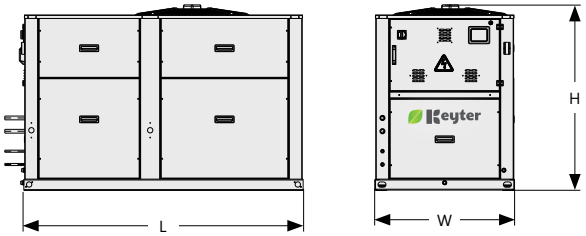
Dimensions:

KDE outdoor units

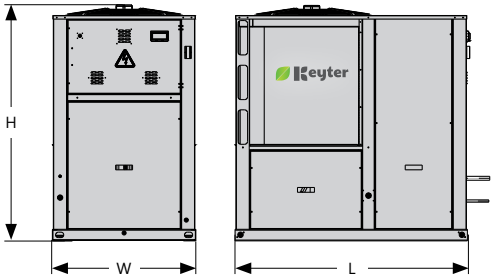
Series 2



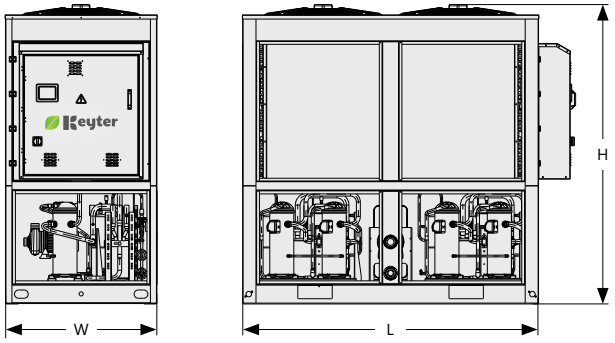
Series 3



Series 4



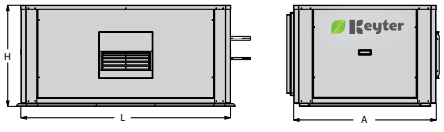
Series 5



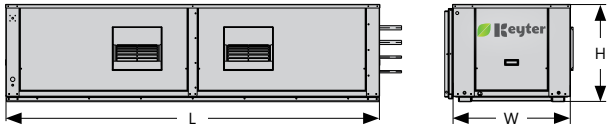
Outdoor unit dimensions (KDE)				
	Series 2	Series 3	Series 4	Series 5
L	1200	2100	2100	2412
W	1050	1050	1050	1100
H	1725	1395	1695	2176

KPH indoor units

Series 2



Series 3 to 6



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

THALIA

WATER-TO-AIR PACKAGED UNITS
plates heat exchanger

6 - 50 kW
7 - 58 kW

Multi-Scroll
EC

50 Hz
60 Hz

R410A

Adaptation and Versatility

- Horizontally or vertically constructed unit, enabling a flexible connection for facilities connected to duct networks
- Fully adaptable and configurable units with Options and a wide variety of ASSEMBLIES
- Condensing pressure control as option for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Energy efficiency

- The packaged water-to-air units are one of the most energy efficient solutions in large spaces for centralised facilities with a water and geothermal loop due to the high energy performance coefficients
- Electronic fans and electronic expansion valve available for minimal energy consumption
- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021

Low noise level

- Compressors in insulated, closed compartment available with acoustic isolation jacket
- Variable speed electronic fans

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet, LonWorks)

Applications

Industry

Retail & Shopping centres

Entertainment

and other applications, please consult us

THALIA
technical data

6 - 50 kW

KGH/KGV model			GH1005	GH1007	GH2008	GH2010	GH3012	GH3015	GH3018	GH4025	GH4030	GH4040	GH4050	GV2040	GV3050
Heat pump version (I)															
Cooling mode	Cooling capacity (1)	kW	6.3	7.9	8.0	9.7	13.9	15.5	19.2	26.7	34.2	42.0	47.0	37.6	50.0
		TR	2	2.5	2.5	3	4	4.5	5.5	8	10	12	13.5	11	14.5
		kBTU/hr	21.5	27.0	27.3	33.1	47.4	52.9	65.5	91.1	116.7	143.3	160.4	128.3	170.6
	Power input (2)	kW	1.4	1.8	1.9	2.5	3.1	3.6	4.7	5.9	7.8	9.2	10.4	9.2	11.7
	EER (3)	W/W	4.4	4.3	4.2	4.0	4.4	4.4	4.1	4.5	4.4	4.6	4.5	4.1	4.3
		BTU/(Wxhr)	15.0	14.6	14.3	13.5	15.1	14.9	14.0	15.4	14.9	15.5	15.4	13.9	14.6
Heating mode	Heating capacity (4)	kW	6.6	8.6	8.7	10.8	14.9	16.5	20.7	29.0	37.3	44.8	50.2	42.5	58.0
	Power input (2)	kW	1.8	2.4	2.5	3.4	4.0	4.3	5.7	7.2	10.0	10.8	12.1	12.7	14.7
	COP (3)	W/W	3.6	3.5	3.5	3.2	3.7	3.9	3.6	4.0	3.7	4.1	4.1	3.3	4.0
Technical characteristics															
Power supply			230 V/I/50 HZ		400 V/III/50 HZ										
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088												
	Type of compressor		Rotary		Hermetic scroll										
	No. circuits/compressors		1/1	1/1	1/1	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	1	1	1	2
Indoor fan	Supply airflow	m^3/h	950	1200	1300	1600	2000	2400	2800	4000	4800	6000	7000	5700	8500
	Nominal available pressure	Pa	50	50	50	50	50	50	50	75	75	100	100	100	100
	No. x Type of fan		1 x Centrifugal												2 x Centrifugal
	Power input	kW	0.14	0.15	0.17	0.22	0.24	0.26	0.32	0.70	0.82	1.21	1.54	1.34	1.46
Outdoor water circuit	Water flow (5)	l/h	1088	1378	1398	1712	2411	2696	3388	4573	5912	7180	8018	6530	8641
	No. x type of heat exchanger		1 x stainless steel brazed plates heat exchanger												
	Hydraulic connections		3/4"	3/4"	1"	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Equipment sound pressure of Lp10 (6)		dB(A)	49	49	49	50	50	50	50	50	51	51	51	62	63
Weight		kg	110	115	130	132	146.4	146.4	156.7	295	303	383	385	416	694

(1) Cooling capacity for indoor air temp. 27ºC/50% RH and water inlet/outlet temp. 30/35ºC.
(2) Power input by the compressor and indoor fan.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Nominal heating capacity for indoor air temp. 20ºC and water inlet/outlet temp. 15/10ºC.
(5) Nominal water flow calculated with a differential between water outlet and water inlet temp. of 6ºC.
(6) Sound pressure level in dB(A) measured at 10 m from the source, with air suction and supply duct.

Codification:

Horizontal construction

KGH — **Series** | **Size** | **Capacity** | **NS4W**

- **I** - Reversible heat pump
- **N** - Standard compressor (scroll)
- **S** - Standard version
- **4** - 400 V/III/50 Hz
- **W** - R-410A

Vertical construction

KGV — **Series** | **Size** | **Capacity** | **NS4W**

- **I** - Reversible heat pump
- **N** - Standard compressor (scroll)
- **S** - Standard version
- **4** - 400 V/III/50 Hz
- **W** - R-410A

Electronic control:

Keyter THALIA units include as standard CLIMANAGER programmable electronic control with TH-Tune user terminal.

CLIMANAGER

TH-Tune terminal

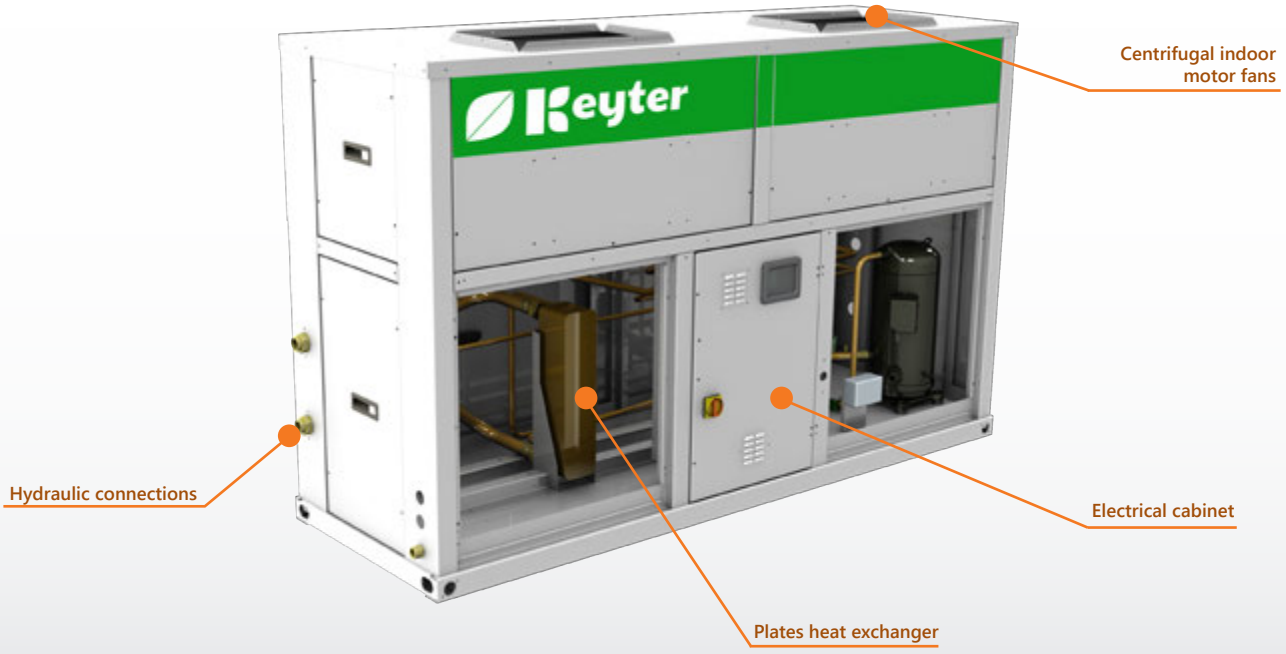
Options:

- Supply fan with EC technology
- Electronic expansion valve
- F filtration section
- Auxiliary electrical heater
- Auxiliary hot water coil in-duct
- Differential pressure switch for airflow control
- Clogged filter detector
- Condensing pressure regulation 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)

THALIA
versions

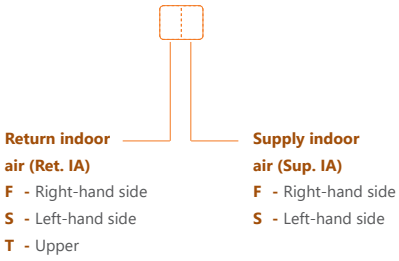
Keyter THALIA GH
Horizontal construction

Keyter THALIA GV
Vertical construction



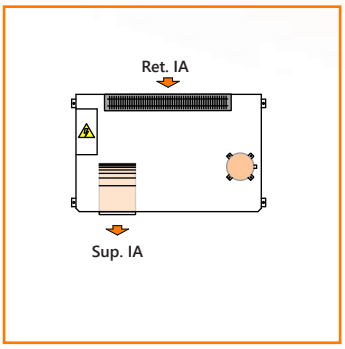
THALIA assemblies

Type of assembly (KGV):

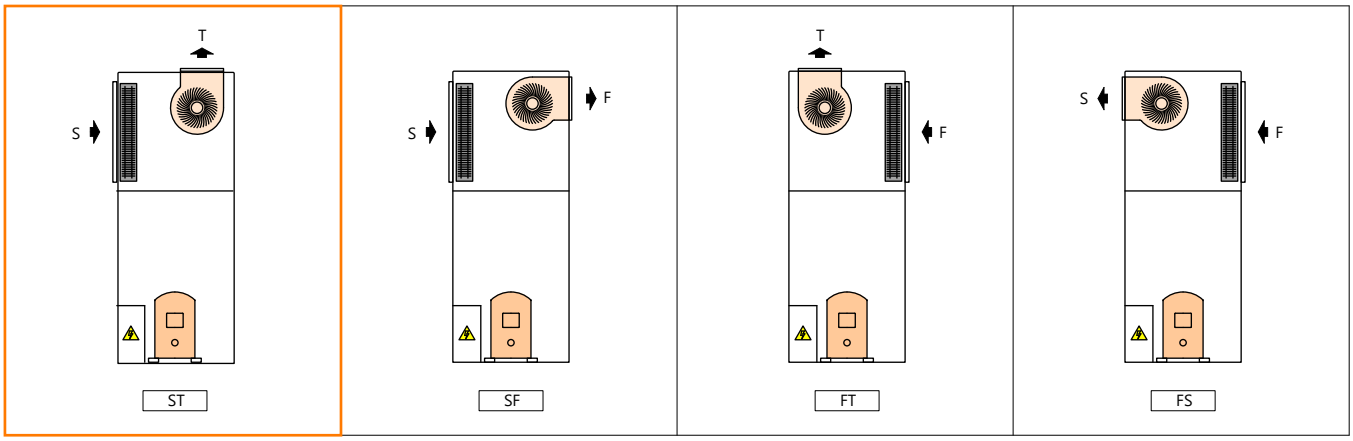


Type of assembly (KGH):

STANDARD ASSEMBLY

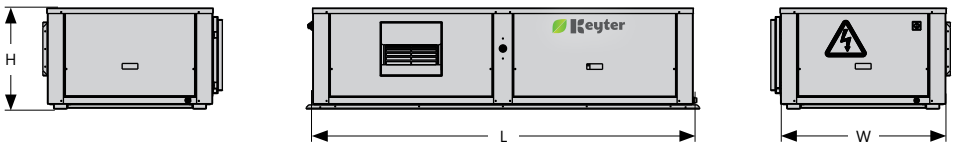


STANDARD ASSEMBLY

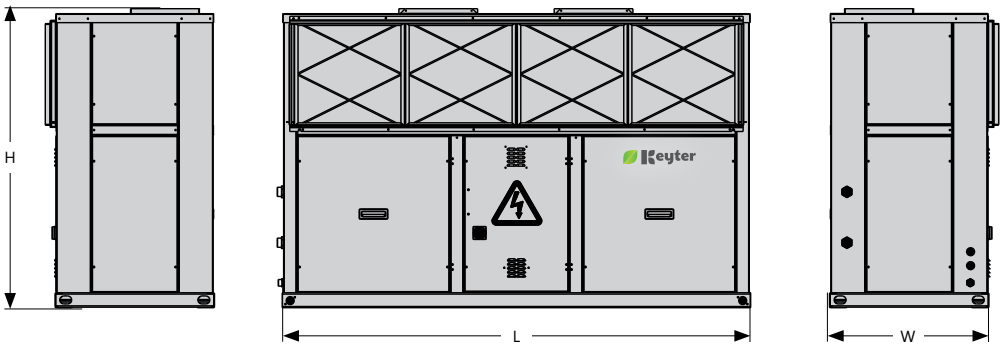


Dimensions:

KGH series



KGV series



Horizontal construction dimensions (KGH)				
	Series 1	Series 2	Series 3	Series 4
L	1150	1150	1295	2095
W	510	510	610	915
H	465	495	530	630

Vertical construction dimensions (KGH)		
	Series 2	Series 3
L	1339	2350
W	800	800
H	1475	1475

BOTHNIA

WATER-TO-AIR PACKAGED UNITS
Shell and tube heat exchanger

23 - 79 kW

Multi-Scroll
EC
50 Hz
60 Hz

R410A
R134a

Adaptation and Versatility

- Vertically constructed units, enabling a flexible connection for facilities connected to duct networks
- Fully adaptable and configurable units with Options and a wide variety of ASSEMBLIES
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Compressors in insulated, closed compartment available with acoustic isolation jacket
- Variable speed electronic fans as standard

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- The packaged water-to-air units are one of the most energy efficient solutions in large spaces for centralised facilities with a water and geothermal loop due to the high energy performance coefficients
- Electronic fans and electronic expansion valve available for minimal energy consumption
- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)

Applications

Industry
Retail & Shopping centres
Entertainment

and other applications, please consult us

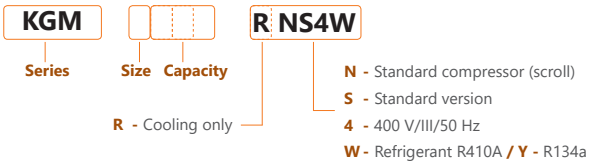
BOTHNIA
technical data

24 - 79 kW

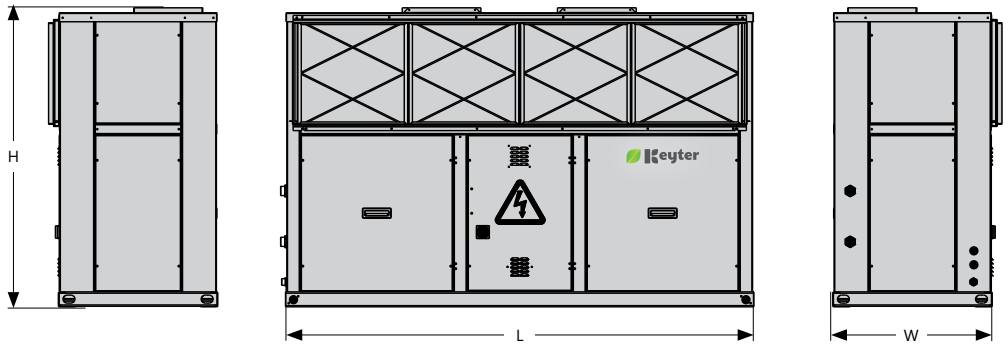
KGM model			2020	2030	2040	3052	3060	3070
Cooling only version (R)								
Cooling mode	Cooling capacity (1)	kW	23.5	34.0	44.7	58.8	68.0	79.0
		TR	7	10	13	17	19.5	22.5
		kBTU/hr	80.2	116.0	152.5	200.6	232.0	269.6
	Power input (2)	kW	4.6	6.8	8.6	11.8	13.6	15.2
	EER (3)	W/W	5.1	5.0	5.2	5.0	5.0	5.2
		BTU/(Wxhr)	17.4	17.1	17.7	17.0	17.1	17.7
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral					
Refrigerant circuit	Refrigerant fluid/GWP	kg CO_2	R410A/2088					
	Type of compressor		Hermetic scroll					
	No. circuits/No. compressors		1/1	1/1	1/1	1/2	1/2	1/2
	No. power stages		1	1	1	2	2	2
Indoor fan	Supply airflow	m^3/h	4000	5000	6500	8000	8500	11000
	Nominal available pressure	Pa	75	75	100	100	100	100
	No. x Type of fan		1 x Centrifugal			2 x Centrifugal		
Outdoor water circuit	Water flow (4)	m^3/h	3.1	4.5	5.9	8.0	9.3	10.8
	Type of heat exchanger		Shell and tube					
	Hydraulic connections		1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
Equipment sound pressure of Lp10 (5)		dB(A)	41.7	43.5	47.8	52.6	54	57
Weight		kg	472	484	504	730	730	730

(1) Cooling capacity for indoor air Temp. 27ºC/50% RH and water inlet/outlet Temp. 30/35ºC.
(2) Power input by the compressor and indoor fan.
(3) EER calculated based on regulation EN 14511-2013.
(4) Nominal water flow calculated with a differential between water outlet and water inlet temp. of 6ºC.
(5) Sound pressure level in dB(A) measured at 10 m from the source, with air suction and supply duct.

Codification:



Dimensions:



Dimensions	Series 2	Series 3
L	1339	2350
W	800	800
H	1475	1475

Electronic control:

Keyter BOTHNIA units include CLIMANAGER programmable electronic control with TH-Tune user terminal as standard.

Options:

- Cupronickel heat exchanger for condensation with sea water
- Supply fan with EC technology
- F filtration section
- Auxiliary electrical heater
- Auxliary hot water coil in-duct
- Clogged filter detector
- Electronic expansion valve
- Regulation of the condensation pressure with a three-way valve and proportional motor provided in a separate kit
- Differential pressure switch to control the airflow
- Water filter
- Anti-corrosion treatments for the indoor coil
- Other electrical voltages (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)

CONSUM | VARIOUS LOCATIONS - J.CARRION LOGÍSTICA | SPAIN - POLYTECHNIC UNIVERSITY | SPAIN - SPA BAHÍA ALCUDIA | SPAIN

CARREFOUR MARKET | SPAIN - VALENTÍN PARK CLUB | SPAIN - GARDEN HOTELS | VARIOUS - CAPSA | SPAIN - MILITARY BASE | SPAIN

HEALTH CENTRES I VARIOUS LOCATIONS - AEAT | SPAIN - HOTEL ROC MARBELLA PARK | SPAIN - HYPERMARKET E. LECLERQ | SPAIN

chillers and heat pumps
air - water

NESEA

MICRO-CHILLERS
air-to-water heat pump

8 - 24 kW
9 - 31 kW

Inverter · Multi-Scroll · EC · 50 Hz 60 Hz

ACS

R410A · R452B · R134a

Adaptation and Versatility

- Versions with hydraulic kit and built-in buffer tank to reduce compressors short cycling
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- NEW NESEA MAXIMA versions with R-134a refrigerant to deliver water at high temperatures up to +65°C

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW Full INVERTER technology to improve seasonal energy efficiency
- Electronic fans as standard and electronic expansion valves available for minimal energy consumption
- Equipments with hydraulic kit can include high-performance electronic pumps
- NEW hot gas partial heat reclaim system for sanitary hot water

Low noise level

- Dual acoustic insulation of the compressors with an acoustic jacket in a closed, insulated compartment
- Variable speed electronic fans as standard

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of Mini-Chillers with R-452B refrigerant (ODP 0, GWP 676)

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Applications

Industry · Retail & Shopping centres · Education & Culture · Hospitals

NESEA versions

Keyter NESEA

Keyter NESEA INVERTER

Hydraulic versions:

KWF - Standard version (S)

Equipment with no hydraulic kit. This unit includes as standard triple protection of plate heat exchanger, with flow switch in the water piping, refrigerant anti-freeze and water anti-freeze protection.

KWF - Version with hydraulic kit (P)

The hydraulic kit includes a flow pump, expansion vessel, safety valve and flow switch.

The hidraulic kits of models from series 1,2 and 3 include include high performance electronic pump as standard.

The hydraulic kits of models from series 4 may be equipped with the following options:

- Single pump without speed control.
- High energy performance electronic pump.

KWF - version with hydraulic kit and buffer tank (H)

Equipment designed with a hydraulic kit and also a buffer tank to reduce compressors short cycling. Buffer tank capacity of 35 litres in series 3 and 100 litres in series 4.

NESEA
technical data

8 - 24 kW

KWF models			3009	3014	3020	4026	4030
Cooling only version (R)							
Cooling	Cooling capacity (1)	kW	7.8	12.1	17.2	22.3	24.3
		TR	2.5	3.5	5	6.5	7
		kBTU/hr	26.6	41.3	58.7	76.1	82.9
	Power input (2)	kW	2.8	4.5	6.4	8.0	9.1
	EER (3)	W/W	2.8	2.7	2.7	2.8	2.7
		BTU/(hrxW)	9.5	9.2	9.2	9.5	9.1
Heat pump version (I)							
Cooling mode	Cooling capacity (1)	kW	7.8	12.1	17.2	22.3	24.3
	Power input (2)	kW	2.8	4.5	6.4	8.0	9.1
	EER (3)	W/W	2.8	2.7	2.7	2.8	2.7
Heating mode	Heating capacity (4)	kW	9.4	15.3	21.5	28.2	31.4
	Power input (2)	kW	2.9	4.7	6.1	8.3	9.4
	COP (3)	W/W	3.2	3.3	3.5	3.4	3.3
Technical characteristics							
Power supply			400 V/III/50 HZ with neutral				
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088				
	Type of compressor		Hermetic scroll, single version				
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1
	No. power stages		1	1	1	1	1
Hydraulic circuit	Water flow	m^3/h	1.3	2.1	3.0	3.8	4.2
	Type of heat exchanger		Stainless steel brazed plates heat exchanger				
	Hydraulic connections		1"	1"	1"	1 1/4"	1 1/4"
Outdoor fan	Outdoor airflow	m^3/h	3700	3700	7000	7000	7000
	No. x Type of fan		1 x Axial 450 EC		2 x Axial 450 EC		
Equipment sound pressure of Lp10 (5)		dB(A)	32	32	35	35	35
Empty weight		kg	136	144	155	247	250

Inverter

13 - 27 kW

KWF INVERTER models			3014	4022	4030
Cooling only version (R)					
Cooling	Cooling capacity (1)	kW	12.8	20.8	26.7
		TR	4.0	6.0	8.0
		kBTU/hr	43.7	71.0	91.2
	Power input (2)	kW	4.7	7.2	8.6
	EER (3)	W/W	2.7	2.9	3.1
		BTU/(hrxW)	9.2	9.9	10.6
Heat pump version (I)					
Cooling mode	Cooling capacity (1)	kW	12.8	20.8	26.7
	Power input (2)	kW	4.7	7.2	8.6
	EER (3)	W/W	2.7	2.9	3.1
Heating mode	Heating capacity (4)	kW	16.2	25.7	32.3
	Power input (2)	kW	4.7	7.1	8.6
	COP (3)	W/W	3.4	3.6	3.8
Technical characteristics					
Power supply			400 V/III/50 HZ with neutral		
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088		
	Type of compressor		Inverter compressor		
	No. circuits/compressors		1/1	1/1	1/1
	Power stage control		Modulating control 25 - 100%		
Hydraulic circuit	Water flow	m^3/h	2.2	3.6	4.6
	Type of heat exchanger		Stainless steel brazed plates heat exchanger		
	Hydraulic connections		1"	1 1/4"	1 1/4"
Outdoor fan	Outdoor airflow	m^3/h	3700	7000	7000
	No. x Type of fan		1 x Axial 450 EC	2 x Axial 450 EC	2 x Axial 450 EC
Equipment sound pressure of Lp10 (5)		dB(A)	32	35	35
Empty weight		kg	134	226	255

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Options:

- Inverter version with compressor, expansion valve and outdoor electronic fan
- Outdoor EC radial fan
- Anti-corrosion coated outdoor coil
- Hydraulic circuit with variable speed electronic pump (standard with chassis 1, 2 and 3; optional with chassis 4)
- Remote controller
- External communication with MODBUS protocol via RS485 card

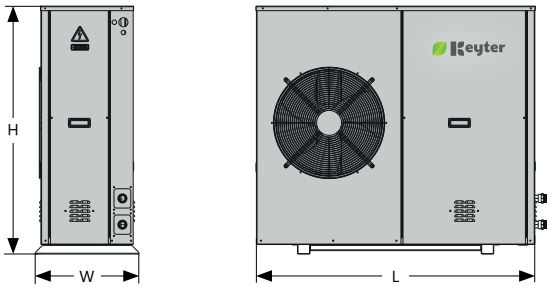
NESEA dimensions

Dimensions:

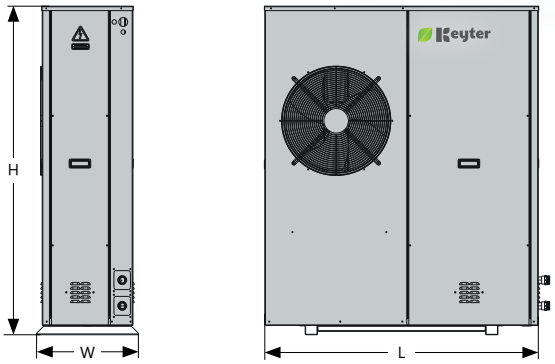
series 3

models 3009/3014

version S

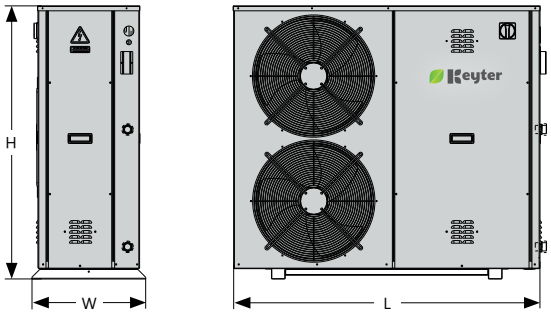


versions P and H

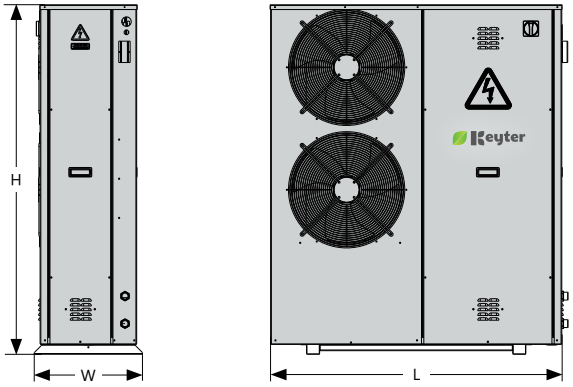


model 3020

version S

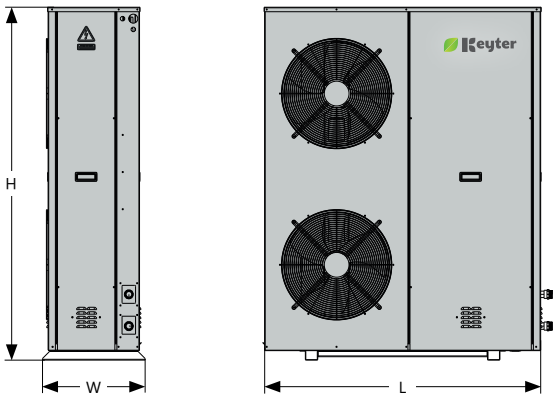


versions P and H

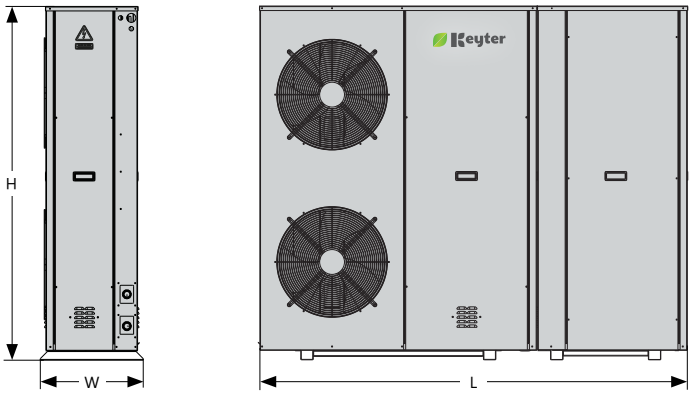


series 4

versions S and P



version H



In series 4, version H, the buffer tank is delivered as a separate module assembled with the unit. Optionally, this module may be delivered independently of the equipment.

Dimensions				
	Series 3 - S	Series 3 - P/H	Series 4 - S/P	Series 4 - H
L	1230	1230	1230	1897
W	456	456	456	456
H	1095	1473	1567	1567

PACIFICA

CHILLERS AND HEAT PUMPS
air-to-water

29 - 329 kW
33 - 387 kW

Multi-Scroll
50 Hz
60 Hz

ACS
T
4T

R410A
R452B
R134a

Adaptation and Versatility

- Versions with hydraulic kit and built-in buffer tank to reduce the frequency of compressor stops and starts
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- PACIFICA MAXIMA versions with R-134a refrigerant to deliver water at high temperatures up to +65°C

Low noise level

- Compressors in a closed compartment, isolated from the airflow (except series 2 to 5) available with an acoustic jacket
- Low speed condensation axial fans and oversized outdoor coils resulting in improved efficiency and a very low noise level
- EC axial fans with AxiTop diffusers for a very low noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High partial and full load efficiency, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW inverter compressors in the PACIFICA INVERTER range for maximum energy efficiency
- Electronic fans and electronic expansion valves for minimal energy consumption
- NEW hot gas partial and full heat reclaim system for sanitary hot water
- MULTIPIPE units available for simultaneous delivery of cooling and heating
- Water Free-cooling system for free-cooling

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of units with R-452B refrigerant (ODP 0, GWP 676)

Applications

Industry Logistics
Retail & Shopping centres
Culture
Hotels

versions

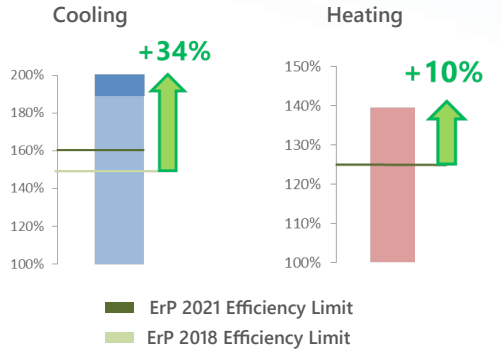
PACIFICA

20-189 kW/20-184 kW

Chillers equipped with multiscroll technology.

- Seasonal energy efficiency ratio for cooling (SEER) ηs,c 2018 >= 149%
- Seasonal energy efficiency ratio for cooling (SEER) ηs,c 2021 >= 161%

Seasonal energy efficiency

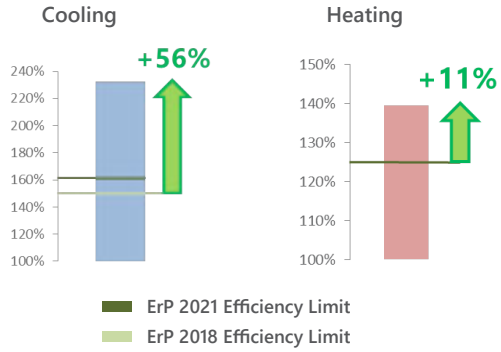


PACIFICA INVERTER

39-170 kW/42-180 kW

Chillers equipped with INVERTER technology, an electronic expansion valve and variable-speed electronic fans to comply with the ErP 2021 regulation and guarantee maximum energy savings.

Seasonal energy efficiency



Hydraulic versions:

Keyter WE - Standard version (S)

Equipment with no hydraulic kit.

The WE units include as standard triple protection of plates heat exchanger, with flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Keyter WE - Version with hydraulic kit (P)

Hydraulic kit composed of a circulation pump suitable for water or glycol water to 0°C, expansion vessel, purge and closing valves, pressure gauges and a flow switch.

Low temperature kit is required for water temperatures below 0°C, the, which requires replacement of the pump and adds electrical heater on hydraulic elements to operate with water temperature up to -10°C.

Keyter WE - version with hydraulic kit and buffer tank (H)

Equipment designed with a hydraulic kit in addition to a buffer tank with an anti-freeze electrical heater to reduce compressors short cycling.

The hydraulic kit is built into the chassis of the unit for all models except the series 6, where the hydraulic kit is in a separate module but is delivered with the unit.

Optionally, a module independent to the unit may be delivered, with a 375 or 725 litre capacity buffer tank and anti-freeze electrical heater.

For water temperatures below 0°C, it is necessary to request the low-temperature kit for the hydraulic kit.

PACIFICA
range specification

			PACIFICA	PACIFICA INVERTER
General characteristics				
Refrigerant	R410A		✓	✓
	Full charge of refrigerant		✓	✓
	Leak detection		●	●
Casing	Self-supporting chassis of galvanized steel with oven cured polyester paint treatment		✓	✓
	Self-supporting chassis of stainless steel with oven cured polyester paint treatment		●	●
	Customisable colour to meet the needs of the facility		●	●
	Lower compartment closed with a sheet for compressors and cooling components	KWE - 5 to 9	✓	✓
	Insulation in the lower cooling compartment		●	●
	Anti-vibration supports		●	●
Compressors	Tandem multiscroll technology		✓	–
	Scroll Compressors, Single version	KWE-2030 to 2045	●	–
	Inverter technology		●	✓
	Compressor anti-vibration mounts		✓	✓
	Soft starter		●	●
	Acoustic jacket		●	●
	Original manufacturer high-performance acoustic jacket		●	●
	Suction accumulator and liquid receiver	version I	✓	✓
		version R	●	●
Expansion valves	Thermostatic expansion valves		✓	–
	Electronic expansion valves		●	✓
Fans				
Outdoor fans	Axial fans with AC technology		✓	–
	Axial fans with EC technology		●	✓
	AxiTop diffusers for axial fans		●	●
	Fan nozzles painted inside		●	●
	Fans with epoxy paint		●	●
	Enhanced fans		●	●
	Radial EC plug fans		●	●
	Centrifugal fans		●	–
Heat exchangers				
Coils	Coils with copper tubes and aluminium fins, with L or U geometry		✓	✓
	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)		●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)		●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)		●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating		●	●
	COPPERFIN: Copper tubes/Copper fins		●	●
Heat exchangers	Freon-to-water heat exchanger, AISI 316L stainless steel plates, welded with copper and heat insulated.		✓	✓
	Stainless steel exchanger of SS AISI 304/SS AISI 316 SMO254 or Titanium		●	●
	Shell and tube heat exchanger	KWE - 3, 4 and 6	●	●
	Antifreeze electrical heater in the plate heat exchanger for protection at low outdoor temp.		●	●
Energy				
Energy reclaim	Partial or full condensation energy reclaim for sanitary hot water		●	●
	Pump in the condensation heat reclaim circuit		●	●
	Antifreeze electrical heater in reclaim plate heat exchanger for sanitary hot water		●	●
Free-cooling	Built-in free-cooling via an additional outdoor coil, outdoor sensor and three-way valve		●	●

Codification:

KWE | **Series** | **Size** | **Power** | **NS4W**

I - Reversible heat pump
R - Cooling only

N - Standard scroll compressor / **E** - High efficiency DSH compressor
S - Standard / **P** - Hydraulic kit / **H** - Hydraulic kit with buffer tank
4 - 400 V/III/50 Hz
W - Refrigerant R410A / **B** - R452B / **Y** - R134a

			PACIFICA	PACIFICA INVERTER
Hydraulic				
Pumps (WE-version P/H)	Normal available pressure single pump (7-12 mH2O)		✓	✓
	High available pressure single pump (15-20 mH2O)		●	●
	Very high available pressure single pump (25-30 mH2O)		●	●
	Pump with variable speed drive		●	●
	Back-up pump (standard, high and very high pressure available)		●	●
	Electronic pump		●	●
	Dual pump		●	●
	Electronic back-up pump		●	●
Hydraulic elements	Low-temperature kit for operation with water at temp. < 5ºC		●	●
	Flexible connections for hydraulic inlet and outlet		●	●
	Water filter		●	●
Installation				
Condensate pan	Condensate drain pan in outdoor unit		✓	✓
	Electrical heater in the outdoor condensate drain pan for low outdoor temperatures		●	●
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/without neutral, depending on model)		✓	✓
	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)		●	●
Packaging	Packaging for maritime transportation		●	●
Control				
Electronic control and communication	Aquamicro configurable electronic control	KWE-2 to 4	✓	–
	MicroAD user terminal for Aquamicro control		●	–
	Programmable electronic Aquamanager control	KWE-2 to 4	●	✓
		KWE -5 to 9	✓	✓
	pLDPRO user terminal for Aquamanager control (max. standard distance terminal-board: 50 m)	KWE-2 to 4	●	✓
		KWE-5 and 6	✓	✓
	pGD1 user and maintenance terminal for Aquamanager control (max. standard distance terminal-board: 50 m)	KWE-2 to 6	●	●
		KWE-7 to 9	✓	✓
	TCONN cards (for distances between terminal and board longer than 50 m) (see technical manual)		●	●
	Condensation and evaporation pressure control with transducers		✓	✓
	Management up to two pumps in the evaporator		✓	✓
	Master-slave management		●	●
	Electronic expansion valve management		●	●
	RS485 card for Modbus communication		●	●
	Plant Visor/Plant Watch PRO/tERA supervision		●	●
	BACNET/LONWORKS communication		●	●
Defrosting	Defrosting via cycle inversion via a 4-way valve		✓	✓
Additional control and safety elements	General switch on electrical cabinet		✓	✓
	Thermal-magnetic protection for compressors, fans and pumps		✓	✓
	Triple protection of the plate heat exchanger with water flow switch and water anti-freeze protection and freon		✓	✓
	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		●	●
	Energy meter		●	●
Electrical cabinet	Fully-wired electrical cabinet, with IP54 protection		✓	✓
	Forced ventilation of the electrical cabinet	KWE-1 to 6	●	●
		KWE-7 to 9	✓	✓
	Design of electrical switchgear for high temperatures		✓	✓
	Tropicalised electrical cabinet		●	●
	Antifreeze electrical heater in electrical cabinet for low outdoor temperatures		●	●

✓ Included as standard ● Option – Not applicable

Codification:

KWE [ ][ ][ ] **VS4W**

- **Series**
- **Size**
- **Power**
  - **I** - Reversible heat pump
  - **R** - Cooling only
- **V** - Inverter compressor
- **S** - Standard / **P** - Hydraulic kit / **H** - Hydraulic kit with buffer tank
- **4** - 400 V/III/50 Hz
- **W** - Refrigerant R410A / **Y** - R134a

PACIFICA
technical data

28 - 43 kW

KWE models			2030	2035	2039	2045	2030	2035	2039	2045
Cooling only version (R)										
	Cooling capacity (1)	kW	28.7	32.7	37.7	42.9	28.7	32.7	37.7	42.9
		TR	8.5	9.5	11	12.5	8.5	9.5	11	12.5
		kBTU/hr	97.9	111.6	128.6	146.4	97.9	111.6	128.6	146.4
	Power input (2)	kW	9.1	10.8	12.1	13.3	9.1	10.8	12.1	13.3
	EER (3)	W/W	3.1	3.0	3.1	3.2	3.1	3.0	3.1	3.2
		BTU/(Wxhr)	10.7	10.3	10.6	11.0	10.7	10.3	10.6	11.0
Cooling	ESEER (3)		4.2	4.1	4.1	4.2	4.2	4.1	4.1	4.2
	SEER (4)		4.0	4.0	4.0	4.1	4.6	4.7	4.3	4.5
	ηs,c (5)		154%	153%	152%	158%	175%	179%	163%	172%
	SEPR (7°C) (6)		5.0	5.0	5.0	5.2	5.5	5.6	5.3	5.5
	SEPR (-8°C) (6)		3.1	3.1	3.1	3.2	3.6	3.7	3.3	3.6
	IPLV (7)	kW/TR	0.72	0.72	0.74	0.72	0.66	0.65	0.73	0.68
		BTU/(Wxhr)	16.5	16.5	16.0	16.5	17.7	18.0	16.4	17.3
Heat pump version (I)										
	Cooling capacity (1)	kW	27.8	31.7	36.5	41.6	27.8	31.7	36.5	41.6
	Power input (2)	kW	9.3	11.0	12.3	13.5	9.3	11.0	12.3	13.5
	EER (3)	W/W	3.0	2.9	3.0	3.1	3.0	2.9	3.0	3.1
	ESEER (3)		4.2	4.1	4.1	4.1	4.2	4.1	4.1	4.1
Cooling mode	SEER (4)		3.9	3.8	3.9	4.0	4.4	4.5	4.1	4.3
	ηs,c (5)		147%	146%	146%	151%	168%	172%	157%	166%
	SEPR (7°C) (6)		4.9	4.8	4.9	5.0	5.4	5.4	5.1	5.3
	SEPR (-8°C) (6)		2.9	2.9	2.9	3.1	3.4	3.5	3.2	3.4
	IPLV (7)	kW/TR	0.75	0.76	0.78	0.76	0.69	0.67	0.75	0.71
		BTU/(Wxhr)	15.8	15.7	15.4	15.8	17.0	17.2	15.8	16.6
	Heating capacity (8)	kW	33.2	38.3	42.1	47.8	33.2	38.3	42.1	47.8
	Power input (2)	kW	9.0	10.7	12.0	13.1	9.0	10.7	12.0	13.1
Heating mode	COP (3)	W/W	3.7	3.6	3.5	3.6	3.7	3.6	3.5	3.6
	SCOP warmer climate (4)		3.9	3.8	3.7	3.8	4.4	4.3	4.1	3.9
	ηs,h warmer climate (5)		148%	145%	140%	145%	166%	165%	157%	149%
	ηs,h average climate with EC fan (5)		123%	120%	124%	128%	136%	133%	136%	131%
Technical characteristics										
Power supply			400 V/III/50 HZ with neutral							
	Refrigerant fluid/GWP	Kg CO_2	R410A/2088							
Refrigerant circuit	Type of compressor		Hermetic scroll, single version (option)				Hermetic tandem scroll (standard)			
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/2	1/2	1/2	1/2
	No. power stages		1	1	1	1	2	2	2	2
	Water flow	m^3/h	4.9	5.6	6.5	7.4	4.9	5.6	6.5	7.4
Hydraulic circuit	Type of heat exchanger		Stainless steel brazed plates							
	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"
	Buffer tank capacity -vers. H	litres	150							
	Outdoor airflow	m^3/h	14000	14000	19500	19500	14000	14000	19500	19500
Outdoor fan	No. x Type of fan		1 x Axial 800 AC							
	Fan speed	rpm	660/480	660/480	900/700	900/700	660/480	660/480	900/700	900/700
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	44.4	45.7	46.9	48.4	44.4	45.7	46.9	48.4
Weights	Empty weight	kg	343	345	360	415	343	345	360	415
	In-service weight	kg	356	358.5	374	431	356	358.5	374	431

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER, COP and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.

Series 2 - S/P

Series 2-H

PACIFICA
technical data

50 - 81 kW

KWE models			2052	2060	2070	3052	3060	3070	4078	4090
Cooling only version (R)										
Cooling	Cooling capacity (1)	kW	50.4	55.7	64.6	51.5	57.1	64.3	74.9	81.1
		TR	14.5	16	18.5	15	16.5	18.5	21.5	23.5
		kBTU/hr	172.1	190.2	220.5	175.7	194.8	219.3	255.5	276.7
	Power input (2)	kW	14.6	17.7	21.6	14.5	17.5	21.1	23.1	27.4
	EER (3)	W/W	3.4	3.2	3.0	3.6	3.3	3.0	3.2	3.0
		BTU/(Wxhr)	11.8	10.8	10.2	12.1	11.1	10.4	11.1	10.1
	ESEER (3)		4.7	4.3	4.3	4.8	4.8	4.8	4.9	4.5
	SEER (4)		4.8	4.5	4.4	4.9	5.0	4.9	5.1	4.8
	ηs,c (5)		185%	172%	169%	190%	192%	189%	196%	182%
	SEPR (7°C) (6)		5.8	5.5	5.5	5.9	6.0	5.9	6.1	5.8
	SEPR (-8°C) (6)		3.9	3.6	3.5	4.0	4.1	4.0	4.2	3.9
	IPLV (7)	kW/TR	0.64	0.69	0.69	0.62	0.63	0.63	0.62	0.66
		BTU/(Wxhr)	18.6	17.2	17.1	19.0	18.6	18.2	18.7	17.4
Heat pump version (I)										
Cooling mode	Cooling capacity (1)	kW	48.9	54.0	62.5	49.9	55.4	62.2	72.5	78.6
	Power input (2)	kW	14.9	18.0	22.0	14.8	17.8	21.6	23.5	27.9
	EER (3)	W/W	3.3	3.0	2.8	3.4	3.1	2.9	3.1	2.8
	ESEER (3)		4.6	4.3	4.3	4.7	4.8	4.7	4.9	4.5
	SEER (4)		4.6	4.3	4.2	4.7	4.8	4.7	4.9	4.6
	ηs,c (5)		177%	165%	162%	182%	185%	181%	188%	174%
	SEPR (7°C) (6)		5.6	5.3	5.3	5.7	5.8	5.8	5.9	5.6
	SEPR (-8°C) (6)		3.7	3.4	3.4	3.8	3.9	3.8	4.0	3.7
	IPLV (7)	kW/TR	0.66	0.71	0.72	0.65	0.65	0.66	0.65	0.69
		BTU/(Wxhr)	17.8	16.5	16.3	18.3	17.8	17.5	18.0	16.7
Heating mode	Heating capacity (8)	kW	55.6	65.5	73.1	55.7	66.4	74.3	83.7	92.0
	Power input (2)	kW	15.6	17.2	21.0	15.6	17.2	20.8	22.8	27.0
	COP (3)	W/W	3.6	3.8	3.5	3.6	3.9	3.6	3.7	3.4
	SCOP warmer climate (4)		4.7	4.9	4.6	4.7	5.0	4.7	4.8	4.4
	ηs,h warmer climate (5)		180%	189%	177%	180%	190%	181%	183%	168%
	ηs,h average climate with EC fan (5)		145%	155%	141%	146%	157%	145%	149%	136%
Technical characteristics										
Power supply			400 V/III/50 HZ with neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088							
	Type of compressor		Hermetic tandem scroll							
	No. 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	Water flow	m^3/h	8.7	9.6	11.1	8.9	9.8	11.1	12.9	14.0
	Type of heat exchanger		Stainless steel brazed plates			Stainless steel brazed plates (standard)/Shell and tube (optional)				
	Hydraulic connections		2"	2"	2"	2"	2"	2"	2"	2"
	Buffer tank capacity -vers. H	litres	150			225			225	
Outdoor fan	Outdoor airflow	m^3/h	19500	19500	19500	19500	19500	19500	19500	19500
	No. x Type of fan		1 x Axial 800 AC							
	Fan speed	rpm	900/700	900/700	900/700	900/700	900/700	900/700	900/700	900/700
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	47.8	52.6	52.6	47.8	52.6	52.3	53.8	55.6
Weights	Empty weight	kg	435	455	455	515	530	545	615	620
	In-service weight	kg	452	473	473	532	548	565	637	643

(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Series 3 and 4 - S/P

Series 3 and 4 - H

PACIFICA
technical data

95 - 157 kW

KWE models			5100	5120	6130	6140	6150	6160	6170	6180
Cooling only version (R)										
Cooling	Cooling capacity (1)	kW	95.0	107.3	116.9	124.9	133.8	142.0	149.6	156.7
		TR	27	30.5	33.5	35.5	38	40.5	42.5	44.5
		kBTU/hr	324.1	366.1	398.7	426.3	456.4	484.4	510.5	534.6
	Power input (2)	kW	30.0	35.0	39.5	44.1	45.1	46.2	50.5	54.7
	EER (3)	W/W	3.2	3.1	3.0	2.8	3.0	3.1	3.0	2.9
		BTU/(Wxhr)	10.8	10.5	10.1	9.7	10.1	10.5	10.1	9.8
	ESEER (3)		5.3	5.0	4.7	4.8	4.9	5.0	4.8	4.7
	SEER (4)		5.2	5.2	4.6	4.5	4.7	4.8	4.7	4.5
	ηs,c (5)		201%	201%	175%	173%	178%	183%	178%	173%
	SEPR (7°C) (6)		6.2	6.2	5.6	5.6	5.7	5.8	5.7	5.6
	SEPR (-8°C) (6)		4.3	4.3	3.7	3.7	3.8	3.9	3.8	3.7
	IPLV (7)	kW/TR	0.59	0.66	0.66	0.66	0.65	0.64	0.65	0.67
		BTU/(Wxhr)	20.3	19.8	18.1	17.9	18.3	18.6	18.2	17.7
Heat pump version (I)										
Cooling mode	Cooling capacity (1)	kW	93.6	105.8	115.2	123.1	131.8	139.9	-	-
	Power input (2)	kW	31.0	36.0	40.7	45.5	46.5	47.5	-	-
	EER (3)	W/W	3.0	2.9	2.8	2.7	2.8	2.9	-	-
	ESEER (3)		4.9	4.3	4.3	4.2	4.4	4.5	-	-
	SEER (4)		5.1	5.1	4.4	4.4	4.5	4.6	-	-
	ηs,c (5)		194%	195%	169%	167%	173%	177%	-	-
	SEPR (7°C) (6)		6.1	6.1	5.5	5.4	5.6	5.7	-	-
	SEPR (-8°C) (6)		4.1	4.1	3.6	3.5	3.7	3.8	-	-
	IPLV (7)	kW/TR	0.61	0.61	0.68	0.69	0.67	0.66	-	-
		BTU/(Wxhr)	19.6	19.2	17.5	17.3	17.7	18.1	-	-
Heating mode	Heating capacity (8)	kW	96.2	124.2	132.7	143.4	152.2	161.1	-	-
	Power input (2)	kW	31.2	35.8	39.2	43.8	44.7	45.5	-	-
	COP (3)	W/W	3.1	3.5	3.4	3.3	3.4	3.5	-	-
	SCOP warmer climate (4)		4.0	4.4	4.1	4.0	4.2	4.3	-	-
	ηs,h warmer climate (5)		153%	168%	156%	153%	159%	164%	-	-
	ηs,h average climate with EC fan (5)		138%	156%	136%	131%	137%	142%	-	-
Technical characteristics										
Power supply			400 V/III/50 HZ with neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088							
	Type of compressor		Hermetic tandem scroll							
	No. circuits/compressors		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
Hydraulic circuit	Water flow	m^3/h	16.4	18.5	20.1	21.5	23.0	24.5	25.8	27.0
	Type of heat exchanger		Stainless steel brazed plates (standard)/Shell and tube (optional)							
	Hydraulic connections		2 1/2"	2 1/2"	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80
	Buffer tank capacity -vers. H	litres	in separate module		375					
Outdoor fan	Outdoor airflow	m^3/h	28000	39000	39000	39000	39000	39000	39000	39000
	No. x Type of fan		2 x Axial 800 AC							
	Fan speed	rpm	660/480	900/700	900/700	900/700	900/700	900/700	900/700	900/700
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	49.9	54.6	54.6	55.5	55.5	56.2	56.2	56.2
Weights	Empty weight	kg	840	846	1048	1069	1096	1343	1354	1365
	In-service weight	kg	865	871	1074	1096	1123	1371	1383	1395

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER, COP and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.

Series 5 - S/P

Series 61 - S/P

PACIFICA
technical data

ErP 2018 ErP 2021 160 - 318 kW

KWE models			6200	6210	6240	6270	6300	6340	6380
Cooling only version (R)									
Cooling	Cooling capacity (1)	kW	162.6	187.8	213.2	235.7	262.4	289.2	317.9
		TR	46.5	53.5	61	67	75	82.5	90.5
		kBTU/hr	555.0	641.0	727.6	804.1	895.4	986.9	1084.7
	Power input (2)	kW	54.4	58.9	67.0	75.3	85.2	98.1	111.1
	EER (3)	(W/W)	3.0	3.2	3.2	3.1	3.1	2.9	2.9
		BTU/(Wxhr)	10.2	10.9	10.9	10.7	10.5	10.1	9.8
	ESEER (3)		5.1	5.4	5.4	5.3	5.4	5.2	5.0
	SEER (4)		4.7	5.0	5.1	5.1	5.1	5.0	5.0
	ηs,c (5)		178%	193%	195%	194%	198%	193%	191%
	SEPR (7°C) (6)		5.7	6.1	6.1	6.1	6.2	6.1	6.1
	SEPR (-8°C) (6)		3.8	4.2	4.2	4.2	4.3	4.2	4.1
	IPLV (7)	kW/TR	0.64	0.60	0.60	0.60	0.61	0.62	0.63
		BTU/(Wxhr)	18.4	19.7	19.7	19.6	19.3	19.0	18.8
Heat pump version (I)									
Cooling mode	Cooling capacity (1)	kW	160.5	185.3	210.3	232.4	258.8	285.1	313.2
	Power input (2)	kW	55.8	60.5	68.9	77.4	87.6	100.4	113.8
	EER (3)	W/W	2.9	3.1	3.1	3.0	3.0	2.8	2.8
	ESEER (3)		4.3	4.7	4.8	4.7	4.8	4.9	4.8
	SEER (4)		4.5	4.9	4.9	4.9	5.0	5.0	5.0
	ηs,c (5)		172%	187%	189%	188%	191%	193%	190%
	SEPR (7°C) (6)		5.6	5.9	6.0	6.0	6.1	6.1	6.0
	SEPR (-8°C) (6)		3.6	4.0	4.1	4.1	4.1	4.2	4.1
	IPLV (7)	kW/TR	0.66	0.62	0.62	0.62	0.63	0.62	0.63
		BTU/(Wxhr)	17.7	19.1	19.2	19.0	18.8	19.0	18.7
Heating mode	Heating capacity (8)	kW	179.2	207.9	234.8	265.5	296.3	341.8	387.2
	Power input (2)	kW	51.1	59.1	66.0	74.2	84.0	96.3	109.1
	COP (3)	W/W	3.5	3.5	3.6	3.6	3.5	3.6	3.5
	SCOP warmer climate (4)		4.4	4.4	4.5	4.6	4.5	4.6	4.6
	ηs,h warmer climate (5)		166%	170%	173%	174%	171%	178%	178%
	ηs,h average climate with EC fan (5)		140%	141%	143%	144%	142%	142%	142%
Technical characteristics									
Power supply			400 V/III/50 HZ with neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088						
	Type of compressor		Hermetic tandem scroll						
	No. circuits/compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4
	No. power stages		4	4	4	4	4	4	4
Hydraulic circuit	Water flow	m^3/h	28.0	32.4	36.7	40.6	45.2	49.8	54.8
	Type of heat exchanger		Stainless steel brazed plates (standard)/Shell and tube (optional)						
	Hydraulic connections		DN 80	DN 80	DN 80	DN 80	DN 100	DN 100	DN 100
	Buffer tank capacity -vers. H	litres	375						
Outdoor fan	Outdoor airflow	m^3/h	58500	58500	58500	58500	78000	83600	83600
	No. x Type of fan		3 x Axial 800 AC				4 x Axial 800 AC	(2 AC + 2 EC) x Axial 800	
	Fan speed	rpm	900/700	900/700	900/700	900/700	900/700	900/700	900/700
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	57.5	57.7	58	58.3	59.2	59.2	59.2
Weights	Empty weight	kg	1650	1750	1805	1865	2154	2205	2265
	In-service weight	kg	1686	1786	1842	1903	2196	2249	2310

(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

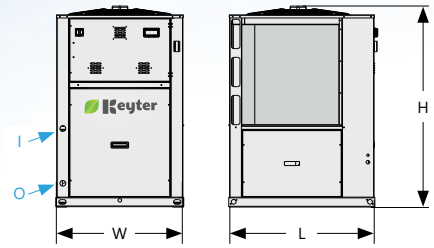
Series 62 - S/P

Series 63 - S/P

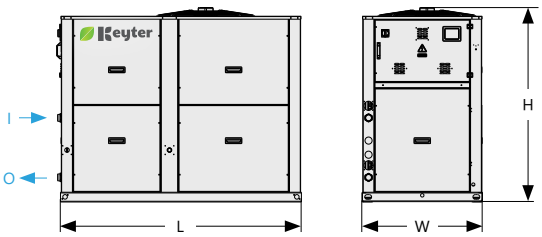
PACIFICA
dimensions

Dimensions of the standard version (S) and the version with hydraulic kit (P):

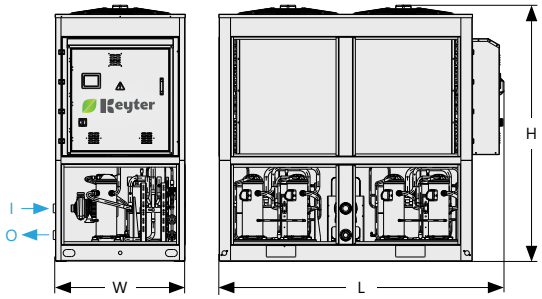
series 2



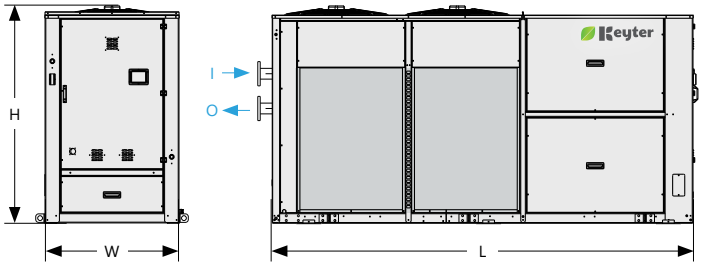
series 3-4



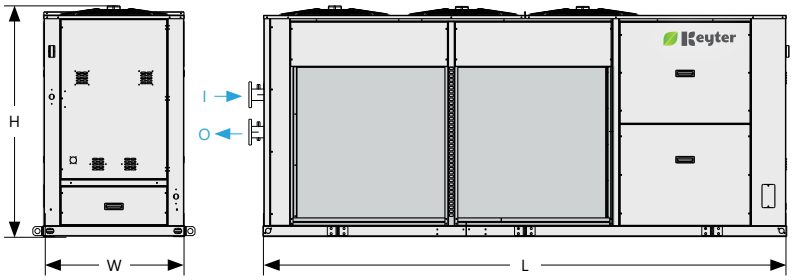
series 5



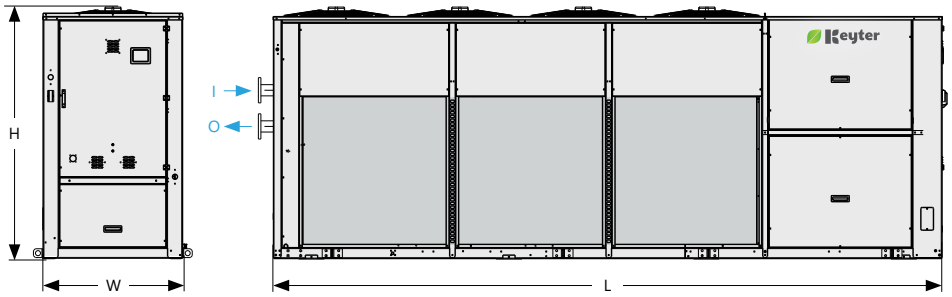
series 6 (models 6130 to 6180)



series 6 (models 6200 to 6270)



series 6 (models 6300 to 6380)

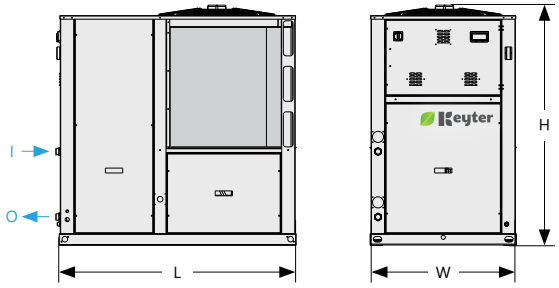


Dimensions of the standard version (S) and the version with hydraulic kit (P)							
	Series 2	Series 3	Series 4	Series 5 (version S)	Series 6 (models 61xx)	Series 6 (models 62xx)	Series 6 (models 63xx)
L	1200	2100	2100	2412	3470	4370	5300
W	1050	1050	1050	1100	1100	1100	1100
H	1725	1395	1695	2176	1795	1795	1995

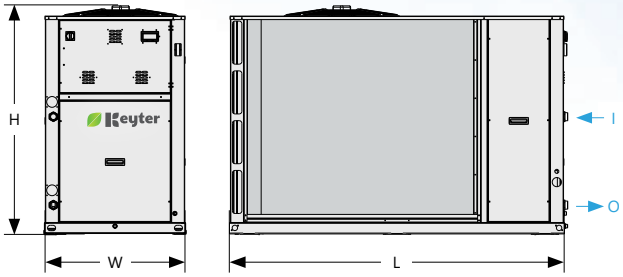
PACIFICA dimensions

Dimensions of version with hydraulic kit and buffer tank (H):

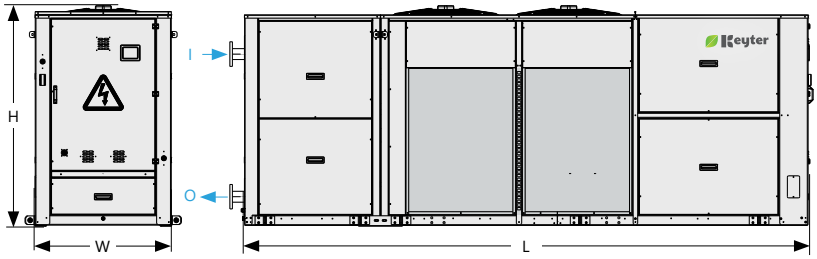
series 2



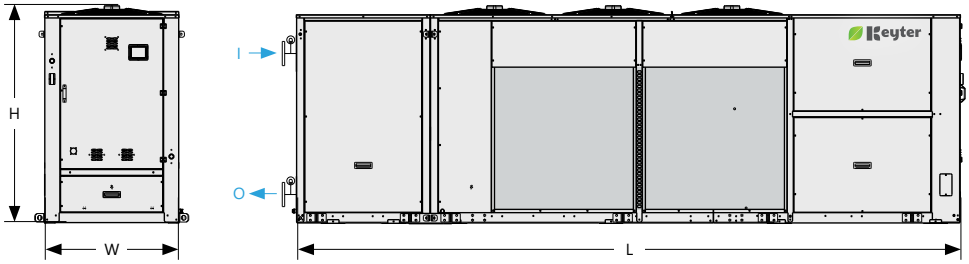
series 3-4



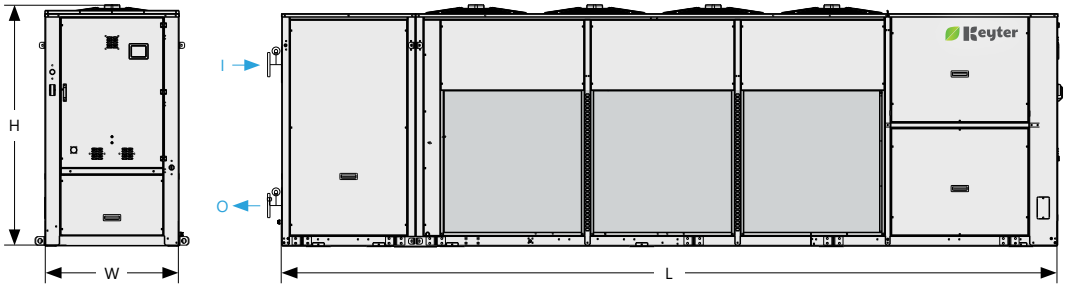
series 6 (models 6130 to 6180)



series 6 (models 6200 to 6270)



series 6 (models 6300 to 6380)



Dimensions of version with hydraulic unit and buffer tank (H)						
	Series 2	Series 3	Series 4	Series 6 (models 61xx)	Series 6 (models 62xx)	Series 6 (models 63xx)
L	1700	2490	2490	4580	5480	6410
W	1050	1050	1050	1100	1100	1100
H	1725	1395	1695	1795	1795	1995

In series 5, the buffer tank is always assembled as an optional independent module.

For the option of an independent module with 375 L capacity buffer tank, see prod. dimensions.
For an independent module with 725 L capacity buffer tank, see module dimensions on page 105.

PACIFICA SILENCE

Keyter PACIFICA SILENCE

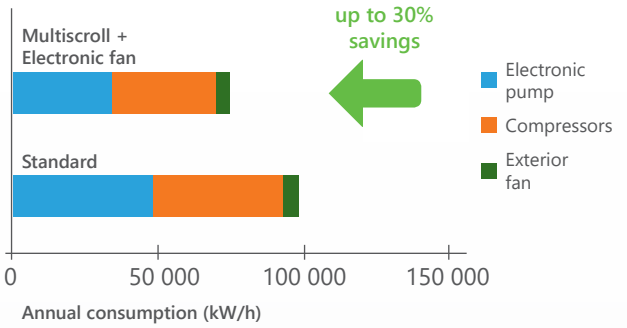
Energy efficiency - Multiscroll technology

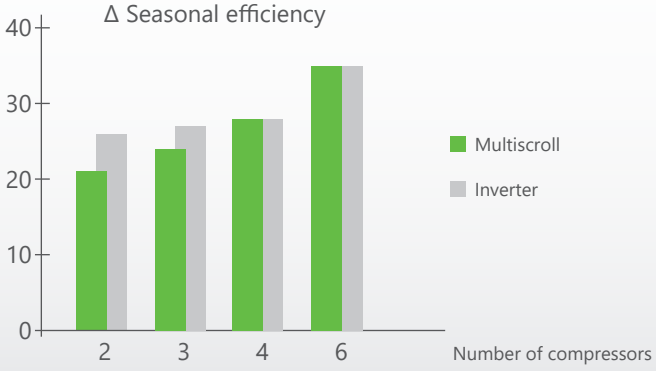
Multi-Scroll

Multiscroll technology combined with electronic expansion valves (EEVs) and EC axial fans enable us to meet the maximum energy efficiency standards with a robust, reliable solution.

With this solution, immediate benefits are gained in the operation of large centralised facilities, creating synergies that enable substantial savings up to 30% of the energy consumed.

The seasonal efficiency of tandem multiscroll units based on four AC scroll compressors is similar to that of equipment with inverter compressors. For units with fewer than four compressors, a high SEER is achieved thanks to the Inverter technology with refrigerant flow regulation.





PACIFICA SILENCE
technical data

100 - 164 kW

KWE models			7105	7117	7130	7140	7148	7156	7180
Cooling only version (R)									
	Cooling capacity (1)	kW	103.0	114.2	122.8	131.4	140.6	149.7	164.4
		TR	29.5	32.5	35	37.5	40	43	47
		kBTU/hr	351.3	389.7	419.0	448.4	479.6	510.9	560.9
	Power input (2)	kW	29.0	35.0	39.5	44.1	45.1	45.6	54.1
	EER (3)	(W/W)	3.6	3.3	3.1	3.0	3.1	3.3	3.0
		BTU/(Wxhr)	12.1	11.1	10.6	10.2	10.6	11.2	10.4
Cooling	ESEER (3)		5.6	5.2	5.1	5.0	5.1	5.6	5.2
	SEER (4)		5.1	4.8	4.7	4.7	4.8	5.5	5.1
	ηs,c (5)		194%	184%	182%	180%	186%	211%	197%
	SEPR (7°C) (6)		6.1	5.8	5.8	5.8	5.9	6.5	6.2
	SEPR (-8°C) (6)		4.2	3.9	3.9	3.8	4.0	4.6	4.3
	IPLV (7)	kW/TR	0.60	0.63	0.64	0.64	0.63	0.57	0.60
		BTU/(Wxhr)	20.0	18.9	18.7	18.6	19.0	20.8	19.6
Heat pump version (I)									
	Cooling capacity (1)	kW	99.8	110.7	119.0	127.2	136.2	145.1	159.4
	Power input (2)	kW	29.6	35.7	40.3	45.0	46.0	47.9	56.7
	EER (3)	W/W	3.4	3.1	2.9	2.8	3.0	3.0	2.8
	ESEER (3)		4.7	4.5	4.4	4.4	4.5	5.0	4.6
Cooling mode	SEER (4)		4.9	4.6	4.6	4.5	4.7	5.2	4.8
	ηs,c (5)		187%	177%	175%	173%	178%	198%	184%
	SEPR (7°C) (6)		5.9	5.7	5.6	5.6	5.7	6.2	5.9
	SEPR (-8°C) (6)		4.0	3.8	3.7	3.7	3.8	4.3	3.9
	IPLV (7)	kW/TR	0.62	0.65	0.66	0.67	0.65	0.60	0.64
		BTU/(Wxhr)	19.3	18.2	18.0	17.9	18.3	19.7	18.3
	Heating capacity (8)	kW	112.1	126.8	138.8	153.5	158.7	166.5	184.1
	Power input (2)	kW	31.2	36.1	37.6	40.2	44.7	47.6	53.3
Heating mode	COP (3)	W/W	3.6	3.5	3.7	3.8	3.6	3.5	3.5
	SCOP average climate (4)		3.4	3.4	3.5	3.7	3.5	3.6	3.5
	ηs,h average climate (5)		128%	126%	133%	139%	131%	137%	133%
Technical characteristics									
Power supply			400 V/III/50 HZ with neutral						
	Refrigerant fluid/GWP	Kg CO_2	R410A/2088						
Refrigerant circuit	Type of compressor		Hermetic tandem scroll						
	No. circuits/compressors		2/4	2/4	2/4	2/4	2/4	2/4	2/4
	No. power stages		4	4	4	4	4	4	4
	Water flow	m^3/h	17.7	19.7	21.2	22.6	24.2	25.8	28.3
Hydraulic circuit	Type of heat exchanger		Stainless steel brazed plates						
	Hydraulic connections		DN 80	DN 80	DN 80	DN 80	DN 80	DN 80	DN 80
	Outdoor airflow	m^3/h	39000	39000	39000	39000	39000	56000	56000
Outdoor fan	No. x Type of fan		2 x Axial 800 AC					4 x Axial 800 AC	
	Fan speed	rpm	900/700	900/700	900/700	900/700	900/700	660/480	660/480
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	50.5	50.5	50.1	50.9	51	52.8	53
Weights	Empty weight	kg	1350	1375	1400	1446	1465	1485	1535
	In-service weight	kg	1375	1400	1426	1473	1492	1513	1564

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER, COP and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Series 7

PACIFICA SILENCE
technical data

ErP 2018 ErP 2021 190 - 329 kW

KWE models			8210	8234	8270	9300	9312	9360
Cooling only version (R)								
	Cooling capacity (1)	kW	197.1	224.6	246.6	270.1	299.5	328.8
		TR	56	64	70.5	77	85.5	93.5
		kBTU/hr	672.6	766.4	841.4	921.6	1021.8	1121.9
	Power input (2)	kW	62.0	69.6	81.2	86.9	91.2	106.5
	EER (3)	(W/W)	3.2	3.2	3.0	3.1	3.3	3.1
		BTU/(Wxhr)	10.9	11.0	10.4	10.6	11.2	10.5
Cooling	ESEER (3)		5.7	5.7	5.2	5.6	5.7	5.7
	SEER (4)		5.6	5.5	5.2	5.5	5.6	5.3
	ηs,c (5)		216%	214%	202%	214%	218%	206%
	SEPR (7°C) (6)		6.7	6.6	6.3	6.6	6.7	6.4
	SEPR (-8°C) (6)		4.7	4.7	4.4	4.7	4.8	4.5
	IPLV (7)	kW/TR	0.55	0.56	0.59	0.56	0.56	0.58
		BTU/(Wxhr)	21.3	20.9	19.9	21.1	21.2	20.3
Heat pump version (I)								
	Cooling capacity (1)	kW	190.8	217.6	239.1	262.8	290.2	318.8
	Power input (2)	kW	65.3	71.9	85.1	91.7	95.8	113.4
	EER (3)	W/W	2.9	3.0	2.8	2.9	3.0	2.8
	ESEER (3)		5.1	5.1	4.7	5.0	5.1	4.7
Cooling mode	SEER (4)		5.2	5.3	4.9	5.2	5.3	4.9
	ηs,c (5)		201%	204%	188%	199%	204%	188%
	SEPR (7°C) (6)		6.3	6.4	6.0	6.2	6.4	6.0
	SEPR (-8°C) (6)		4.4	4.4	4.1	4.3	4.5	4.1
	IPLV (7)	kW/TR	0.59	0.59	0.63	0.60	0.59	0.63
		BTU/(Wxhr)	19.9	20.0	18.6	19.7	20.0	18.6
	Heating capacity (8)	kW	226.9	249.6	274.5	302.7	332.8	364.6
	Power input (2)	kW	58.6	72.9	83.7	86.3	96.1	108.6
Heating mode	COP (3)	W/W	3.9	3.4	3.3	3.5	3.5	3.4
	SCOP average climate (4)		4.0	3.6	3.4	3.7	3.6	3.5
	ηs,h average climate (5)		153%	136%	128%	138%	137%	131%
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral					
	Refrigerant fluid/GWP	Kg CO_2	R410A/2088					
Refrigerant circuit	Type of compressor		Hermetic tandem scroll					
	No. circuits/compressors		3/6	3/6	3/6	4/8	4/8	4/8
	No. power stages		6	6	6	8	8	8
	Water flow	m^3/h	34.0	38.7	42.5	46.5	51.6	56.6
Hydraulic circuit	Type of heat exchanger		Stainless steel brazed plates					
	Hydraulic connections		DN 100	DN 100	DN 100	DN 100	DN 100	DN 100
	Outdoor airflow	m^3/h	58500	84000	84000	112000	112000	112000
Outdoor fan	No. x Type of fan		3 x Axial 800 AC	6 x Axial 800 AC		8 x Axial 800 AC		
	Fan speed	rpm	900/700	660/480	660/480	660/480	660/480	660/480
Noise Level	Equipment sound pressure (Lp10) (9)	dB(A)	52.7	54.7	55	55.3	55.8	55.5
Weights	Empty weight	kg	2005	2095	2173	2970	3015	3085
	In-service weight	kg	2042	2133	2212	3018	3064	3135

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER, COP and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

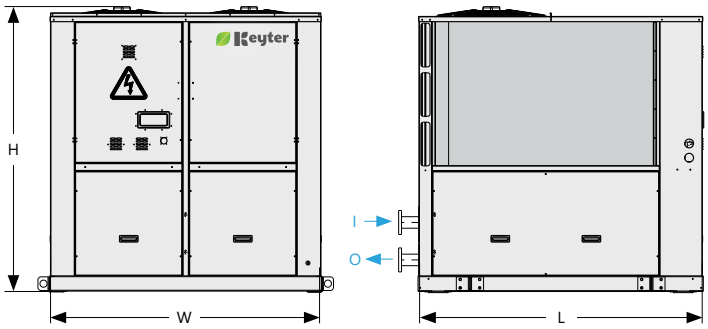
Series 8

Series 9

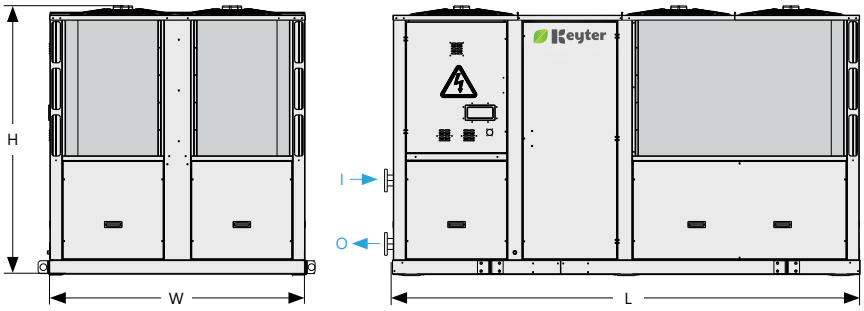
PACIFICA SILENCE dimensions

Dimensions of the standard version (S) and version with hydraulic kit (P):

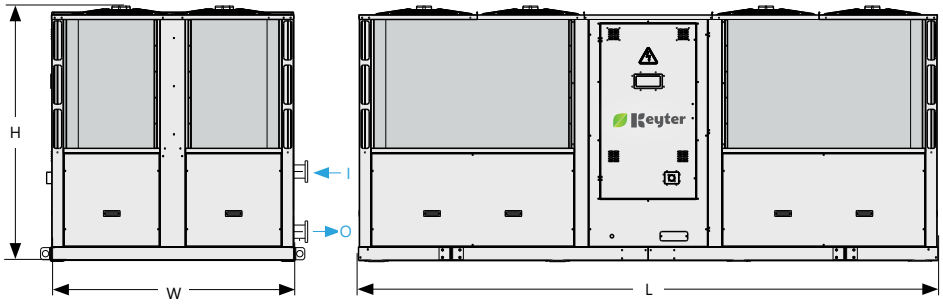
series 7



series 8

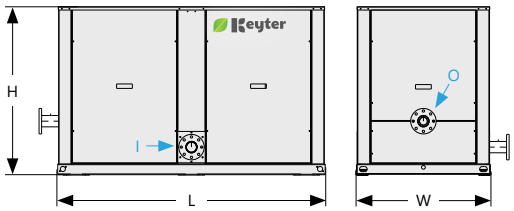


series 9



Dimensions of the standard version (S) and version with hydraulic kit (P)			
	Series 7	Series 8	Series 9
L	2200	3825	5000
W	2100	2100	2100
H	2197	2197	2197

Independent module dimensions for units with buffer tank:



Independent module (buffer tank)	
L	2100
W	1050
H	1319

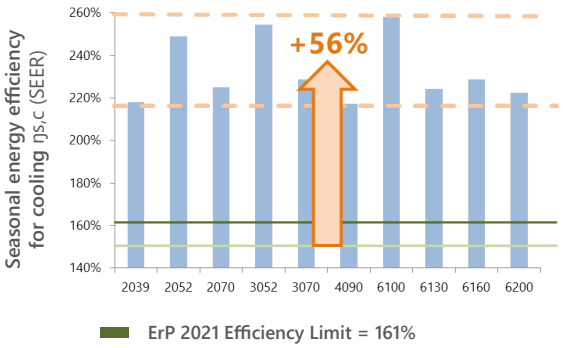
PACIFICA INVERTER
technical data

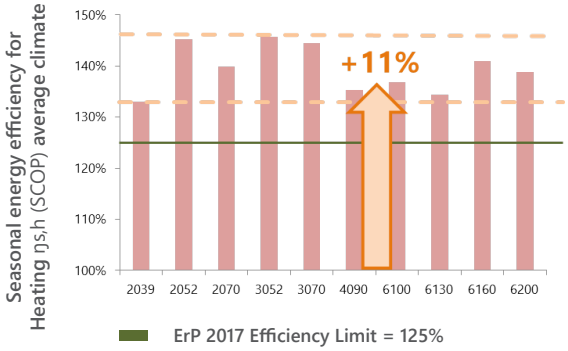
38 - 170 kW

KWE models			2039	2052	2070	3052	3070	4090	6100	6130	6160	6200
Cooling only version (R)												
Cooling	Cooling capacity (1)	kW	39.5	52.7	67.7	53.8	67.3	84.9	102.5	122.3	148.7	170.1
		TR	11	14.5	18.5	15	18.5	23.5	29	33.5	40.5	46.5
		kBTU/hr	134.7	179.9	231.0	183.7	229.6	289.7	349.7	417.3	507.4	580.5
	Power input (2)	kW	11.1	13.7	20.6	13.5	20.2	26.5	28.2	37.6	44.4	51.7
	EER (3)	(W/W)	3.5	3.9	3.3	4.0	3.3	3.2	3.6	3.2	3.3	3.3
		BTU/(Wxhr)	12.1	13.2	11.2	13.6	11.4	10.9	12.4	11.1	11.4	11.2
	SEER (4)		5.7	6.4	5.8	6.6	5.9	5.6	6.7	5.8	5.9	5.8
	ηs,c (5)		218%	249%	225%	255%	228%	217%	258%	224%	229%	222%
	SEPR (7°C) (6)		6.6	7.3	6.8	7.5	6.9	6.6	7.7	6.8	7.0	6.8
	SEPR (-8°C) (6)		4.6	5.4	4.9	5.6	5.0	4.7	5.7	4.9	5.0	4.9
	IPLV (7)	kW/TR	0.6	0.5	0.6	0.5	0.6	0.6	0.5	0.6	0.6	0.6
		BTU/(Wxhr)	19.2	21.5	19.5	22.0	19.8	18.5	21.9	19.1	19.4	18.6
Heat pump version (I)												
Cooling mode	Cooling capacity (1)	kW	38.3	51.1	65.5	52.2	65.2	82.3	101.1	120.6	146.6	168.0
	Power input (2)	kW	11.4	14.0	21.1	13.8	20.6	27.0	29.1	38.9	45.7	53.1
	EER (3)	W/W	3.4	3.7	3.1	3.8	3.2	3.0	3.5	3.1	3.2	3.2
	SEER (4)		5.4	6.2	5.6	6.3	5.7	5.4	6.4	5.6	5.7	5.5
	ηs,c (5)		210%	239%	215%	245%	219%	208%	249%	216%	221%	214%
	SEPR (7°C) (6)		6.4	7.1	6.6	7.2	6.7	6.4	7.4	6.6	6.8	6.6
	SEPR (-8°C) (6)		4.5	5.2	4.7	5.3	4.7	4.5	5.5	4.7	4.9	4.7
	IPLV (7)	kW/TR	0.6	0.6	0.6	0.6	0.6	0.7	0.6	0.6	0.6	0.7
		BTU/(Wxhr)	18.5	20.8	18.7	21.2	19.0	17.8	21.2	18.4	18.8	18.0
Heating mode	Heating capacity (8)	kW	42.2	55.7	73.2	55.8	74.4	92.2	107.5	133.0	161.4	179.6
	Power input (2)	kW	10.8	14.4	19.8	14.4	19.5	25.7	30.7	36.7	43.0	47.5
	COP (3)	W/W	3.9	3.9	3.7	3.9	3.8	3.6	3.5	3.6	3.8	3.8
	SCOP average climate (4)		3.5	3.8	3.7	3.8	3.8	3.6	3.6	3.6	3.7	3.7
	ηs,h average climate (5)		133%	145%	140%	146%	145%	135%	137%	134%	141%	139%
Technical characteristics												
Power supply			400 V/III/50 HZ with neutral									
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088									
	Type of compressor		Inverter									
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	Power stage control		Modulating control 25-100%						Modulating control 12.5-100%			
Hydraulic circuit	Water flow	m³/h	6.6	8.8	11.3	9.0	11.2	14.2	17.4	20.8	25.3	28.9
	Type of heat exchanger		Stainless steel brazed plates									
	Hydraulic connections		1 1/2"	2"	2"	2"	2"	2"	2 1/2"	DN80	DN80	DN80
Outdoor fan	Outdoor airflow	m³/h	22000	22000	22000	22000	22000	22000	44000	44000	44000	66000
	No. x Type of fan		1 x Axial 800 EC						2 x Axial 800 EC			3 x Axial 800 EC
Equipment sound pressure (Lp10) (9)		dB(A)	46.9	47.8	52.6	47.8	52.3	55.6	49.9	54.6	56.2	57.5
Weights	Empty weight	kg	371	448	482	530	561	639	865	1079	1383	1700
	In-service weight	kg	385	465	487	547	581	662	890	1105	1411	1736

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Seasonal energy efficiency

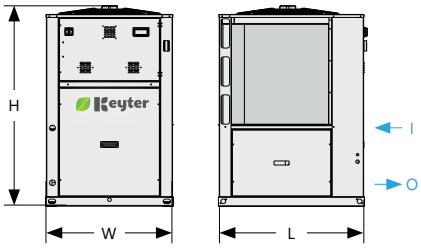




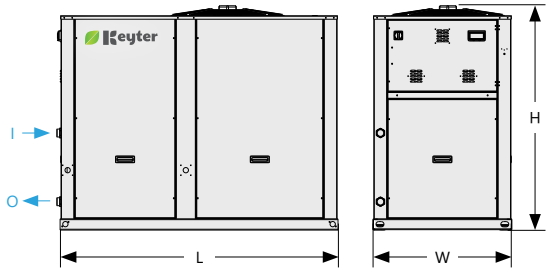
PACIFICA INVERTER dimensions

Dimensions:

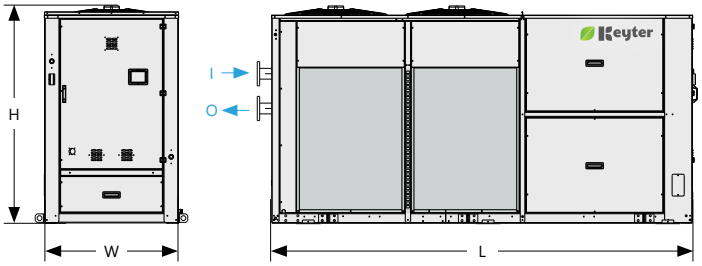
Standard version (S) and version with hydraulic kit (P):
series 2



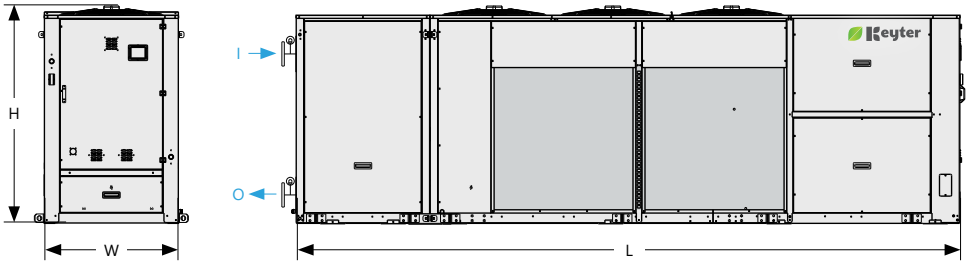
series 3-4



series 6 (models 6100 to 6160)



series 6 (models 6200 to 6270)



Dimensions of the standard version (S) and version with hydraulic kit (P)					
	Series 2	Series 3	Series 4	Series 61xx	Series 62xx
L	1200	2100	2100	3470	4370
W	1050	1050	1050	1100	1100
H	1725	1395	1695	1795	1795
Dimensions of version with hydraulic kit and buffer tank (H)					
	Series 2	Series 3	Series 4	Series 61xx	Series 62xx
L	1700	2490	2490	4580	5480
W	1050	1050	1050	1100	1100
H	1725	1395	1695	1795	1795

ARGIA

CHILLERS AND HEAT PUMPS
air-to-water

28 - 244 kW
30 - 247 kW

Multi-Scroll

ACS

T

R134a

R513A

Adaptation and Versatility

- Versions with hydraulic kit and built-in buffer tank to reduce the frequency of compressor stops and starts
- Available with Plate or Shell and tube heat exchangers
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Equipment with operating range to deliver water at high temperatures up to +55°C

Low noise level

- Compressors in a closed compartment isolated from the airflow as standard, and acoustic jacket as option
- Low speed condensation axial fans and oversized outdoor coils resulting in improved efficiency and a very low noise level
- EC axial fans equipped with AxiTop diffusers for a very low noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic kit can include high-performance electronic pumps
- NEW hot gas partial and full heat reclaim system for sanitary hot water
- Water free-cooling system for free-cooling

Environment

- Optimised design for reduced refrigerant charge R-134a (ODP 0, GWP 1300)
- NEW availability of units with low GWP R-513A refrigerant (ODP 0, GWP 573)

Applications

Industry Logistics | Retail & Shopping centres | Culture | Hospitals

ARGIA
technical data

29 - 244 kW

KWH models			1030	1040	1050	1060	2075	2095	2115	3145	3165	3180	3210	3240	4210	4240
Cooling only version (R)																
Cooling	Cooling capacity (1)	kW	28.9	38.3	47.4	59.7	73.4	93.0	117.2	-	150.1	168.1	186.0	234.4	-	-
		TR	8.5	11	13.5	17	21	26.5	33.5	-	43	48	53	67	-	-
		kBTU/hr	98.7	130.8	161.9	203.7	250.6	317.3	399.9	-	512.3	573.5	634.7	799.7	-	-
	Power input (2)	kW	8.9	12.4	14.6	17.2	21.9	27.4	32.9	-	43.6	48.3	53.1	64.2	-	-
	EER (3)	(W/W)	3.3	3.1	3.2	3.5	3.4	3.4	3.6	-	3.4	3.5	3.5	3.7	-	-
		BTU/(Wxhr)	11.1	10.5	11.1	11.8	11.5	11.6	12.1	-	11.8	11.9	12.0	12.5	-	-
	SEER (4)		4.2	3.7	4.1	4.7	5.0	4.9	5.1	-	5.4	5.5	5.6	6.1	-	-
	ηs,c (5)		159%	140%	155%	180%	192%	186%	197%	-	207%	211%	214%	237%	-	-
	SEPR (7°C) (6)		5.3	4.8	5.2	5.8	6.1	6.0	6.2	-	6.5	6.6	6.7	7.2	-	-
	SEPR (-8°C) (6)		3.4	2.9	3.2	3.9	4.2	4.0	4.3	-	4.6	4.7	4.7	5.3	-	-
	IPLV (7)	BTU/(Wxhr)	15.6	14.1	15.2	17.6	18.5	17.8	19.0	-	19.0	19.3	19.5	21.7	-	-
Heat pump version (I)																
Cooling mode	Cooling capacity (1)	kW	28.0	37.2	46.0	58.0	71.1	90.2	113.7	128.8	145.5	162.9	-	-	189.9	243.9
	Power input (2)	kW	9.0	12.6	14.9	17.5	22.3	27.8	33.5	39.9	44.3	49.2	-	-	54.1	65.9
	EER (3)	W/W	3.1	3.0	3.1	3.3	3.2	3.2	3.4	3.2	3.3	3.3	-	-	3.5	3.7
	SEER (4)		4.0	3.6	3.9	4.5	4.8	4.7	4.9	4.9	5.2	5.3	-	-	6.0	6.6
	ηs,c (5)		154%	135%	149%	172%	184%	178%	189%	189%	199%	202%	-	-	233%	257%
	SEPR (7°C) (6)		5.1	4.7	5.0	5.6	5.9	5.8	6.0	6.0	6.3	6.4	-	-	7.1	7.7
	SEPR (-8°C) (6)		3.2	2.8	3.1	3.7	4.0	3.8	4.1	4.1	4.3	4.4	-	-	5.2	5.8
	IPLV (7)	BTU/(Wxhr)	15.1	13.6	14.7	16.9	17.7	17.1	18.2	17.3	18.2	18.5	-	-	20.5	22.9
Heating mode	Heating capacity (8)	kW	30.1	43.5	54.0	67.6	69.1	96.6	121.4	138.1	155.7	174.5	-	-	201.1	246.7
	Power input (2)	kW	8.7	12.9	15.2	17.9	20.3	27.0	32.3	38.6	42.9	47.5	-	-	52.3	63.5
	COP (3)	W/W	3.4	3.4	3.6	3.8	3.4	3.6	3.8	3.6	3.6	3.7	-	-	3.8	3.9
	SCOP warmer climate (4)		3.9	3.9	4.1	4.6	4.6	4.6	5.0	4.6	4.7	4.8	-	-	5.3	5.4
	ηs,h warmer climate (5)		149%	149%	158%	174%	175%	177%	191%	174%	181%	184%	-	-	203%	209%
	ηs,h average climate with EC fan (5)		121%	130%	132%	139%	139%	142%	151%	141%	144%	145%	-	-	152%	155%
Technical characteristics																
Power supply			400 V/III/50 HZ with neutral													
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300													
	Type of compressor		Hermetic tandem scroll													
	No. circuits/compressors		1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/4	2/4	2/4	2/4	2/4	2/4	2/4
	Power stage control		2	2	2	2	2	2	2	4	4	4	4	4	4	4
Hydraulic circuit	Water flow	m^3/h	5.0	6.6	8.2	10.3	12.6	16.0	20.2	22.2	25.9	29.0	32.0	40.4	32.7	42.0
	Type of heat exchanger		Stainless steel brazed plates													
	Hydraulic connections		1 1/2"	1 1/2"	2"	2"	2"	2 1/2"	DN80	DN80	DN80	DN80	DN80	DN80	DN80	DN80
Outdoor fan	Outdoor airflow	m^3/h	20000	20000	20000	20000	39000	39000	39000	58500	58500	58500	58500	58500	83600	83600
	No. x Type of fan		1 x Axial 800 AC				2 x Axial 800 AC			3 x Axial 800 AC					4 x Axial 800 EC/AC	
Equipment sound pressure (Lp10) (9)		dB(A)	49.9	54.6	54.6	54.6	49.9	54.6	54.6	57.5	57.7	58.0	58.0	58.0	58.5	59.2
Weights	Empty weight	kg	790	800	815	825	1400	1425	2000	2020	2040	2060	2030	2045.0	2705	2715
	In-service weight	kg	808	820	837	848	1426	1452	2028	2056	2076	2097	2068	2083.0	2749	2760

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35°C.
(2) Nominal power input by compressors and outdoor fans.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7°C DB/6°C WB.
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Options:

Keyter ARGIA range has the same options available as the Keyter PACIFICA units (see options on pages 94 and 95).

ARGIA
technical data

R513A ErP 2018 ErP 2021

29 - 243 kW

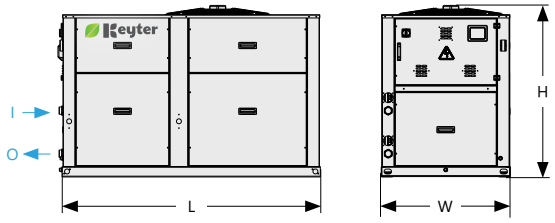
KWH models			1030	1040	1050	1060	2075	2095	2115	3145	3165	3180	3210	3240	4210	4240
Cooling only version (R)																
Cooling	Cooling capacity (1)	kW	28.9	38.2	47.4	59.6	73.3	92.8	117.0	-	149.8	167.7	185.6	233.9	-	-
		TR	8.5	11	13.5	17	21	26.5	33.5	-	43	48	53	66.5	-	-
		kBTU/hr	98.5	130.5	161.6	203.3	250.1	316.7	399.1	-	511.3	572.4	633.4	798.1	-	-
	Power input (2)	kW	9.2	12.8	15.1	17.8	22.7	28.4	34.2	-	45.2	50.2	55.1	66.7	-	-
	EER (3)	(W/W)	3.1	3.0	3.1	3.3	3.2	3.3	3.4	-	3.3	3.3	3.4	3.5	-	-
		BTU/(Wxhr)	10.7	10.2	10.7	11.4	11.0	11.2	11.7	-	11.3	11.4	11.5	12.0	-	-
	SEER (4)		4.1	3.6	4.0	4.6	4.8	4.7	4.9	-	5.2	5.3	5.4	5.9	-	-
	ηs,c (5)		154%	137%	151%	175%	185%	180%	190%	-	200%	203%	206%	228%	-	-
	SEPR (7°C) (6)		5.2	4.7	5.1	5.7	5.9	5.8	6.0	-	6.3	6.4	6.5	7.0	-	-
	SEPR (-8°C) (6)		3.2	2.8	3.1	3.7	4.0	3.9	4.1	-	4.4	4.5	4.5	5.1	-	-
	IPLV (7)	BTU/(Wxhr)	15.1	13.7	14.8	17.1	17.8	17.2	18.3	-	18.3	18.6	18.8	20.9	-	-
Heat pump version (I)																
Cooling mode	Cooling capacity (1)	kW	28.0	37.1	45.9	57.9	71.0	90.0	113.5	128.6	145.3	162.6	-	-	189.5	243.4
	Power input (2)	kW	9.3	13.0	15.4	18.1	23.2	28.9	34.8	41.4	46.0	51.0	-	-	56.2	68.4
	EER (3)	W/W	3.0	2.9	3.0	3.2	3.1	3.1	3.3	3.1	3.2	3.2	-	-	3.4	3.6
	SEER (4)		3.9	3.5	3.8	4.4	4.6	4.5	4.7	4.7	5.0	5.1	-	-	5.8	6.4
	ηs,c (5)		149%	132%	145%	167%	176%	172%	181%	182%	191%	195%	-	-	224%	247%
	SEPR (7°C) (6)		5.0	4.6	4.9	5.5	5.7	5.6	5.8	5.8	6.1	6.2	-	-	6.9	7.5
	SEPR (-8°C) (6)		3.1	2.7	3.0	3.6	3.8	3.7	3.9	3.9	4.2	4.2	-	-	5.0	5.5
	IPLV (7)	BTU/(Wxhr)	14.6	13.2	14.3	16.4	17.0	16.5	17.5	16.7	17.6	17.8	-	-	19.7	22.0
Heating mode	Heating capacity (8)	kW	31.7	45.7	56.7	71.0	72.7	101.6	127.6	145.2	163.7	183.4	-	-	211.3	259.2
	Power input (2)	kW	9.0	13.3	15.7	18.5	21.1	28.0	33.5	40.1	44.5	49.4	-	-	54.3	65.9
	COP (3)	W/W	3.5	3.4	3.6	3.8	3.5	3.6	3.8	3.6	3.7	3.7	-	-	3.9	3.9
	SCOP average climate (4)		3.0	3.0	3.2	3.4	3.4	3.5	3.7	3.4	3.5	3.6	-	-	4.0	4.0
	ηs,h average climate (5)		111%	112%	119%	130%	126%	131%	140%	129%	133%	135%	-	-	150%	154%
Technical characteristics																
Power supply			400 V/III/50 HZ with neutral													
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573													
	Type of compressor		Hermetic tandem scroll													
	No. circuits/compressors		1/2	1/2	1/2	1/2	2/2	2/2	2/2	2/4	2/4	2/4	2/4	2/4	2/4	2/4
	Power stage control		2	2	2	2	2	2	2	4	4	4	4	4	4	4
Hydraulic circuit	Water flow	m^3/h	5.0	6.6	8.2	10.3	12.6	16.0	20.1	22.1	25.8	28.9	32.0	40.3	32.6	41.9
	Type of heat exchanger		Stainless steel brazed plates													
	Hydraulic connections		1 1/2"	1 1/2"	2"	2"	2"	2 1/2"	DN80	DN80	DN80	DN80	DN80	DN80	DN80	DN80
Outdoor fan	Outdoor airflow	m^3/h	20000	20000	20000	20000	39000	39000	39000	58500	58500	58500	58500	58500	83600	83600
	No. x Type of fan		1 x Axial 800 AC				2 x Axial 800 AC			3 x Axial 800 AC					4 x Axial 800 EC/AC	
Equipment sound pressure (Lp10) (9)		dB(A)	49.9	54.6	54.6	54.6	49.9	54.6	54.6	57.5	57.7	58.0	58.0	58.0	58.5	59.2
Weights	Empty weight	kg	790	800	815	825	1400	1425	2000	2020	2040	2060	2030	2045.0	2705	2715
	In-service weight	kg	808	820	837	848	1426	1452	2028	2056	2076	2097	2068	2083.0	2749	2760

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Nominal power input by compressors and outdoor fans.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7ºC DB/6ºC WB.
(9) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

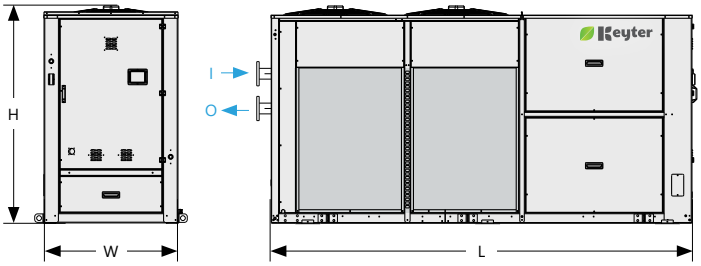
ARGIA dimensions

Dimensions:

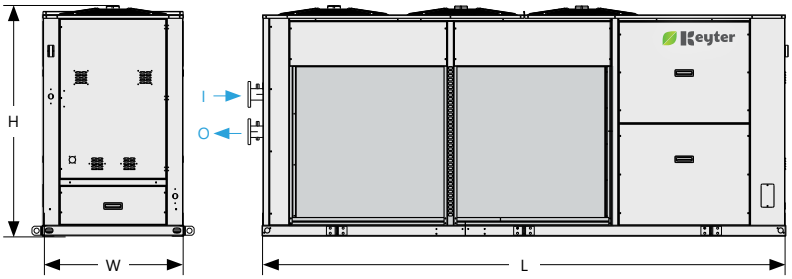
series 1



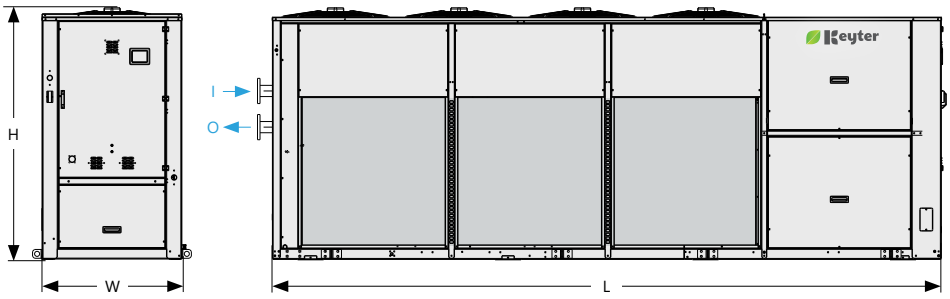
series 2



series 3



series 4



Dimensions of the standard version (S) and version with hydraulic kit (P)				
	Series 1	Series 2	Series 3	Series 4
L	2100	3470	4370	5300
W	1050	1100	1100	1100
H	1395	1795	1795	1995

ATLANTIA

CHILLERS AND HEAT PUMPS
air-to-water

101 - 678 kW
164 - 755 kW

Multi-Scroll

ACS

4T

R410A

R452B

Adaptation and Versatility

- Versions with hydraulic kit and built-in buffer tank to reduce the frequency of compressor stops and starts
- Available with Plate heat exchangers (KWA) or with Shell and tube heat exchangers (KWM)
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models.
- Maximum accessibility and easy maintenance via removable panels
- Water free-cooling system for free-cooling

Low noise level

- Triple acoustic insulation as option, with compressors insulated by acoustic jacket and mounted in closed structure with sound insulation
- Low speed condensation axial fans and oversized outdoor coils
- Electronic outdoor axial fans with AxiTop diffusers as option resulting in improved efficiency and a very low noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic kit can include high-performance electronic pumps
- NEW hot gas partial and full heat reclaim system for sanitary hot water
- MULTIPIPE units available for simultaneus delivery of cooling and heating

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of units with R-452B refrigerant (ODP 0, GWP 676)

Applications

Industry

Retail & Shopping centres

Hotels

and other applications, please consult us

ATLANTIA versions

Keyter ATLANTIA WA

Keyter ATLANTIA WM

Hydraulic versions

Keyter WA/WM - Standard version (S)

Equipment with no hydraulic kit.

WA units with plate heat exchanger and WM units with shell and tube heat exchanger and condensing pressure control by frequency drive.

The WA/WM units have triple protection for the heat exchanger, that includes as standard flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Keyter WA/WM - Version with hydraulic kit (P)

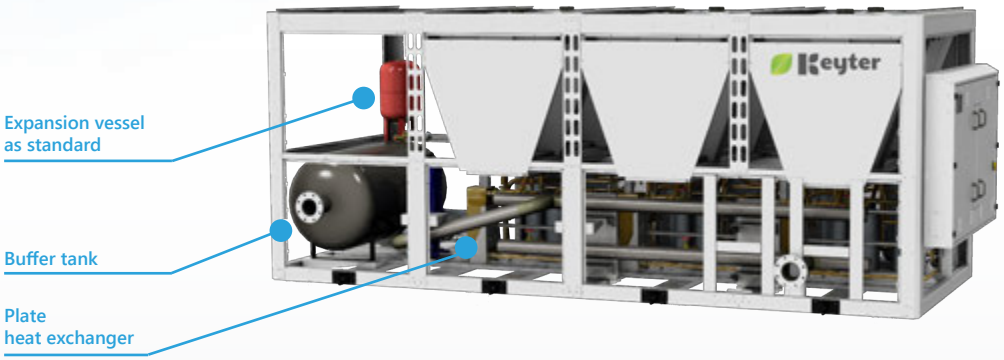
Integrated hydraulic kit composed of a circulation pump suitable for water or glycol water up to 0°C, purge and closing valves, pressure gauges and flow switch.

Low temperature kit is required for water temperatures below 0°C, which requires replacement of the pump and adds electrical heaters on hydraulic elements to operate with water temperature up to -10°C.

Keyter WA/WM - version with hydraulic kit and buffer tank (H)

ATLANTIA
versions

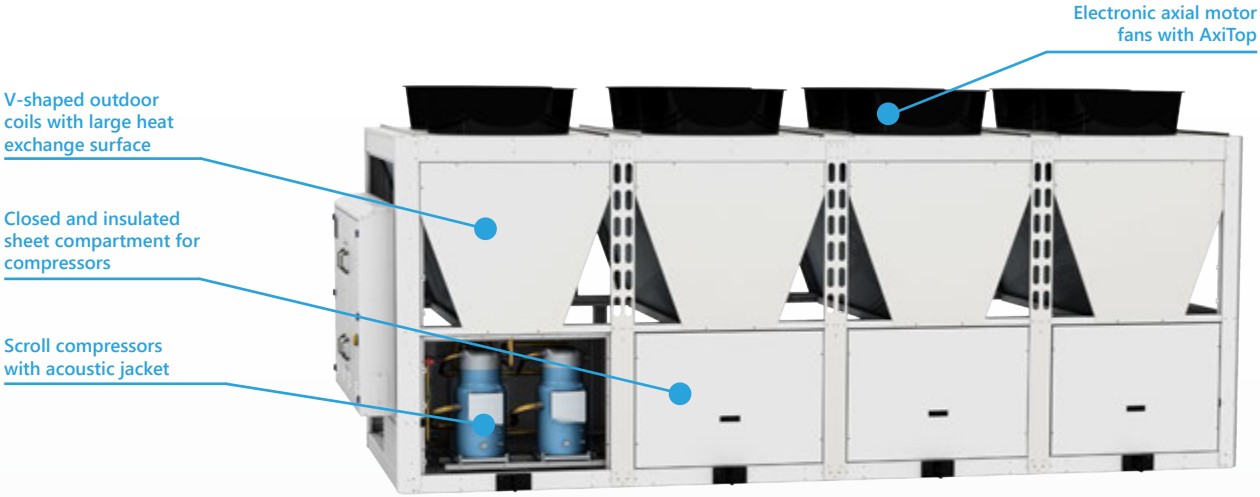
Version H - Hydraulic kit and buffer tank



Hydraulic kit built into the unit composed of a circulation pump suitable for water or glycol water up to 0°C, buffer tank with anti-freeze electrical heaters to reduce compressors short cycling, 50-litre expansion vessel, purge and closing valves, pressure gauges and flow switch.

Optionally, a module that is independent to the unit may be delivered, with a 725 litre capacity buffer tank and electrical heaters (see module on page 105).

Super Low Noise option



WA/WM units with Super Low Noise option, includes the following noise reduction options:

- Insulated compressors with acoustic jacket
- Compressors mounted in a fully closed, phonically insulated compartment
- Electronic axial fans, that adapt rotating speed based on the demand of the unit and therefore reduce the noise level
- AxiTop in axial fans: acoustic reduction elements and airflow diffusers in the outdoor fans, which, along with the electronic fan, provide an outdoor fan solution that is very advantageous in terms of efficiency and noise level
- Oversized outdoor coils in some models, which reduce the sound level even further, thanks to the reduction in the airflow required for the heat exchange in the coil.

ATLANTIA options

		KWA	KWM
Hydraulic			
Pumps	Normal available pressure single pump (7-12 mH2O)	●	●
	High available pressure single pump (15-20 mH2O)	●	●
	Very high available pressure single pump (25-30 mH2O)	●	●
	EC pump	●	●
	Back-up pump (standard, high and very high pressure)	●	●
Heat exchanger	Stainless steel plate heat exchanger	✓	–
	Shell and tube heat exchanger	–	✓
Hydraulic elements	Low temperature kit in the hydraulic kit	●	●
	Hydraulic inlet and outlet flexible connections	●	●
	Water filter	●	●
Energy			
	Electronic expansion valve	●	●
	Partial/full condensation heat reclaim	●	●
	Free-cooling	●	●
Anti-corrosion			
Coils	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)	●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating	●	●
	COPPERFIN: Copper tubes/Copper fins	●	●
Fans			
	AC axial fans	✓	–
	AC axial fans with variable speed drive	●	✓
	Condensing pressure control	✓	✓
	EC axial fans	●	●
	AxiTop diffusers	●	●
Installation			
	Anti-vibration mounts	●	●
	Outdoor condensate drain pan	✓	✓
	Electrical cabinet ventilation	✓	✓
	Voltage of 220 V/III ph/60 Hz; 380 V/III ph/60 Hz; 400 V/III ph/60 Hz; 460 V / III ph / 60 Hz	●	●
	Acoustic jacket for compressors	●	●
	Manufacturer's high-performance acoustic jacket for compressors	●	●
	Compressors in open sheet compartment	●	●
	Compressors in fully closed and insulated sheet compartment	●	●
	Insulation of all piping cold lines	●	●
	Anti-freeze electrical heater for low temperatures	●	●
	Coil protection grille	●	●
	Protection grille for access to the unit perimeter	●	●
Control			
	AQUAMANAGER platform	✓	✓
	pGD controller	✓	✓
	RS485 card for ModBus communication	●	●
	Master-slave management	●	●
	Plant Visor/Watch PRO supervision	●	●
	tERA supervision	●	●
	Bacnet/Lonworks communication	●	●
	Energy meter	●	●

✓ Included as standard ● Option – Not applicable

Codification:

KWA | | | **NS3W**

Series **Size** **Power**

I - Reversible heat pump
R - Cooling only

N - Scroll compressor
S - Standard / **P** - Hydraulic kit / **H** - Hydraulic kit with buffer tank
3 - 400 V/III/50 Hz without neutral
W - Refrigerant R410A / **B** - R452B

ATLANTIA
technical data

ErP 2021

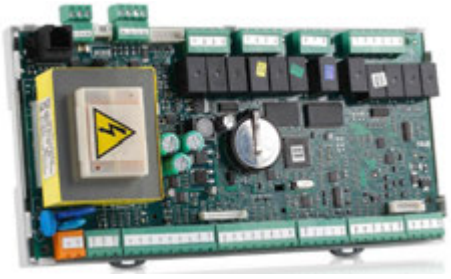
101 - 339 kW

KWA/KWM models			1100	1120	1150	1190	2210	2225	2240	2270	2300	2340	2380
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	101.2	111.2	135.6	169.5	165.0	193.8	222.5	246.9	271.2	305.1	338.9
		TR	29	32	39	48.5	47	55.5	63.5	70.5	77.5	87	96.5
		kBTU/hr	345.3	379.4	462.7	578.4	563.1	661.1	759.1	842.3	925.5	1040.9	1156.4
	Total power input (2)	kW	31.9	35.8	47.1	55.3	51.8	61.7	71.6	82.9	94.2	102.4	110.6
	EER (3)	W/W	3.2	3.1	2.9	3.1	3.2	3.1	3.1	3.0	2.9	3.0	3.1
		BTU/(hrxW)	10.8	10.6	9.8	10.5	10.9	10.7	10.6	10.2	9.8	10.2	10.5
	ESEER (3)		4.8	4.7	4.8	4.7	4.8	4.8	4.8	4.6	4.5	4.6	4.8
	SEER (4)		4.8	4.8	4.9	4.9	4.9	4.9	4.9	4.7	4.6	4.8	4.9
	ηs,c (5)		190%	189%	193%	192%	192%	192%	193%	186%	181%	188%	195%
	SEPR (-7ºC) (6)		6.0	5.9	5.6	5.9	6.2	6.0	5.9	5.7	5.5	5.7	5.9
	SEPR (+8ºC) (6)		3.6	3.5	3.4	3.6	3.6	3.6	3.5	3.4	3.3	3.5	3.6
Heat pump version (I)													
Cooling mode	Cooling capacity (1)	kW	100.2	110.4	134.6	168.2	163.9	192.3	220.8	245.0	269.2	302.8	336.4
	Total power input (2)	kW	31.4	36.5	48.0	56.3	52.7	62.8	73.0	84.5	96.0	104.3	112.7
	EER (3)	W/W	3.2	3.0	2.8	3.0	3.1	3.1	3.0	2.9	2.8	2.9	3.0
	ESEER (3)		4.4	4.3	4.2	4.4	4.7	4.7	4.7	4.5	4.4	4.5	4.7
	SEER (4)		5.0	4.7	4.5	4.5	5.0	4.9	4.7	4.5	4.3	4.4	4.5
	ηs,c (5)		198%	186%	176%	177%	198%	191%	186%	176%	168%	173%	177%
Heating mode	Heating capacity (7)	kW	113.3	131.0	162.1	188.8	191.1	226.6	262.0	283.6	305.3	342.7	377.6
	Total power input (2)	kW	27.6	31.9	42.0	49.1	46.5	55.2	63.9	73.9	83.9	92.7	98.1
	COP (3)	W/W	4.1	4.1	3.9	3.8	4.1	4.1	4.1	3.8	3.6	3.7	3.8
	SCOP average climate (4)		4.0	4.0	3.8	3.9	4.2	4.2	4.2	4.0	3.7	3.8	4.0
	ηs,h average climate (5)		151%	153%	146%	147%	159%	160%	161%	150%	142%	145%	152%
Technical characteristics													
Power supply			400 V/III/50 HZ without neutral										
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088										
	Type of compressor		Hermetic scroll										
	No. circuits/compressors		1/2	1/2	1/2	1/2	2/4	2/4	2/4	2/4	2/4	2/4	2/4
	No. power stages		2	2	2	2	4	4	4	4	4	4	4
Hydraulic circuit	Water flow	m^3/h	17.4	19.2	23.4	29.2	28.4	33.4	38.3	42.5	46.7	52.6	58.4
	KWA series type heat exchanger		Stainless steel brazed plates heat exchanger										
	KWM series type heat exchanger		-	-	-	-	Shell and tube heat exchanger						
	Hydraulic connections		VICTAULIC 3"			VICTAULIC 4"	DN80	DN80	DN80	DN80	DN80	DN100	DN100
Outdoor fan	Outdoor airflow	m^3/h	40500	40500	40500	40500	81000	81000	81000	81000	81000	81000	81000
	No. x Type of fan		2 x Axial 800 AC				4 x Axial 800 AC						
Sound pressure (Lp10) (8)		dB(A)	48	49	49	48	58	59	59	58	58	59	60
Weight KWA series		kg	1260	1280	1320	1380	2325	2400	2450	2485	2510	2605	2640

(1) Nominal cooling capacity for water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Nominal power input by compressors and outdoor fans.
(3) EER, COP and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency Ratio for chillers for the high temperature process in line with Ecodesign Regulation EU 2016/2281.
(7) Nominal heating capacity for a water inlet/outlet temp. 40/45°C and outdoor air temp. 7ºC DB/6ºC WB.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Electronic control:

Keyter ATLANTIA units include as standard AQUAMANAGER programmable electronic control, specifically developed for the management of air-to-water and water-to-water units with pGD1 user and maintenance terminal.



AQUAMANAGER

pGD1 terminal

ATLANTIA
technical data

331 - 678 kW

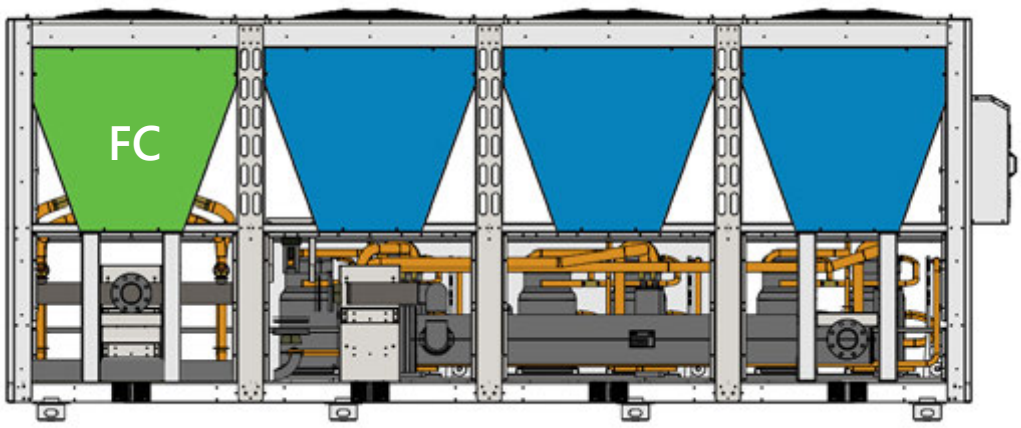
KWA/KWM models			3360	3390	3420	3450	3490	3530	3570	4480	4540	4600	4640	4680	4720	4760
Cooling only version (R)																
Cooling	Cooling capacity (1)	kW	333.7	358.1	382.5	406.8	440.7	474.5	508.3	444.9	493.7	542.5	576.3	610.1	644.0	677.8
		TR	95	102	109	116	125.5	135	144.5	126.5	140.5	154.5	164	173.5	183.5	193
		kBTU/hr	1138.7	1221.8	1305.0	1388.2	1503.7	1619.1	1734.6	1518.2	1684.6	1850.9	1966.4	2081.8	2197.3	2312.7
	Total power input (2)	kW	107.5	118.7	130.0	141.3	149.5	157.7	165.8	143.3	165.8	188.4	196.6	204.7	212.9	221.1
	EER (3)	W/W	3.1	3.0	2.9	2.9	2.9	3.0	3.1	3.1	3.0	2.9	2.9	3.0	3.0	3.1
		BTU/(hrxW)	10.6	10.3	10.0	9.8	10.1	10.3	10.5	10.6	10.2	9.8	10.0	10.2	10.3	10.5
	ESEER (3)		4.8	4.7	4.6	4.5	4.6	4.7	4.8	4.8	4.6	4.5	4.6	4.6	4.7	4.8
	SEER (4)		4.9	4.8	4.7	4.6	4.7	4.8	4.9	4.9	4.7	4.6	4.7	4.8	4.9	4.9
	ηs,c (5)		193%	188%	184%	181%	186%	190%	195%	193%	186%	181%	185%	188%	191%	195%
	SEPR (-7°C) (6)		5.9	5.8	5.6	5.5	5.6	5.8	5.9	5.9	5.7	5.5	5.6	5.7	5.8	5.9
	SEPR (+8°C) (6)		3.5	3.4	3.4	3.3	3.4	3.5	3.6	3.5	3.4	3.3	3.4	3.5	3.5	3.6
Heat pump version (I)																
Cooling mode	Cooling capacity (1)	kW	331.2	355.4	379.6	403.9	437.4	471.0	504.6	441.6	490.0	538.5	572.1	605.6	639.2	672.8
	Total power input (2)	kW	109.5	121.0	132.4	143.9	152.3	160.7	169.0	145.9	168.9	191.9	200.3	208.7	217.0	225.4
	EER (3)	W/W	3.0	2.9	2.9	2.8	2.9	2.9	3.0	3.0	2.9	2.8	2.9	2.9	2.9	3.0
	ESEER (3)		4.7	4.6	4.5	4.4	4.5	4.6	4.7	4.7	4.5	4.4	4.5	4.5	4.6	4.7
	SEER (4)		4.7	4.6	4.4	4.3	4.4	4.4	4.5	4.7	4.5	4.3	4.3	4.4	4.5	4.5
	ηs,c (5)		186%	179%	173%	168%	172%	175%	177%	186%	176%	168%	171%	173%	175%	177%
Heating mode	Heating capacity (7)	kW	392.9	414.6	436.3	458.0	494.1	530.3	566.4	523.9	567.3	610.7	646.8	682.9	719.1	755.2
	Total power input (2)	kW	95.8	105.8	115.8	125.9	133.0	140.1	147.2	127.7	147.8	167.8	174.9	182.0	189.1	196.2
	COP (3)	W/W	4.1	3.9	3.8	3.6	3.7	3.8	3.8	4.1	3.8	3.6	3.7	3.8	3.8	3.8
	SCOP average climate (4)		4.2	4.0	3.9	3.7	3.8	3.9	4.0	4.2	4.0	3.7	3.8	3.9	3.9	4.0
	ηs,h average climate (5)		161%	153%	147%	142%	146%	149%	152%	161%	150%	142%	145%	147%	150%	152%
Technical characteristics																
Power supply			400 V/III/50 HZ without neutral													
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088													
	Type of compressor		Hermetic scroll													
	No. circuits/compressors		3/6	3/6	3/6	3/6	3/6	3/6	3/6	4/8	4/8	4/8	4/8	4/8	4/8	4/8
	No. power stages		6	6	6	6	6	6	6	8	8	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	57.5	61.7	65.9	70.1	75.9	81.8	87.6	76.7	85.1	93.5	99.3	105.1	111.0	116.8
	KWA series type heat exchanger		Stainless steel brazed plates heat exchanger													
	KWM series type heat exchanger		Shell and tube heat exchanger													
	Hydraulic connections		DN100	DN100	DN100	DN100	DN100	DN125	DN125	DN125	DN125	DN125	DN125	DN125	DN125	DN150
Outdoor fan	Outdoor airflow	m^3/h	121500	121500	121500	121500	121500	121500	121500	162000	162000	162000	162000	162000	162000	162000
	No. x Type of fan		6 x Axial 800 AC							8 x Axial 800 AC						
Sound pressure (Lp10) (8)		dB(A)	60	60	60	61	61	62	62	62	63	62	63	63	64	64
Weight KWA series		kg	3410	3430	3490	3500	3610	3690	3770	4335	4395	4425	4495	4670	4750	4840

Free-cooling option

High efficiency option via an additional free-cooling module built into the unit.

This module makes it possible to benefit from the outdoor air energy when outdoor conditions are favourable, to exchange energy with the facility's water.

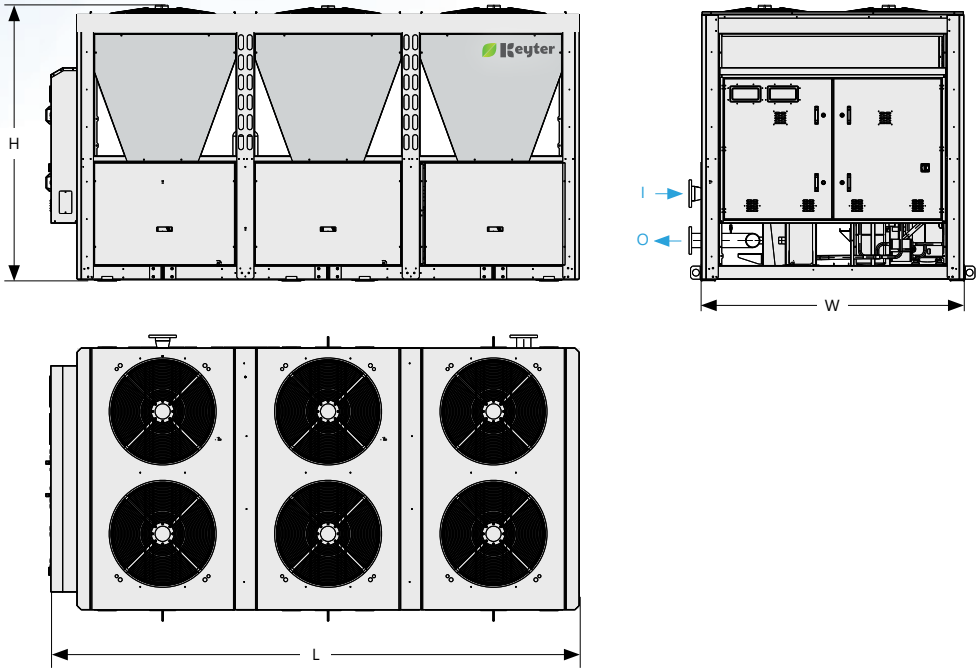
The module includes a three-way valve that sends water from the facility to the unit refrigerant circuit heat exchanger, or to the free-cooling outdoor coil if outdoor conditions are suitable, therefore resulting in a significant reduction in the unit total electricity consumption.



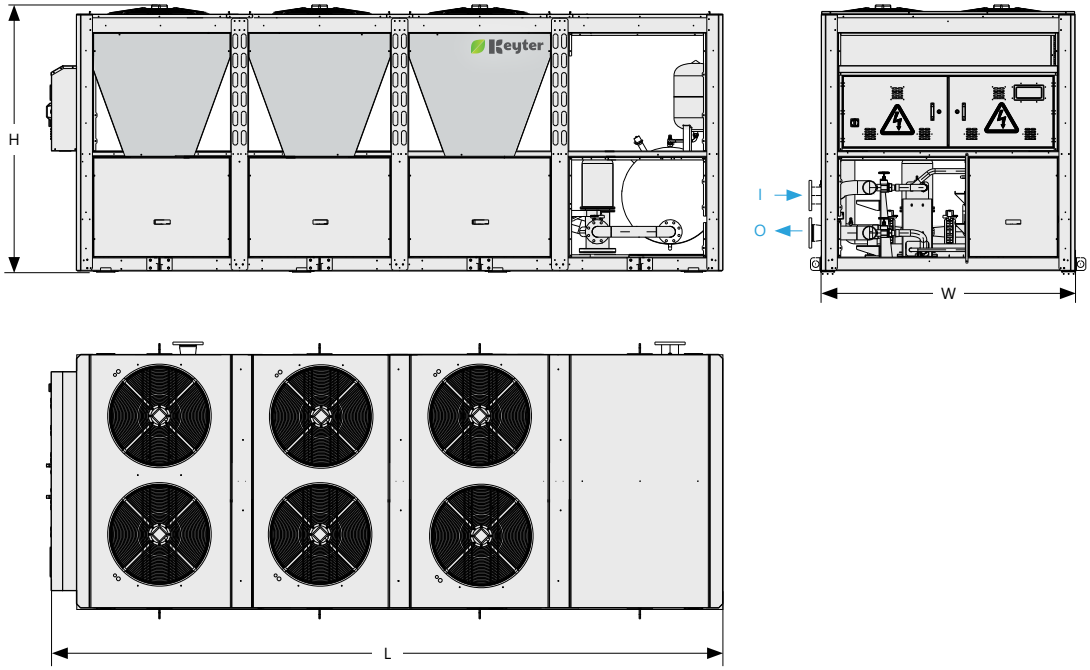
ATLANTIA
dimensions

Dimensions:

Standard version (S) and version with hydraulic kit (P):



Version with hydraulic kit and buffer tank (H):



Dimensions of the standard version (S) and version with hydraulic kit (P)				
	Series 1	Series 2	Series 3	Series 4
L	2412	2950	4200	5596
W	1100	2100	2100	2100
H	2300	2250	2250	2250
Dimensions of version with hydraulic kit and buffer tank (H)				
	Series 1	Series 2	Series 3	Series 4
L	-	4200	5596	6925
W	-	2100	2100	2100
H	-	2250	2250	2250

Series 1 units with hydraulic kit option and buffer tank, tank mounted in a separate module.

ATLANTIA POWER

CHILLERS
air-to-water

208 - 831 kW

Multi-Scroll

50 Hz
60 Hz

ACS

R410A

R452B

Adaptation and Versatility

- Versions with hydraulic kit and built-in buffer tank to reduce the frequency of compressor stops and starts
- Available with Plate heat exchangers (KWP) or Shell and tube heat exchanger (KWB)
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Triple acoustic insulation as option, with compressors insulated by acoustic jacket and mounted in closed structure with sound insulation
- EC axial fans with AxiTop diffusers as standard, resulting in improved efficiency and a very low noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- Electronic fans with AxiTop and electronic expansion valve as standard for minimal energy consumption
- Equipment with a hydraulic kit can include high-performance electronic pumps
- Hot gas partial and full heat reclaim system for sanitary hot water
- Water free-cooling system for free-cooling

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of unit with R-452B refrigerant (ODP 0, GWP 676)

Applications

Industry

Retail & Shopping centres

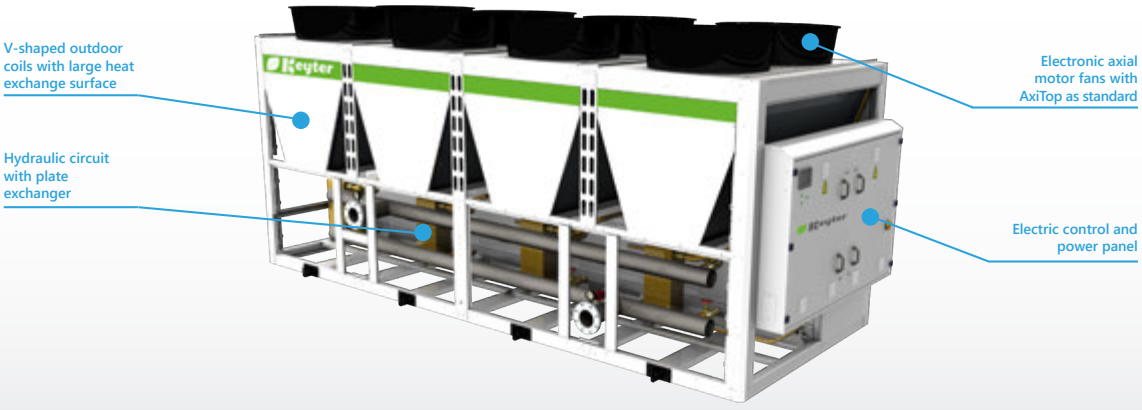
Culture

Hotels

ATLANTIA POWER versions

Keyter ATLANTIA POWER WB

Keyter ATLANTIA POWER WP



Hydraulic versions:

Keyter WB/WP - Standard version (S)

Equipment with no hydraulic kit.

The WB units have triple protection of shell and tube heat exchanger, that includes as standard flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Keyter WB/WP - Version with hydraulic kit (P)

Integrated hydraulic kit composed of a circulation pump suitable for water or glycol water to 0°C, purge and closing valves, pressure gauges and a flow switch.

Low temperature kit is required for water temperatures below 0°C, which requires replacement of the pump and adds electrical heater on hydraulic elements to operate with water temperature up to -10°C.

Keyter WB/WP - Version with hydraulic kit and buffer tank (H)

Built-in hydraulic kit, composed of a circulation pump suitable for water or glycol water up to 0°C, buffer tank with anti-freeze electrical heater to reduce compressors short cycling, 50-litre expansion vessel, purge and closing valves, pressure gauges and flow switch.

ATLANTIA POWER
technical data

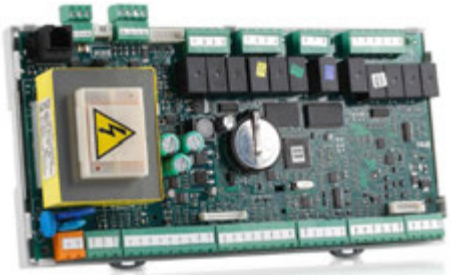
208 - 831 kW

KWB/KWP models			1240	2400	2420	2480	3620	3670	3720	4810	4860	4910	4960
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	207.6	351.6	374.2	415.3	540.8	581.9	622.9	707.4	748.4	789.5	830.6
		TR	59	100	106.5	118.5	154	165.5	177.5	201.5	213	224.5	236.5
		kBTU/hr	708.4	1199.7	1276.9	1417.0	1845.2	1985.4	2125.5	2413.6	2553.8	2693.9	2834.1
	Power input (2)	kW	74.3	113.8	131.1	148.7	187.8	205.4	223.0	244.5	262.1	279.7	297.4
	EER (3)	(W/W)	2.8	3.1	2.9	2.8	2.9	2.8	2.8	2.9	2.9	2.8	2.8
		BTU/(Wxhr)	9.5	10.5	9.7	9.5	9.8	9.7	9.5	9.9	9.7	9.6	9.5
	ESEER (3)			4.5	4.3	4.2	4.3	4.2	4.2	4.3	4.3	4.2	4.2
	SEER (4)			5.2	5.2	5.1	5.2	5.1	4.8	5.2	5.1	5.1	4.9
	ηs,c (5)			203%	205%	199%	205%	199%	189%	206%	202%	199%	195%
	Maximum outdoor operating temp.	ºC	+ 45										
Technical characteristics													
Power supply			400 V/III/50 HZ without neutral										
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088										
	Type of compressor		Hermetic tandem scroll										
	No. circuits/compressors		2/4	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	4	6	6	6	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	35.8	60.6	64.5	71.5	93.2	100.2	107.3	121.8	128.9	136.0	143.1
	KWB series type heat exchanger		-	Shell and tube									
	KWP series type heat exchanger		Stainless steel brazed plates										
	Hydraulic connections		VICTAULIC 4"	DN100	DN100	DN100	DN125	DN125	DN125	DN150	DN150	DN200	DN200
	Outdoor airflow	m^3/h	48000	98000	98000	98000	147000	147000	147000	196000	196000	196000	196000
Outdoor fan	Type of fan		Axial EC with AxiTop										
	No. x Fan diameter		2 x 800	4 x 800			6 x 800			8 x 800 AC			
Equipment sound pressure of Lp10 (6)		dB(A)	60	53	54	53	57	56	56	56	59	58	59
Weights	Empty weight	kg	1520	2905	2945	3055	4060	4095	4120	5210	5240	5280	5335

(1) Nominal cooling capacity with a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Nominal power input by compressors and outdoor fans.
(3) EER and ESEER calculated based on standard EN 14511-2013.
(4) Seasonal Energy Efficiency Ratio for cooling factor calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(6) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Electronic control:

Keyter ATLANTIA POWER units includes as standard AQUAMANAGER programmable electronic control, specifically developed for the management of air-to-water and water-to-water equipment, with pGD1 user and maintenance terminal.



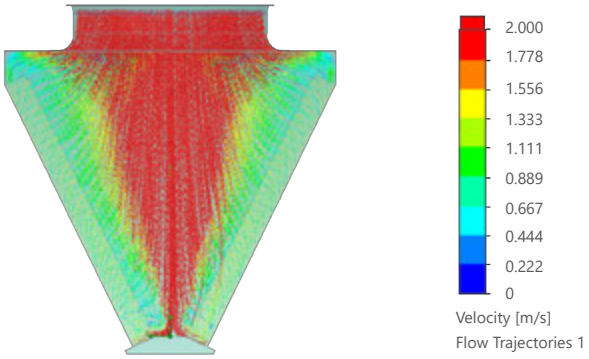
AQUAMANAGER

pGD1 terminal

Innovation and latest technology

Keyter Technologies is developing its products and researching and integrating trends and new developments to improve products and their energy efficiency.

To do so, and within an R&D&I effort that is constantly being developed in collaboration with technology centres and universities, studies have been conducted with dynamic simulation tools to perform a detailed in-depth analysis during the equipment design phase, resulting in an optimised design in terms of performance and energy efficiency.



Air velocity analysis in the coil of the unit

ATLANTIA POWER
options

		KWB	KWP
Hydraulic			
Pumps	Normal available pressure single pump (7-12 mH2O)	●	●
	High available pressure single pump (15-20 mH2O)	●	●
	Very high available pressure single pump (25-30 mH2O)	●	●
	Pump with variable speed drive	●	●
	Back-up pump (standard, high and very high pressure)	●	●
Heat exchanger	Stainless steel plate heat exchanger	–	✓
	Shell and tube heat exchanger	✓	–
Hydraulic elements	Low temperature kit in the hydraulic circuit	●	●
	Hydraulic inlet and outlet flexible connections	●	●
	Water filter	●	●
Energy			
	Electronic expansion valve	✓	✓
	Partial/full condensation heat reclaim	●	●
	Free-cooling	●	●
Anti-corrosion			
Coils	BLUECOAST: Copper tubes/Aluminium fins pre-lacquered with polyurethane (hydrophilic)	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)	●	●
	GREYCOAST: Copper tubes/Aluminium fins pre-lacquered with polymer (hydrophobic)	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating	●	●
	COPPERFIN: Copper tubes/Copper fins	●	●
Fans			
	Condensing pressure control	✓	✓
	EC axial fans	✓	✓
	AxiTop diffusers	✓	✓
Installation			
	Anti-vibration mounts	●	●
	Outdoor condensate drain pan	✓	✓
	Voltage of 220 V/III ph/60 Hz; 380 V/III ph/60 Hz; 400 V/III ph/60 Hz; 460 V / III ph / 60 Hz	●	●
	Electrical cabinet ventilation	✓	✓
	Acoustic jacket for compressors	●	●
	Manufacturer's high-performance acoustic jacket for compressors	●	●
	Compressors in open sheet compartment	●	●
	Compressors in fully closed and insulated sheet compartment	●	●
	Insulation of all piping cold lines	●	●
	Anti-freeze electrical heater for low temperatures	●	●
	Coil protection grille	●	●
	Protection grille for access to the unit perimeter	●	●
Control			
	AQUAMANAGER platform	✓	✓
	pGD controller	✓	✓
	RS485 card for ModBus communication	●	●
	Master-slave management	●	●
	Plant Visor/Watch PRO supervision	●	●
	tERA supervision	●	●
	Bacnet/Lonworks communication	●	●
	Energy meter	●	●

✓ Included as standard ● Option – Not applicable

Codification:

KWB | | | **NS3W**

Series **Size** **Power**

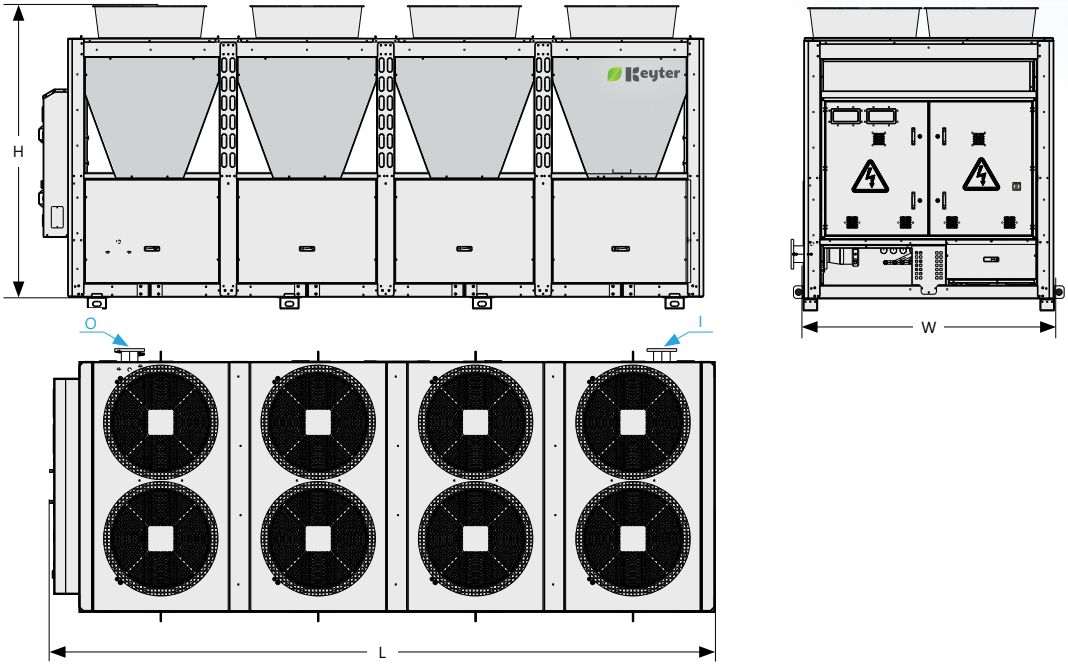
I - Reversible heat pump
R - Cooling only

N - Scroll compressor
S - Standard / **P** - Hydraulic kit / **H** - Hydraulic kit with buffer tank
3 - 400 V/III/50 Hz without neutral
W - Refrigerant R410A / **B** - R452B

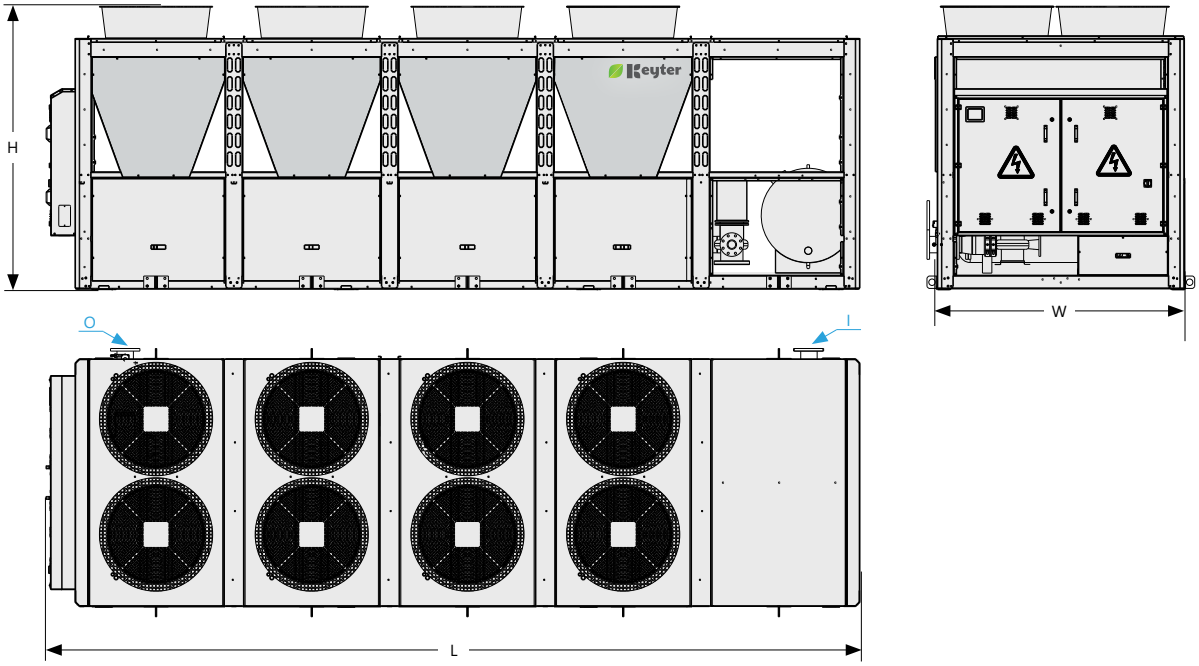
ATLANTIA POWER dimensions

Dimensions:

Standard version (S) and version with hydraulic kit (P):



Version with hydraulic kit and buffer tank (H):



Dimensions of the standard version (S) and version with hydraulic kit (P) (mm)				
	Series 1	Series 2	Series 3	Series 4
L	1100	2950	4272	5615
W	2100	2100	2100	2100
H	2500	2450	2450	2450
Dimensions of version with hydraulic kit and buffer tank (H) (mm)				
	Series 1	Series 2	Series 3	Series 4
L	-	4273	5596	6925
W	-	2100	2100	2100
H*	-	2450	2450	2450

*AxiTop is a removable component. The height of the unit without AxiTop is 2250 mm.

The buffer tank of models series 1 with hydraulic kit + buffer tank option, is mounted in a separate module.

NEMESIS

MODULAR CHILLERS
Enhanced flexibility!

100-208 kW x 5 to 1040 kW

Multi-Scroll | EC | 50 Hz 60 Hz

ACS

R410A | R452B

Adaptation and Versatility

- Modular chillers to help adapt to the facility, enabling access to modules via doors and lifts
- Available with plate heat exchangers
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Triple acoustic insulation as option, with compressors insulated by acoustic jacket and mounted in closed structure with sound insulation
- Low speed condensation axial fans and oversized outdoor coils
- Electronic outdoor axial fans with AxiTop diffusers as option resulting in improved efficiency and a very low noise level

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic kit can include high-performance electronic pumps
- Hot gas partial and full heat reclaim system for sanitary hot water
- Water free-cooling system for free-cooling

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of unit with R-452B refrigerant (ODP 0, GWP 676)

Applications

Industry | Retail & Shopping centres | Culture | Hotels

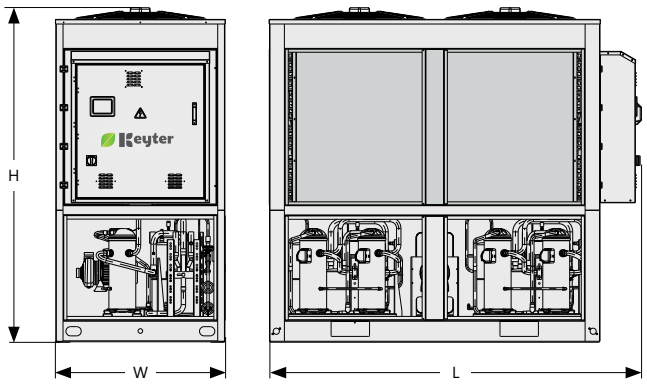
NEMESIS
technical data

101 - 208 kW

KWS models			1100	1120	1150	1190	1240
Cooling only version (R)							
Cooling	Cooling capacity (1)	kW	101.2	111.2	135.6	169.5	207.6
		TR	29	32	39	48.5	59
		kBTU/hr	345.3	379.4	462.7	578.4	708.4
	Power input (2)	kW	31.9	35.8	47.1	55.3	74.3
	EER (3)	(W/W)	3.1	3.1	2.9	3.1	2.8
		BTU/(hrxW)	10.8	10.6	9.8	10.5	9.5
	Maximum outdoor operating temp.	ºC	48	48	48	48	45
Technical characteristics							
Power supply			400 V/III/50 HZ with neutral				
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088				
	Type of compressor		Hermetic tandem scroll				
	No. circuits/compressors		1/2	1/2	1/2	1/2	1/2
	No. power stages		2	2	2	2	2
Hydraulic circuit	Water flow	m^3/h	16.7	19.2	23.4	29.2	35.8
	Type of heat exchanger		Stainless steel brazed plates heat exchanger				
	Hydraulic connections		VICTAULIC 3"	VICTAULIC 3"	VICTAULIC 3"	VICTAULIC 4"	VICTAULIC 4"
Outdoor fan	Outdoor airflow	m^3/h	40000	40000	40000	40000	48000
	No. x Type of fan		2 x Axial 800 AC				2 x Axial 800 EC + AxiTop
Equipment sound pressure of Lp10 (4)		dB(A)	57	57	57	58	60
Empty weight		kg	1260	1280	1320	1380	1520

(1) Nominal cooling capacity for water inlet/outlet temperature of 12/7°C and outdoor air temperature of 35ºC.
(2) Nominal power input by compressors and outdoor fans.
(3) EER calculated based on regulation EN 14511-2013.
(4) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Dimensions (versions S and P):



Equipment in the Keyter NEMESIS range has been designed for modular assembly with a Victaulic tube connection for fast connection up to five modules.

Dimensions (versions S and P)		
	Models 11xx	Model 1240
L	2412	2412
W	1100	1100
H	2300	2500

For Keyter NEMESIS units with a buffer tank, this is delivered as an independent module (see dimensions of the module on page 105).

Electronic control:

MODULMANAGER programmable electronic control as standard, especially developed for the management of NEMESIS modular units, with pGD1 user and maintenance terminal.

Options:

Units of Keyter NEMESIS range provides the possibility of installing the same options as the ATLANTIA range (see options available on page 115).

PANGEA

CHILLERS
air-to-water, screw

214 - 1642 kW

Screw · EC · Inverter · 50 Hz 60 Hz

ACS

R134a · R513A · R450A · R1234ze

Adaptation and Versatility

- NEW available in 5 different VERSIONS to suit the project requirements
- Equipped with a direct action screw compressor and low speed and with the latest generation shell and tube heat exchangers
- Wide operating range of units available up to an outdoor temperature of 55°C
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Low speed condensation axial fans and oversized outdoor coils
- EC axial fans with AxiTop diffusers as option, resulting in improved efficiency and a very low noise level
- NEW available in version with "X" AxiBlade system for a very low noise level, reducing up to 8 dB(A)

Easy control

- Electronic regulation and SIEMENS supervision for simple use and high performance
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW inverter screw compressor available as an option for maximum energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Hot gas partial heat reclaim system with plate heat exchanger for sanitary hot water

Environment

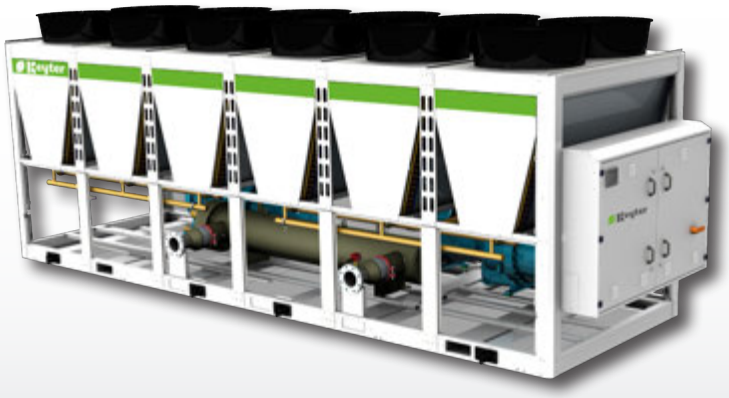
- Optimised design for reduced refrigerant charge R-134a and low GWP refrigerants
- NEW availability of unit with low GWP refrigerants R-513A (ODP 0, GWP 573) and R-450A (ODP 0, GWP 574)
- NEW PANGEA ECO availability of unit with low GWP refrigerant R-1234ze (ODP 0, GWP <1)

Applications

Industry · Retail & Shopping centres · Culture · Hotels

PANGEA versions

Keyter PANGEA WT, versions H and V



version H

High Efficiency

Compact units

Axial fan, 800 EC + AxiTop

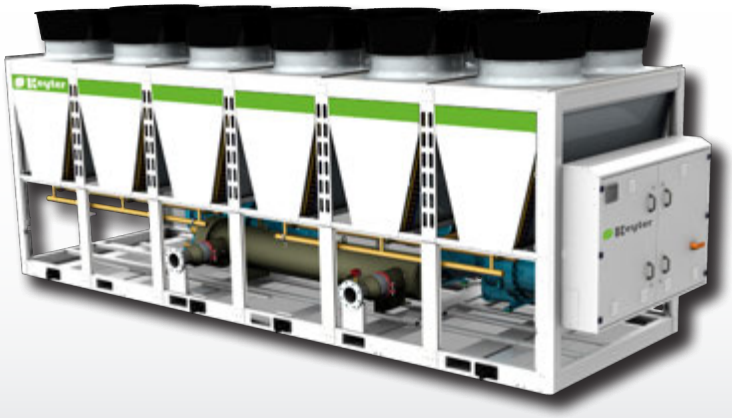
Version V

Very High Efficiency

Oversized condensing coils

Axial fan, 800 EC + AxiTop

Keyter PANGEA WT, version X



Version X

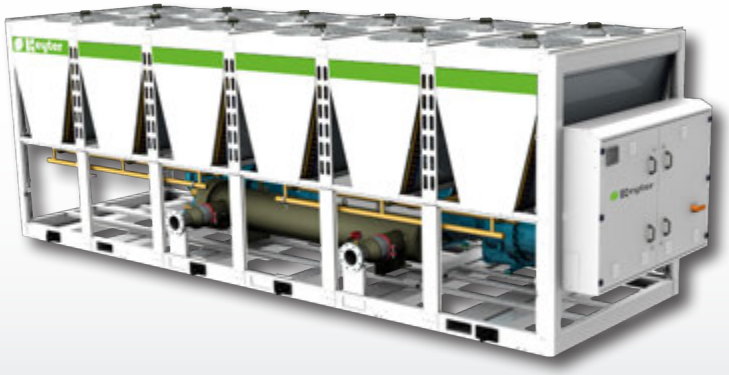
EXtra High Efficiency

Very low sound level

Oversized condensing coils

Axial fan 860, AxiBlade

Keyter PANGEA WT, versions S and L



Version S

Standard Efficiency

Compact units

Axial fan, 800 AC

Version L

Smart Efficiency

Oversized condensing coils

Axial fan, 800 AC

PANGEA
options

		VERSION S	VERSION H	VERSION L	VERSION V	VERSION X
Hydraulic						
Pumps	Single pump (standard, high and very high pressure available)	●	●	●	●	●
	Pump with variable speed drive	●	●	●	●	●
	Back-up pump (standard, high and very high pressure)	●	●	●	●	●
Heat exchanger	Shell and tube heat exchanger	✓	✓	✓	✓	✓
	Low temperature kit in the hydraulic kit	●	●	●	●	●
Hydraulic elements	Victaulic adaptor - Flange	●	●	●	●	●
	Water filter	●	●	●	●	●
Energy						
	Electronic expansion valve	✓	✓	✓	✓	✓
	Screw compressors with inverter technology	●	●	●	●	●
	Partial/full condensation heat reclaim	●	●	●	●	●
	Built-in free-cooling via an outdoor coil, external sensor and three-way valve	●	●	●	●	●
Anti-corrosion						
Coils	BLUECOAST: Copper tubes/Alumin. fins pre-lacquered with polyurethane (hydrophilic)	●	●	●	●	●
	ALUCOAST: Copper tubes/Aluminium fins, high strength (hydrophilic)	●	●	●	●	●
	GREYCOAST: Copper tubes/Alumin. fins pre-lacquered with polymer (hydrophobic)	●	●	●	●	●
	BLYGOLD: Copper tubes/Aluminium fins with Blygold coating	●	●	●	●	●
	COPPERFIN: Copper tubes/Copper fins	●	●	●	●	●
Fans						
Outdoor fans	Condensing pressure control	✓	✓	✓	✓	✓
	AC axial fans	✓	–	✓	–	–
	EC axial fans with AxiTop	–	✓	–	✓	–
	EC AxiBlade axial fans	–	–	–	–	✓
Installation						
Anti-vibration	Anti-vibration mounts	●	●	●	●	●
Condensate pan	Outdoor condensate drain pan	✓	✓	✓	✓	✓
Electrical cabinet	Electrical cabinet ventilation	✓	✓	✓	✓	✓
Electric power supply	220 V / III ph / 60Hz; 380 V / III ph / 60Hz; 400 V / III ph / 60Hz; 460 V / III ph / 60Hz	●	●	●	●	●
	Other electrical voltages (consult)	●	●	●	●	●
Insulation	Compressors in fully closed sheet compartment	●	●	●	●	●
	Acoustic insulation of the compressor chamber	●	●	●	●	●
	Thermal insulation	✓	✓	✓	✓	✓
	Insulation of all piping cold lines	●	●	●	●	●
	Acoustic jacket for compressors	●	●	●	●	●
	Manufacturer's high-performance acoustic jacket for compressors	●	●	●	●	●
Low temperature	Anti-freeze electrical heater for low temperatures	●	●	●	●	●
Protection grilles	Coil protection grille	●	●	●	●	●
	Protection grille for access to the unit perimeter	●	●	●	●	●
Control						
	Programmable AQUAMATIX control (Siemens Climatix control)	✓	✓	✓	✓	✓
	Climatix HMI user terminal for AQUAMATIX control	✓	✓	✓	✓	✓
	RS485 communication interface for ModBus communication	✓	✓	✓	✓	✓
	Bacnet/Lonworks communication	●	●	●	●	●
	Energy meter	●	●	●	●	●

✓ Included as standard ● Option – Not applicable

Codification:

KWT [ ][ ][ ] **NS3Y**

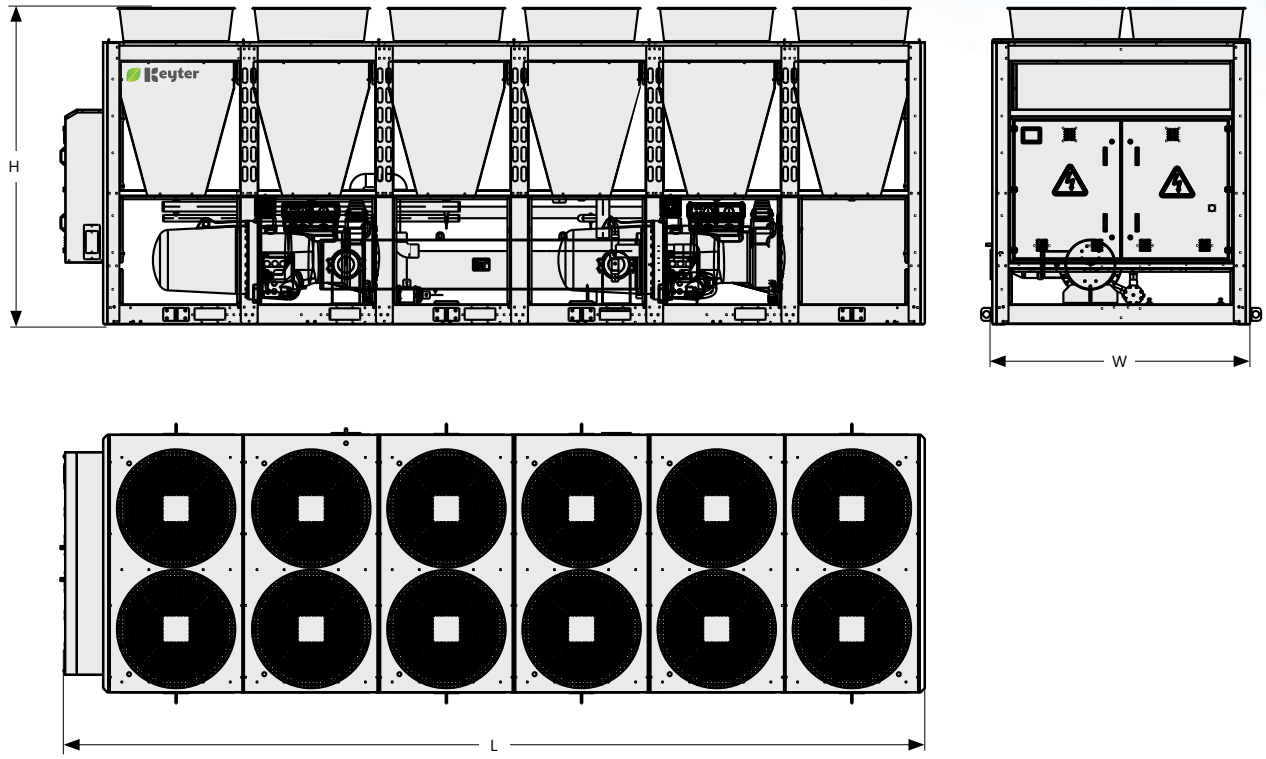
Series **Size** **Power**

Version (S/H/L/V/X)

N - Standard screw compressor / **V** - Inverter screw compressor
S - Hydraulic version
S - standard / **P** - Hydraulic kit
3 - 400 V/III/50 Hz without neutral
Y - R134a / **E** - R1234ze / **T** - R513A

PANGEA dimensions

Dimensions (standard units without hydraulic kit):



Dimensions (versions S and H) in mm									
	Series 2	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series X
L	2550	3650	4750	5850	6950	8050	9150	10250	11350
W					2100				
H - version S (without AxiTop)					2375				
H - version H					2575				

Dimensions of Versions L, V and X (mm)								
	Series 3	Series 4	Series 5	Series 6	Series 7	Series 8	Series 9	Series X0	Series X2
L	3650	4750	5850	6950	8050	9150	10250	11350	13550
W					2100				
H - version L (without AxiTop)					2375				
H - version V					2575				
H - version X					2635				

AxiTop, standard for versions H and V, is a removable component and can be mounted during works.
In version S and L units with the AxiTop option, it is necessary to consider a height increase of 200 mm.
The hydraulic kit option with pump is delivered as an independent module (please see technical documentation).

Electronic control:

Keyter PANGEA units include as standard AQUAMATIX programmable electronic control (Siemens Climatix control), specifically developed for the management of air-to-water and water-to-water units, with Climatix HMI user terminal.

AQUAMATIX

Climatix HMI terminal

PANGEA version S technical data

282 - 1581 kW

KWT models - VERSION S			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	282.1	374.4	464.9	527.1	564.2	657.4	748.7	839.3	929.9
		TR (2)	75	100	125	150	160	175	210	240	260
		kBTU/ hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	113.4	155.2	186.7	221.0	226.6	268.5	310.9	342.2	373.9
EER (4)		W/W	2.5	2.4	2.5	2.4	2.5	2.4	2.4	2.5	2.5
		BTU/ (Wxhr)	7.9	7.7	8.0	8.1	8.5	7.8	8.1	8.4	8.3
SEER (5)			4.1	4.0	4.1	4.0	4.1	4.4	4.3	4.4	4.4
ηs,c (6)			155%	152%	155%	151%	155%	166%	165%	167%	168%
IPLV (7)		BTU/ (Wxhr)	17.0	16.3	17.0	16.0	17.0	16.7	16.3	16.7	17.0
Maximum outdoor temperature		°C	41	44	43	43	41	41	43	43	43
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	48.6	64.5	80.1	90.8	97.2	113.2	129.0	144.6	160.2
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
Outdoor fan	Outdoor airflow	m^3/h	80000	120000	120000	160000	160000	200000	240000	240000	240000
	Type - fan diameter		Axial, 800 AC								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (8)		dB(A)	60	61	60	64	63	63	66	65	66
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2375								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION S			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	992.1	1054.4	1122.7	1212.6	1304.0	1394.4	1457.0	1581.4
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	408.0	441.6	466.0	497.8	528.7	560.2	594.6	655.8
EER (4)		W/W	2.4	2.4	2.4	2.4	2.5	2.5	2.5	2.4
		BTU/(Wxhr)	16.7	16.0	16.3	16.7	17.0	17.0	16.7	16.3
SEER (5)			4.3	4.3	4.6	4.6	4.7	4.7	4.7	4.6
ηs,c (6)			166%	164%	176%	177%	179%	180%	178%	176%
IPLV (7)		BTU/(Wxhr)	0.49	0.47	0.48	0.49	0.50	0.50	0.49	0.48
Maximum outdoor temperature		(°C)	43	43	43	43	43	43	43	43
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1345							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	170.9	181.6	193.4	208.9	224.6	240.2	251.0	272.4
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
Outdoor fan	Outdoor airflow	m^3/h	280000	320000	360000	360000	360000	360000	400000	400000
	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (8)		dB(A)	69	60	61	60	64	63	63	66
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA version H technical data

294 - 1642 kW

KWT models - VERSION H			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	294.0	388.3	483.4	547.3	587.8	683.2	776.6	871.7	967.1
		TR (2)	75	100.0	125.0	150	160	175	210	240	260
		kBTU/hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	106.9	145.2	176.8	208.5	213.5	252.0	290.9	322.4	354.1
EER (4)		W/W	2.8	2.7	2.7	2.6	2.8	2.7	2.7	2.7	2.7
		BTU/(Wxhr)	8.4	8.3	8.5	8.6	9.0	8.3	8.7	8.9	8.8
SEER (5)			4.3	4.3	4.3	4.2	4.3	4.6	4.6	4.6	4.6
ηs,c (6)			166%	163%	165%	161%	166%	177%	175%	177%	178%
IPLV (7)		BTU/(Wxhr)	19.7	19.0	19.4	18.4	19.7	19.4	18.7	19.0	19.4
Maximum outdoor temperature		(°C)	46	48	48	48	46	46	48	48	48
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	50.6	66.9	83.3	94.3	101.2	117.7	133.8	150.2	166.6
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	96000	144000	144000	192000	192000	240000	288000	288000	288000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (8)		dB(A)	57	58	57	61	60	60	63	62	63
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2575								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION H			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	1031.0	1094.9	1164.4	1259.0	1355.0	1450.1	1514.5	1642.3
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	385.7	416.8	436.0	467.9	499.0	530.6	562.4	619.3
EER (4)		W/W	2.7	2.6	2.7	2.7	2.7	2.7	2.7	2.7
		BTU/(Wxhr)	8.7	8.6	8.8	9.0	9.0	9.0	8.5	8.7
SEER (5)			4.6	4.5	4.9	4.9	4.9	4.9	4.9	4.9
ηs,c (6)			175%	174%	187%	188%	189%	189%	188%	186%
IPLV (7)		BTU/(Wxhr)	19.0	18.4	18.7	19.0	19.4	19.4	19.0	18.7
Maximum outdoor temperature		(°C)	48	48	48	48	48	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1345							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	177.6	188.6	200.6	216.9	233.4	249.8	260.9	282.9
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	336000	384000	432000	432000	432000	432000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (8)		dB(A)	66	57	58	57	61	60	60	63
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

PANGEA version L technical data

334 - 1565 kW

KWT models - VERSION L			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	333.6	411.2	521.2	594.3	669.7	743.7	822.4	937.0
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	103.5	143.2	175.8	202.6	204.3	248.5	286.5	320.8
EER (4)		W/W	3.2	2.9	3.0	2.9	3.3	3.0	2.9	2.9
		BTU/(Wxhr)	10.4	10.1	10.6	10.1	10.6	9.7	9.4	9.4
SEER (5)			4.8	4.5	4.6	4.8	5.2	4.9	4.8	4.8
ηs,c (6)			185%	170%	174%	186%	200%	188%	183%	185%
IPLV (7)		BTU/(Wxhr)	24.1	20.7	21.8	21.4	24.8	22.1	20.7	21.4
Maximum outdoor temperature		(°C)	47	47	47	47	47	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	57.5	70.8	89.8	102.4	115.3	128.1	141.7	161.4
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	120000	160000	160000	200000	240000	280000	320000	320000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	59	60	59	63	62	62	65	64
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION L			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1043.5	1119.7	1184.7	1238.7	1349.9	1452.1	1565.2
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	352.9	379.0	408.5	429.8	467.3	498.0	529.3
EER (4)		W/W	3.0	3.0	2.9	2.9	2.9	2.9	3.0
		BTU/(Wxhr)	9.7	9.5	9.7	9.8	9.5	9.6	9.7
SEER (5)			4.9	5.2	5.1	5.1	5.1	5.1	5.2
ηs,c (6)			187%	198%	196%	195%	196%	197%	198%
IPLV (7)		BTU/(Wxhr)	21.76	21.76	21.08	20.74	21.08	21.08	21.76
Maximum outdoor temperature		(°C)	47	47	46	46	46	46	46
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	179.7	192.9	204.1	213.4	232.5	250.1	269.6
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	320000	360000	400000	480000	480000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	65	68	59	60	59	63	65
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2375						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA version V technical data

R134a ErP 2021 344 - 1617 kW

KWT models - VERSION V			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	344.1	424.1	538.4	613.1	690.2	767.6	848.3	967.4
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	97.7	133.8	166.5	191.4	192.9	233.1	267.5	301.9
EER (4)		W/W	3.5	3.2	3.2	3.2	3.6	3.3	3.2	3.2
		BTU/(Wxhr)	11.1	10.8	11.2	10.7	11.2	10.3	10.1	9.9
SEER (5)			5.1	4.8	4.8	5.1	5.5	5.2	5.1	5.1
ηs,c (6)			197%	182%	185%	197%	212%	200%	195%	197%
IPLV (7)		BTU/(Wxhr)	27.2	23.8	24.5	24.1	27.5	24.8	23.8	24.1
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	49	49
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	59.3	73.1	92.7	105.6	118.9	132.2	146.1	166.6
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	144000	192000	192000	240000	288000	336000	384000	384000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	53	54	53	57	56	56	59	58
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION V			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1078.1	1155.7	1222.5	1277.6	1393.7	1499.8	1617.2
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	334.3	358.5	385.9	401.4	438.8	469.8	501.4
EER (4)		W/W	3.2	3.2	3.2	3.2	3.2	3.2	3.2
		BTU/(Wxhr)	10.2	10.0	10.3	10.5	10.1	10.2	10.3
SEER (5)			5.1	5.4	5.4	5.4	5.4	5.4	5.4
ηs,c (6)			197%	209%	207%	207%	207%	208%	209%
IPLV (7)		BTU/(Wxhr)	24.14	24.14	23.80	23.80	23.80	23.80	24.14
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	48
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	185.7	199.1	210.6	220.1	240.1	258.3	278.6
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	384000	432000	480000	576000	576000	576000	576000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	59	62	53	54	53	57	59
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2575						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

PANGEA version X technical data

345 - 1620 kW

KWT models - VERSION X			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	344.6	424.8	539.5	614.1	691.1	768.9	849.6	969.1
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	96.9	132.4	165.0	189.6	191.3	230.8	264.7	299.0
EER (4)		W/W	3.6	3.2	3.3	3.2	3.6	3.3	3.2	3.2
		BTU/(Wxhr)	11.1	10.9	11.3	10.8	11.3	10.4	10.2	10.0
SEER (5)			5.1	4.8	4.9	5.1	5.5	5.2	5.1	5.2
ηs,c (6)			198%	184%	186%	198%	213%	202%	197%	198%
IPLV (7)		BTU/(Wxhr)	27.5	24.1	24.8	24.5	27.9	25.2	24.1	24.5
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52	52
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	59.4	73.2	92.9	105.8	119.0	132.4	146.3	166.9
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	162000	216000	216000	270000	324000	378000	432000	432000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	55	56	55	59	58	58	61	60
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2635							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION X			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1080.2	1157.7	1224.6	1279.6	1396.2	1502.7	1620.3
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	331.2	355.1	382.3	397.2	434.4	465.3	496.8
EER (4)		W/W	3.3	3.3	3.2	3.2	3.2	3.2	3.3
		BTU/(Wxhr)	10.3	10.1	10.4	10.6	10.2	10.3	10.4
SEER (5)			5.2	5.5	5.4	5.4	5.4	5.4	5.5
ηs,c (6)			199%	210%	208%	209%	209%	209%	210%
IPLV (7)		BTU/(Wxhr)	24.48	24.48	24.14	24.14	24.14	24.14	24.48
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	186.1	199.4	210.9	220.4	240.5	258.8	279.1
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	432000	486000	540000	648000	648000	648000	648000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	61	64	55	56	55	59	61
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2375						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA version S technical data

R513A ErP 2018 282 - 1578 kW

KWT models - VERSION S			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	281.6	373.6	463.9	526.0	563.0	656.1	747.2	837.6	928.1
		TR (2)	75	100	125	150	160	175	210	240	260
		kBTU/ hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	117.9	161.4	194.2	229.8	235.7	279.2	323.2	356.0	388.9
EER (4)		W/W	2.4	2.3	2.4	2.3	2.4	2.3	2.3	2.4	2.4
		BTU/ (Wxhr)	7.6	7.4	7.7	7.8	8.1	7.5	7.8	8.1	8.0
SEER (5)			4.0	3.9	4.0	3.9	4.0	4.3	4.2	4.3	4.3
ηs,c (6)			151%	148%	151%	147%	151%	162%	161%	163%	164%
IPLV (7)		BTU/ (Wxhr)	16.0	15.6	16.0	15.3	16.0	15.6	15.3	15.6	16.0
Maximum outdoor temperature		ºC	41	44	43	43	41	41	43	43	43
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	48.5	64.4	79.9	90.6	97.0	113.0	128.7	144.3	159.9
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
Outdoor fan	Outdoor airflow	m^3/h	80000	120000	120000	160000	160000	200000	240000	240000	240000
	Type - fan diameter		Axial, 800 AC								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (8)		dB(A)	60	61	60	64	63	63	66	65	66
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2375								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION S			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	990.1	1052.3	1120.4	1210.2	1301.3	1391.6	1454.1	1578.3
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	424.4	459.3	484.6	517.7	550.0	582.8	618.6	682.4
EER (4)		W/W	2.3	2.3	2.3	2.3	2.4	2.4	2.4	2.3
		BTU/(Wxhr)	7.9	7.8	7.9	8.1	8.2	8.2	7.8	7.9
SEER (5)			4.2	4.2	4.5	4.5	4.6	4.6	4.6	4.5
ηs,c (6)			162%	160%	172%	174%	175%	176%	174%	173%
IPLV (7)		BTU/(Wxhr)	15.6	15.6	15.3	15.6	16.0	16.0	15.6	15.3
Maximum outdoor temperature		(ºC)	43	43	43	43	43	43	43	43
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	170.5	181.3	193.0	208.5	224.2	239.7	250.5	271.9
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
Outdoor fan	Outdoor airflow	m^3/h	280000	320000	360000	360000	360000	360000	400000	400000
	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (8)		dB(A)	69	60	61	60	64	63	63	66
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

PANGEA version H technical data

293 - 1639 kW

KWT models - VERSION H			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	293.4	387.5	482.5	546.3	586.6	681.8	775.0	870.0	965.2
		TR (2)	75	100	125	150	160	175	210	240	260
		kBTU/hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	111.2	151.0	184.0	216.9	222.1	262.1	302.5	335.4	368.4
EER (4)		W/W	2.6	2.6	2.6	2.5	2.6	2.6	2.6	2.6	2.6
		BTU/(Wxhr)	8.1	7.9	8.2	8.3	8.6	8.0	8.3	8.6	8.5
SEER (5)			4.2	4.2	4.2	4.1	4.2	4.5	4.5	4.5	4.5
ηs,c (6)			161%	158%	161%	156%	161%	172%	171%	172%	173%
IPLV (7)		BTU/(Wxhr)	18.7	18.0	18.4	17.3	18.7	18.0	17.7	18.0	18.4
Maximum outdoor temperature		(ºC)	46	48	48	48	46	46	48	48	48
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	50.5	66.7	83.1	94.1	101.0	117.4	133.5	149.9	166.3
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	96000	144000	144000	192000	192000	240000	288000	288000	288000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (8)		dB(A)	57	58	57	61	60	60	63	62	63
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2575								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION H			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	1028.9	1092.8	1162.1	1256.4	1352.2	1447.2	1511.4	1639.0
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	401.2	433.5	453.5	486.7	519.2	552.1	585.1	644.4
EER (4)		W/W	2.6	2.5	2.6	2.6	2.6	2.6	2.6	2.5
		BTU/(Wxhr)	8.4	8.3	8.5	8.6	8.7	8.7	8.2	8.4
SEER (5)			4.5	4.4	4.8	4.8	4.8	4.8	4.8	4.7
ηs,c (6)			171%	169%	183%	183%	184%	185%	183%	182%
IPLV (7)		BTU/(Wxhr)	17.7	18.0	17.7	18.0	18.4	18.4	18.0	17.7
Maximum outdoor temperature		(ºC)	48	48	48	48	48	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	177.2	188.2	200.2	216.4	232.9	249.3	260.3	282.3
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	336000	384000	432000	432000	432000	432000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (8)		dB(A)	66	57	58	57	61	60	60	63
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA version L technical data

333 - 1562 kW

KWT models - VERSION L			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	332.9	410.4	520.2	593.2	668.3	742.2	820.8	935.1
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	107.5	148.8	182.7	210.5	212.1	258.1	297.5	333.3
EER (4)		W/W	3.1	2.8	2.8	2.8	3.2	2.9	2.8	2.8
		BTU/(Wxhr)	10.0	9.7	10.2	9.7	10.2	9.3	9.1	9.0
SEER (5)			4.7	4.4	4.4	4.7	5.1	4.8	4.7	4.7
ηs,c (6)			180%	166%	170%	181%	194%	183%	179%	181%
IPLV (7)		BTU/(Wxhr)	23.1	19.7	20.4	20.4	23.5	20.7	19.7	20.1
Maximum outdoor temperature		(°C)	47	47	47	47	47	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	57.3	70.7	89.6	102.2	115.1	127.8	141.4	161.1
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	120000	160000	160000	200000	240000	280000	320000	320000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	59	60	59	63	62	62	65	64
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION L			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1041.4	1117.5	1182.3	1236.2	1347.2	1449.2	1562.1
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	366.8	393.8	424.5	446.4	485.4	517.5	550.2
EER (4)		W/W	2.8	2.8	2.8	2.8	2.8	2.8	2.8
		BTU/(Wxhr)	9.3	9.1	9.3	9.4	9.1	9.3	9.4
SEER (5)			4.8	5.0	5.0	5.0	5.0	5.0	5.0
ηs,c (6)			182%	194%	191%	191%	191%	192%	194%
IPLV (7)		BTU/(Wxhr)	20.4	20.4	20.1	19.7	19.7	20.1	20.4
Maximum outdoor temperature		(°C)	47	47	46	46	46	46	46
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	179.4	192.5	203.7	212.9	232.1	249.6	269.1
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	320000	360000	400000	480000	480000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	65	68	59	60	59	63	65
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2375						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

PANGEA version V technical data

R513A ErP 2018 ErP 2021 343 - 1614 kW

KWT models - VERSION V			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	343.4	423.3	537.4	611.8	688.8	766.1	846.6	965.5
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	101.5	139.0	173.1	198.9	200.4	242.1	277.9	313.8
EER (4)		W/W	3.4	3.0	3.1	3.1	3.4	3.2	3.0	3.1
		BTU/(Wxhr)	10.6	10.4	10.7	10.3	10.8	9.9	9.7	9.6
SEER (5)			5.0	4.6	4.7	5.0	5.3	5.1	5.0	5.0
ηs,c (6)			191%	178%	180%	191%	206%	195%	190%	191%
IPLV (7)		BTU/(Wxhr)	25.8	22.4	23.1	22.8	26.2	23.8	22.4	22.8
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	49	49
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	59.2	72.9	92.6	105.4	118.7	132.0	145.8	166.3
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	144000	192000	192000	240000	288000	336000	384000	384000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	53	54	53	57	56	56	59	58
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION V			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1076.0	1153.4	1220.0	1275.0	1390.9	1496.8	1614.0
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	347.5	372.6	401.0	417.0	455.9	488.3	521.3
EER (4)		W/W	3.1	3.1	3.0	3.1	3.1	3.1	3.1
		BTU/(Wxhr)	9.8	9.7	9.9	10.1	9.7	9.8	9.9
SEER (5)			5.0	5.3	5.2	5.3	5.3	5.3	5.3
ηs,c (6)			192%	204%	202%	202%	202%	203%	204%
IPLV (7)		BTU/(Wxhr)	23.1	23.1	22.4	22.8	22.4	22.8	23.1
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	48
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	185.3	198.7	210.1	219.6	239.6	257.8	278.0
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	384000	432000	480000	576000	576000	576000	576000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	59	62	53	54	53	57	59
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2575						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(8) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA version X technical data

R513A ErP 2021 344 - 1617 kW

KWT models - VERSION X			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	343.9	424.0	538.4	612.8	689.8	767.4	847.9	967.2
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	100.6	137.5	171.5	197.0	198.6	239.7	274.9	310.7
EER (4)		W/W	3.4	3.1	3.1	3.1	3.5	3.2	3.1	3.1
		BTU/(Wxhr)	10.7	10.5	10.8	10.4	10.9	10.0	9.8	9.7
SEER (5)			5.0	4.7	4.7	5.0	5.4	5.1	5.0	5.0
ηs,c (6)			192%	179%	181%	193%	207%	196%	192%	193%
IPLV (7)		BTU/(Wxhr)	26.2	22.8	23.5	23.1	26.5	24.1	22.8	23.1
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52	52
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	59.2	73.0	92.7	105.6	118.8	132.2	146.1	166.6
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC	DN200 VIC	DN200 VIC
	Outdoor airflow	m^3/h	162000	216000	216000	270000	324000	378000	432000	432000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (8)		dB(A)	55	56	55	59	58	58	61	60
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2635							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION X			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	1078.1	1155.4	1222.1	1277.1	1393.4	1499.6	1617.1
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	344.3	369.1	397.2	412.5	451.3	483.6	516.4
EER (4)		W/W	3.1	3.1	3.1	3.1	3.1	3.1	3.1
		BTU/(Wxhr)	9.9	9.8	10.0	10.2	9.8	9.9	10.0
SEER (5)			5.0	5.3	5.3	5.3	5.3	5.3	5.3
ηs,c (6)			194%	205%	203%	204%	204%	204%	205%
IPLV (7)		BTU/(Wxhr)	23.5	23.5	22.8	23.1	22.8	23.1	23.5
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	185.7	199.0	210.5	220.0	240.0	258.3	278.5
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	432000	486000	540000	648000	648000	648000	648000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (8)		dB(A)	61	64	55	56	55	59	61
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2635						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

PANGEA ECO

CHILLERS
air-to-water screw chillers

214 - 1642 kW

Screw · EC · Inverter · 50 Hz 60 Hz

ACS

R1234ze

LOW GWP REFRIGERANTS

Adaptation and Versatility

- NEW available in 5 different VERSIONS to suit the project requirements
- Equipped with a direct action screw compressor and low speed and with the latest generation shell and tube heat exchangers
- Wide operating range of units available up to an outdoor temperature of 55°C
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Low noise level

- Low speed condensation axial fans and oversized outdoor coils
- EC axial fans with AxiTop diffusers as option, resulting in improved efficiency and a low noise level
- NEW available in version with "X" AxiBlade system for a very low noise level, reducing up to 8 dB(A)

Easy control

- Electronic regulation and SIEMENS supervision for simple use and high performance
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW inverter screw compressor available as an option for maximum energy efficiency
- Electronic fans and electronic expansion valve for minimal energy consumption
- Hot gas partial heat reclaim system with plate heat exchanger for sanitary hot water

Environment

- NEW PANGEA ECO availability of units with low GWP refrigerant R-1234ze (ODP 0, GWP <1)

Applications

Industry · Retail & Shopping centres · Culture · Hotels

and other applications, please consult us

PANGEA ECO version S technical data

214 - 1200 kW

KWT models - VERSION S			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	214.1	284.2	352.8	400.0	428.2	499.0	568.3	637.0	705.8
		TR (2)	75	100	125	150	160	175	210	240	260
		kBTU/hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	83.6	114.7	137.4	163.0	167.1	198.2	229.7	252.3	275.1
EER (4)		W/W	2.6	2.5	2.6	2.5	2.6	2.5	2.5	2.5	2.6
		BTU/hr/W	10.8	10.5	10.9	11.0	11.5	10.6	11.0	11.4	11.3
SEER (5)			4.2	4.1	4.2	4.0	4.2	4.4	4.4	4.4	4.5
ηs,c (6)			158%	155%	158%	154%	158%	169%	167%	169%	171%
Maximum outdoor temperature		ºC	41	44	43	43	41	41	43	43	43
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	36.9	48.9	60.8	68.9	73.8	85.9	97.9	109.7	121.6
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC
Outdoor fan	Outdoor airflow	m^3/h	80000	120000	120000	160000	160000	200000	240000	240000	240000
	Type - fan diameter		Axial, 800 AC								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (7)		dB(A)	60	61	60	64	63	63	66	65	66
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2375								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION S			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	753.0	800.3	852.1	920.4	989.7	1058.3	1105.9	1200.3
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	300.6	325.8	344.3	367.2	389.5	412.2	437.9	482.0
EER (4)		W/W	2.5	2.5	2.5	2.5	2.5	2.6	2.5	2.5
		BTU/hr/W	11.2	11.0	11.2	11.4	11.6	11.6	11.0	11.2
SEER (5)			4.4	4.4	4.7	4.7	4.7	4.8	4.7	4.7
ηs,c (6)			169%	167%	179%	180%	182%	183%	181%	180%
Maximum outdoor temperature		(ºC)	43	43	43	43	43	43	43	43
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R51234ze/< 1							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	129.7	137.8	146.8	158.5	170.5	182.3	190.5	206.8
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
Outdoor fan	Outdoor airflow	m^3/h	280000	320000	360000	360000	360000	360000	400000	400000
	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (7)		dB(A)	69	60	61	60	64	63	63	66
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA ECO version H technical data

223 - 1247 kW

KWT models - VERSION H			2075	3100	3125	4150	4160	5175	6210	6240	6260
Cooling only version (R)											
Cooling capacity		kW (1)	223.1	294.7	366.9	415.4	446.1	518.5	589.4	661.6	734.0
		TR (2)	75	100	125	150	160	175	210	240	260
		kBTU/hr (2)	900	1200	1500	1800	1920	2100	2520	2880	3120
Power input (3)		kW	78.7	107.1	129.9	153.6	157.2	185.8	214.6	237.3	260.1
EER (4)		W/W	2.8	2.8	2.8	2.7	2.8	2.8	2.7	2.8	2.8
		BTU/hr/W	11.4	11.2	11.5	11.7	12.2	11.3	11.7	12.1	12.0
SEER (5)			4.4	4.3	4.4	4.3	4.4	4.7	4.7	4.7	4.7
ηs,c (6)			169%	166%	169%	164%	169%	180%	178%	180%	181%
Maximum outdoor temperature		(ºC)	46	48	48	48	46	46	48	48	48
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	38.4	50.8	63.2	71.6	76.8	89.3	101.5	114.0	126.4
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC
	Outdoor airflow	m^3/h	96000	144000	144000	192000	192000	240000	288000	288000	288000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop								
	Number of fans		4	6	6	8	8	10	12	12	12
Sound pressure (Lp10) (7)		dB(A)	57	58	57	61	60	60	63	62	63
Dimensions	Length	mm	2550	3650	3650	4750	4750	5850	6950	6950	6950
	Width	mm	2100								
	Height	mm	2575								
Weight		kg	2650	3660	3680	4670	4700	5725	6765	6785	6800

KWT models - VERSION H			7280	8300	9320	9350	9375	9400	X040	X045
Cooling only version (R)										
Cooling capacity		kW (1)	782.5	831.1	883.8	955.6	1028.4	1100.6	1149.5	1246.5
		TR (2)	280	300	320	350	375	400	400	450
		kBTU/hr (2)	3360	3600	3840	4200	4500	4800	4800	5400
Power input (3)		kW	283.7	307.0	321.8	344.7	367.1	389.8	413.6	454.6
EER (4)		W/W	2.8	2.7	2.7	2.8	2.8	2.8	2.8	2.7
		BTU/hr/W	11.8	11.7	11.9	12.2	12.3	12.3	11.6	11.9
SEER (5)			4.7	4.6	4.9	5.0	5.0	5.0	5.0	4.9
ηs,c (6)			179%	177%	190%	191%	192%	193%	191%	190%
Maximum outdoor temperature		(ºC)	48	48	48	48	48	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		2/2	2/2	3/3	3/3	3/3	3/3	3/3	3/3
	No. power stages		8	8	12	12	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	134.8	143.1	152.2	164.6	177.1	189.6	198.0	214.7
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	336000	384000	432000	432000	432000	432000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		14	16	18	18	18	18	20	20
Sound pressure (Lp10) (7)		dB(A)	66	57	58	57	61	60	60	63
Dimensions	Length	mm	8050	9150	10250	10250	10250	10250	11350	11350
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	7820	8845	9925	9940	9965	9985	10900	11050

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA ECO version L technical data

253 - 1188 kW

KWT models - VERSION L			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	253.2	312.1	395.6	451.1	508.3	564.5	624.2	711.2
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	77.5	107.1	130.5	150.8	153.0	185.8	214.1	238.8
EER (4)		W/W	3.3	2.9	3.0	3.0	3.3	3.0	2.9	3.0
		BTU/hr/W	13.9	13.5	14.3	13.5	14.1	12.9	12.6	12.6
SEER (5)			4.9	4.5	4.6	4.9	5.2	4.9	4.8	4.9
ηs,c (6)			186%	172%	177%	188%	201%	190%	185%	188%
Maximum outdoor temperature		(°C)	47	47	47	47	47	47	47	47
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	43.6	53.8	68.1	77.7	87.5	97.2	107.5	122.5
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC
	Outdoor airflow	m^3/h	120000	160000	160000	200000	240000	280000	320000	320000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (7)		dB(A)	59	60	59	63	62	62	65	64
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2375							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION L			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	792.0	849.9	899.2	940.2	1024.6	1102.1	1188.0
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	261.9	281.7	303.9	321.2	348.2	370.4	392.9
EER (4)		W/W	3.0	3.0	3.0	2.9	2.9	3.0	3.0
		BTU/hr/W	13.1	12.8	13.0	13.1	12.8	13.0	13.1
SEER (5)			4.9	5.2	5.2	5.1	5.1	5.2	5.2
ηs,c (6)			189%	201%	198%	197%	198%	199%	201%
Maximum outdoor temperature		(°C)	47	47	46	46	46	46	46
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	136.4	146.4	154.9	161.9	176.5	189.8	204.6
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	320000	360000	400000	480000	480000	480000	480000
Outdoor fan	Type - fan diameter	mm	Axial, 800 AC						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (7)		dB(A)	65	68	59	60	59	63	65
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2375						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

PANGEA ECO version V technical data

261 - 1228 kW

KWT models - VERSION V			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	261.2	321.9	408.7	465.3	523.9	582.6	643.9	734.3
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	73.0	99.8	123.4	142.1	144.1	173.9	199.6	224.3
EER (4)		W/W	3.6	3.2	3.3	3.3	3.6	3.4	3.2	3.3
		BTU/hr/W	14.8	14.4	15.1	14.4	15.0	13.8	13.5	13.4
SEER (5)			5.2	4.8	4.9	5.2	5.5	5.3	5.1	5.2
ηs,c (6)			199%	185%	188%	199%	214%	202%	197%	199%
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	49	49
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	45.0	55.5	70.4	80.1	90.2	100.4	110.9	126.5
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC
	Outdoor airflow	m^3/h	144000	192000	192000	240000	288000	336000	384000	384000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (7)		dB(A)	53	54	53	57	56	56	59	58
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2575							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION V			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	818.3	877.2	927.9	969.7	1057.8	1138.4	1227.5
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	247.6	265.9	286.5	299.4	326.3	348.7	371.4
EER (4)		W/W	3.3	3.3	3.2	3.2	3.2	3.3	3.3
		BTU/hr/W	13.8	13.5	13.8	14.0	13.6	13.8	13.9
SEER (5)			5.2	5.5	5.4	5.4	5.4	5.5	5.5
ηs,c (6)			201%	212%	210%	210%	210%	211%	212%
Maximum outdoor temperature		(°C)	49	49	49	49	49	49	48
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	141.0	151.1	159.8	167.0	182.2	196.1	211.4
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	384000	432000	480000	576000	576000	576000	576000
Outdoor fan	Type - fan diameter	mm	Axial 800 EC + AxiTop						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (7)		dB(A)	59	62	53	54	53	57	59
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2575						
Weight		kg	8860	9725	10525	13015	13255	13550	13750

(1) Nominal cooling capacity for a water inlet/outlet temp. 12/7°C and outdoor air temp. 35ºC.
(2) Cooling capacity under AHRI conditions.
(3) Nominal power input by compressors and outdoor fans.
(4) EER calculated based on EN 14511.
(5) Seasonal Energy Efficiency Ratio for cooling factor (SEER) calculated based on EN 14825:2013.
(6) Seasonal Energy Efficiency Ratio for cooling spaces (ηs,c) in line with Ecodesign Regulation EU 2016/2281.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

PANGEA ECO version X technical data

262 - 1230 kW

KWT models - VERSION X			3090	4120	4155	5170	6180	7200	8225	8250
Cooling only version (R)										
Cooling capacity		kW (1)	261.6	322.4	409.5	466.1	524.6	583.6	644.9	735.6
		TR (2)	90	120	155	170	180	200	225	250
		kBTU/hr (2)	1080	1440	1860	2040	2160	2400	2700	3000
Power input (3)		kW	72.4	98.9	122.4	141.0	143.1	172.4	197.8	222.4
EER (4)		W/W	3.6	3.3	3.3	3.3	3.7	3.4	3.3	3.3
		BTU/hr/W	14.9	14.6	15.2	14.5	15.1	13.9	13.7	13.5
SEER (5)			5.2	4.9	4.9	5.2	5.6	5.3	5.2	5.2
ηs,c (6)			200%	186%	190%	201%	215%	204%	199%	201%
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52	52
Technical characteristics										
Power supply			400 V/III/50 HZ without neutral							
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1							
	Type of compressor		Semi-Hermetic Compact Screw							
	No. circuits/compressors		1/1	1/1	1/1	1/1	2/2	2/2	2/2	2/2
	No. power stages		4	4	4	4	8	8	8	8
Hydraulic circuit	Water flow	m^3/h	45.1	55.5	70.5	80.3	90.4	100.5	111.1	126.7
	Type of heat exchanger		Shell and tube							
	Hydraulic connections		DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN150 VIC	DN200 VIC
	Outdoor airflow	m^3/h	162000	216000	216000	270000	324000	378000	432000	432000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE							
	Number of fans		6	8	8	10	12	14	16	16
Sound pressure (Lp10) (7)		dB(A)	55	56	55	59	58	58	61	60
Dimensions	Length	mm	3650	4750	4750	5850	6950	8050	9150	9150
	Width	mm	2100							
	Height	mm	2635							
Weight		kg	3510	4450	4625	5425	6455	7520	8540	8750

KWT models - VERSION X			8285	9300	X033	X235	X237	X240	X243
Cooling only version (R)									
Cooling capacity		kW (1)	819.9	878.7	929.5	971.2	1059.7	1140.5	1229.8
		TR (2)	285	300	330	350	370	400	430
		kBTU/hr (2)	3420	3600	3960	4200	4440	4800	5160
Power input (3)		kW	245.6	263.8	284.2	296.7	323.5	345.8	368.4
EER (4)		W/W	3.3	3.3	3.3	3.3	3.3	3.3	3.3
		BTU/hr/W	13.9	13.6	13.9	14.2	13.7	13.9	14.0
SEER (5)			5.2	5.5	5.5	5.5	5.5	5.5	5.5
ηs,c (6)			202%	213%	211%	211%	211%	212%	214%
Maximum outdoor temperature		(°C)	52	52	52	52	52	52	52
Technical characteristics									
Power supply			400 V/III/50 HZ without neutral						
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1						
	Type of compressor		Semi-Hermetic Compact Screw						
	No. circuits/compressors		2/2	2/2	2/2	3/3	3/3	3/3	3/3
	No. power stages		8	8	8	12	12	12	12
Hydraulic circuit	Water flow	m^3/h	141.2	151.4	160.1	167.3	182.5	196.5	211.8
	Type of heat exchanger		Shell and tube						
	Hydraulic connections		DN200 VIC	DN200 VIC	DN200 VIC	DN200 VIC	DN250 VIC	DN250 VIC	DN250 VIC
	Outdoor airflow	m^3/h	432000	486000	540000	648000	648000	648000	648000
Outdoor fan	Type - fan diameter	mm	Axial 860 EC AXIBLADE						
	Number of fans		16	18	20	24	24	24	24
Sound pressure (Lp10) (7)		dB(A)	61	64	55	56	55	59	61
Dimensions	Length	mm	9150	10250	11350	13550	13550	13550	13550
	Width	mm	2100						
	Height	mm	2635						
Weight		kg	8860	9725	10525	13015	13255	13550	13750



SEA CLUB MEDITERRANEAN RESORT | SPAIN - HOTEL ALHAMAR | SPAIN - ERUM PLASTICS | SPAIN - CARTON BOARD | SPAIN


MAVERICK LABORATORIES | SPAIN - PAGO DE AYLÉS WINES STORE | SPAIN - PROINSUR | SPAIN - RETIREMENT HOME LANJARÓN | SPAIN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chillers & heat pumps
water-to-water

MEDEA

HEAT PUMPS AND CHILLERS
water-to-water

27 - 308 kW
32 - 349 kW

Multi-Scroll
Inverter
50 Hz
60 Hz
ACS
R410A
R134a

Adaptation and Versatility

- High-performance units with plate heat exchangers which enable a flexible configuration for centralised facilities, with closed water loop and geothermal energy
- Versions available with a hydraulic kit
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Versions with R-134a refrigerant to provide water at high temperatures up to +70°C

Low noise level

- Compressors in insulated and closed compartment available with acoustic jacket
- Panelled unit as standard

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- NEW equipment available with inverter compressors as an option for maximum energy efficiency
- Electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic unit can include high-performance electronic pumps
- Hot gas partial heat reclaim system for sanitary hot water

Environment

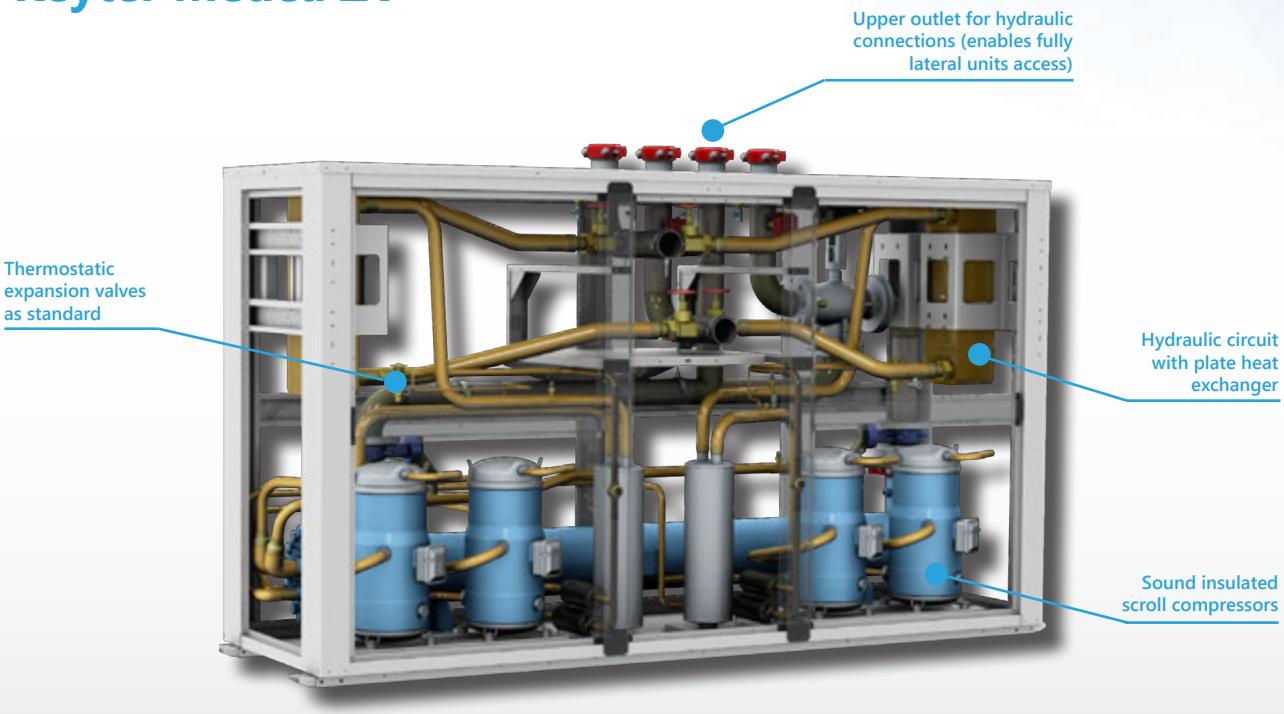
- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW availability of units with refrigerant R-452B (ODP 0, GWP 576)

Applications

Industry
Retail & Shopping centres
Culture
Hospitals

MEDEA versions

Keyter Medea ZV



Hydraulic versions:

Keyter ZV - Standard version (S)

Equipment with no hydraulic kit.

The ZV units have triple protection of plate heat exchanger, that includes as standard flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Keyter ZV - Version with hydraulic kit (P)

Hydraulic kit composed of a circulation pump suitable for water or glycol water up to 0°C, expansion vessel, purge and closing valves, pressure gauges and flow switch.

Low temperature kit is required for water temperatures below 0°C, which requires replacement of the pump and adds electrical heater on hydraulic elements to operate with water temperature up to -10°C.

The hydraulic kit is integrated in the chassis of standard version for all units up to model 2090. For higher models, the hydraulic kit is provided in an separate module.

Codification:

KZV | | | **NS4W**

Series | Size | Capacity

- **I** - Reversible heat pump
- **R** - Cooling only
- **Q** - Heating only
- **C** - Reversible in water circuit, not reversible in the refrigerant circuit
- **H** - Heating only for high water outlet temperature

- **N** - Scroll compressor
- **S** - Standard version
- **4** - 400 V/III/50 Hz
- **W** - R-410A / **Y** - R-134a

Version H heating only for high water output temperatures, available in two versions:

- with EVI compressor in units with R410A refrigerant, for water outlet temperatures up to +65°C
- units with R134a refrigerant, for water outlet temperatures up to +70°C

The MEDEA range units is available without a condenser for the split version with the remote condenser:

KLV | | **NS4W**

- **I** - Reversible heat pump
- **R** - Cooling only

MEDEA
technical data

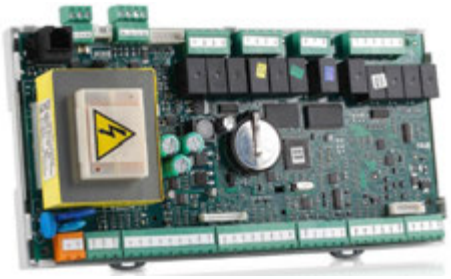
24 - 69 kW

KZV models			1025	1030	1035	1040	1045	2035	2040	2045	2050	2060	2070
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	26.7	30.4	34.6	38.9	45.6	34.8	38.9	45.6	53.6	61.7	69.4
		TR	8	9	10	11.5	13	10	11.5	13	15.5	17.5	20
		kBTU/hr	91.1	103.7	118.1	132.7	155.6	118.7	132.7	155.6	182.9	210.5	236.8
	Power input (2)	kW	5.7	6.5	7.4	8.3	9.5	7.4	8.3	9.5	11.5	12.9	15.1
	EER (3)	W/W	4.7	4.7	4.7	4.7	4.8	4.7	4.7	4.8	4.7	4.8	4.6
		BTU/(hrxW)	16.0	16.0	16.0	16.0	16.4	16.0	16.0	16.4	15.9	16.3	15.7
Heat pump version (I)													
Cooling mode	Cooling capacity (1)	kW	24.3	27.8	31.6	35.5	41.6	31.7	35.5	41.6	48.9	56.3	63.2
	Power input (2)	kW	5.9	6.8	7.7	8.6	9.8	7.7	8.6	9.9	11.9	13.4	15.8
	EER (3)	W/W	4.1	4.1	4.1	4.1	4.2	4.1	4.1	4.2	4.1	4.2	4.0
Heating mode	Heating capacity (4)	kW	31.7	36.4	39.9	45.6	53.6	42.4	48.9	53.0	63.5	73.6	79.8
	Power input (2)	kW	7.3	8.4	9.7	10.6	12.0	9.7	10.9	12.2	14.8	16.6	19.7
	COP (3)	W/W	4.3	4.4	4.1	4.3	4.5	4.4	4.5	4.3	4.3	4.4	4.0
Heating only version (Q)													
Heating	Heating capacity (4)	kW	31.7	36.4	39.9	45.6	53.6	42.4	48.9	53.0	63.5	73.6	79.8
	Power input (2)	kW	7.0	8.0	9.2	10.2	11.6	9.3	10.4	11.7	14.2	15.9	18.9
	COP (3)	W/W	4.5	4.5	4.3	4.5	4.6	4.6	4.7	4.5	4.5	4.6	4.2
Technical characteristics													
Power supply			400 V/III/50 HZ with neutral										
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088										
	Type of compressor		Hermetic scroll, single version					Hermetic tandem scroll					
	No. 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	m^3/h	4.6	5.2	6.0	6.7	7.9	6.0	6.7	7.9	9.2	10.6	12.0
	Type of heat exchanger		Stainless steel brazed plates										
	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	m^3/h	5.8	6.6	7.3	8.3	9.8	7.7	8.9	9.7	11.6	13.4	14.6
	Type of heat exchanger		Stainless steel brazed plates										
	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"
Equipment sound pressure of Lp10 (5)		dB(A)	36	36	37	38	40	37	39	41	39	38	39
Empty weight		kg	360	370	382	390	410	425	448	460	490	515	530

(1) Cooling conditions: 12/7ºC evaporator and 30/35ºC condenser.
(2) Nominal power input by compressors.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Heating conditions: 12/7ºC evaporator and 40/45ºC condenser.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Electronic control:

Keyter MEDEA units include as standard AQUAMANAGER programmable electronic control, specifically developed for the management of air-to-water and water-to-water equipment, with pGD1 user and maintenance terminal.



AQUAMANAGER

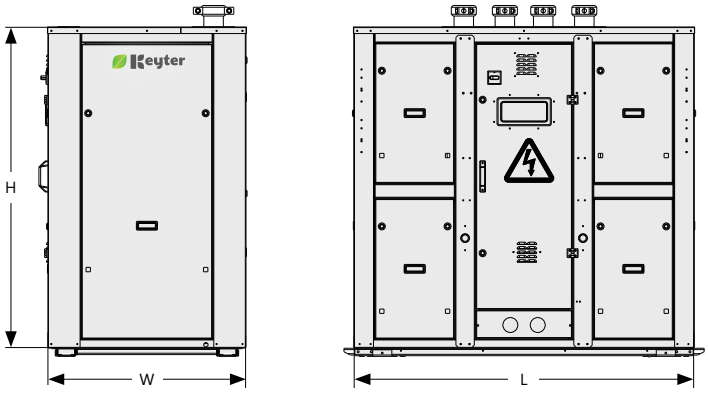
pGD1 controller

MEDEA
technical data

75 - 305 kW

KZV models			2080	2090	2105	2120	2135	2150	3160	3180	3210	3240	3300
Cooling only version (R)													
Cooling	Cooling capacity (1)	kW	82.4	91.6	104.8	119.6	130.9	149.1	160.5	183.5	204.1	236.8	305.2
		TR	23.5	26	30	34	37.5	42.5	46	52.5	58	67.5	87
		kBTU/hr	281.2	312.6	357.6	408.1	446.6	508.8	547.6	626.1	696.4	808.0	1041.4
	Power input (2)	kW	16.3	19.3	22.1	25.1	28.1	31.6	35.1	39.6	45.5	51.5	66.1
	EER (3)	W/W	5.1	4.7	4.7	4.8	4.7	4.7	4.6	4.6	4.5	4.6	4.6
		BTU/(hrxW)	17.2	16.2	16.2	16.3	15.9	16.1	15.6	15.8	15.3	15.7	15.8
Heat pump version (I)													
Cooling mode	Cooling capacity (1)	kW	75.2	83.7	95.5	108.7	119.2	136.0	146.6	167.6	185.9	215.3	278.3
	Power input (2)	kW	16.9	20.0	22.8	25.9	29.0	32.7	36.4	41.0	47.1	53.1	68.4
	EER (3)	W/W	4.5	4.2	4.2	4.2	4.1	4.2	4.0	4.1	4.0	4.1	4.1
Heating mode	Heating capacity (4)	kW	92.6	107.3	123.0	140.2	155.1	174.6	184.2	215.6	246.7	280.5	349.1
	Power input (2)	kW	20.9	24.4	27.9	31.7	35.6	40.1	44.9	50.1	57.6	65.1	83.8
	COP (3)	W/W	4.4	4.4	4.4	4.4	4.4	4.4	4.1	4.3	4.3	4.3	4.2
Heating only version (Q)													
Heating	Heating capacity (4)	kW	92.6	107.3	123.0	140.2	155.1	174.6	184.2	215.6	246.7	280.5	349.1
	Power input (2)	kW	20.1	23.5	26.9	30.5	34.2	38.5	43.2	48.3	55.4	62.6	80.6
	COP (3)	W/W	4.6	4.6	4.6	4.6	4.5	4.5	4.3	4.5	4.5	4.5	4.3
Technical characteristics													
Power supply			400 V/III/50 HZ with neutral										
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088										
	Type of compressor		Hermetic scroll, tandem version		Hermetic scroll, single version				Hermetic tandem scroll				
	No. 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	m^3/h	14.2	15.8	18.1	20.6	22.6	25.7	27.7	31.6	35.2	40.8	52.6
	Type of heat exchanger		Stainless steel brazed plates										
	Hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VICTAULIC 3"				
Hydraulic circuit condenser side	Water flow	m^3/h	16.9	19.6	22.5	25.8	28.4	31.9	33.6	39.3	45.2	51.5	63.8
	Type of heat exchanger		Stainless steel brazed plates										
	Hydraulic connections		2"	2"	2"	2 1/2"	2 1/2"	2 1/2"	VICTAULIC 3"				
Equipment sound pressure of Lp10 (5)		dB(A)	39	44	44	45	45	47	46	48	50	51	52
Empty weight		kg	543	565	760	775	815	895	1250	1325	1369	1475	1575

Dimensions:



Standard version dimensions (S)			
	Series 1	Series 2	Series 3
L	900	1554	2550
W	800	800	800
H	1267	1500	1500

*Dimensions valid for the version with a hydraulic kit (version P) up to model 2090.
For higher models, the hydraulic kit is provided in an independent module (see technical catalogue).

LANGIA

HEAT PUMPS AND CHILLERS

water-to-water

213 - 755 kW
234 - 829 kW

Multi-Scroll
Inverter
50 Hz
60 Hz
ACS
T

R410A
R134a
R1234ze

Adaptation and Versatility

- High-performance units with plate heat exchangers which enable a flexible configuration for centralised facilities, with closed water loop and geothermal energy
- Versions available with a hydraulic kit
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance via removable panels
- Versions with R-134a refrigerant to provide water at high temperatures up to +70°C

Low noise level

- Available panelled and closed unit with acoustic insulation
- Compressors available with acoustic jacket

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- Tandem multiscroll to improve the seasonal energy efficiency
- NEW equipment available with inverter compressors as an option for maximum energy efficiency
- Electronic expansion valve for minimal energy consumption
- Equipment with a hydraulic kit can include high-performance electronic pumps
- Hot gas partial heat reclaim system for sanitary hot water

Environment

- Optimised design for reduced refrigerant charge R-410A (ODP 0, GWP 2088)
- NEW LANGIA ECO availability of units with R-1234ze refrigerant (ODP 0, GWP<1)

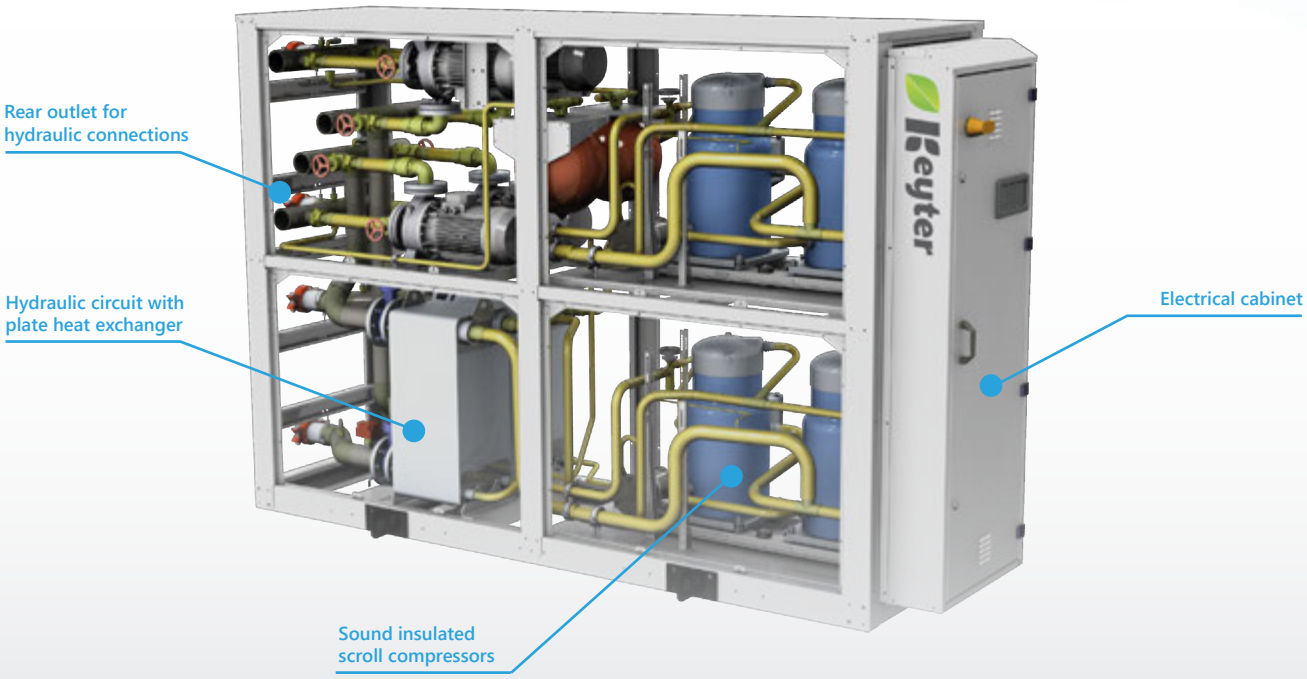
Applications

Industry
Retail & Shopping centres
Culture
Hospitals

LANGIA versions

Keyter Langia ZB

Standard unit without panelling



Hydraulic versions:

Keyter ZB - Standard version (S)

Equipment with no hydraulic kit.

The ZB units have triple protection of plate heat exchanger, that includes as standard flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Keyter ZB - Version with hydraulic kit (P)

Integrated hydraulic kit composed of a circulation pump suitable for water or glycol water up to 0°C, expansion vessel, purge and closing valves, pressure gauges and flow switch.

Low temperature kit is required for water temperatures below 0°C, which requires replacement of the pump and adds electrical heater on hydraulic elements to operate with water temperature up to -10°C.

Codification:

KZB | | | **NS4W**

Series | Size | Capacity

- **I** - Reversible heat pump
- **R** - Cooling only
- **Q** - Heating only
- **C** - Reversible in water circuit, not reversible in the refrigerant circuit
- **H** - Heating only for high water outlet temperature

- **N** - Scroll compressor
- **S** - Standard version
- **4** - 400 V/III/50 Hz
- **W** - R-410A / **Y** - R-134a / **E** - R-1234ze

Version H heating only for high water output temperatures, available in two versions:

- with EVI compressor in units with R410A refrigerant, for water outlet temperatures up to +65°C
- units with R134a refrigerant, for water outlet temperatures up to +70°C

The LANGIA range units is available without condenser for split version with a remote condenser:

KLB | | **NS4W**

- **I** - Reversible heat pump
- **R** - Cooling only

LANGIA
technical data

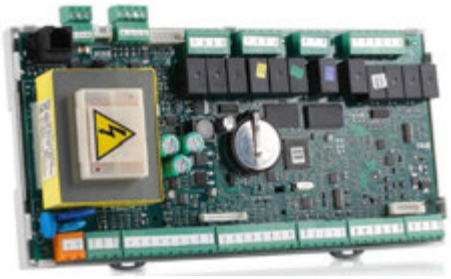
205 - 755 kW

KZB models			1210	1225	2240	2270	2300	2340	2380	3440	3480	4510	4570	4640	4720
Cooling only version (R)															
Cooling	Cooling capacity (1)	kW	212.6	227.7	243.1	273.4	303.6	349.7	395.8	449.4	503.0	524.6	593.7	674.1	754.5
		TR	60.5	65	69.5	78	86.5	99	112.5	128	143	149.5	169	192	214.5
		kBTU/hr	725.4	776.9	829.5	932.9	1035.9	1193.2	1350.5	1533.4	1716.3	1790.0	2025.8	2300.1	2574.5
	Power input (2)	kW	44.8	48.2	50.8	57.5	64.2	73.1	82.0	93.8	105.6	109.7	123.1	140.7	158.4
	EER (3)	W/W	4.7	4.7	4.8	4.8	4.7	4.8	4.8	4.8	4.8	4.8	4.8	4.8	4.8
		BTU/(hrxW)	16.2	16.1	16.3	16.2	16.1	16.3	16.5	16.3	16.3	16.3	16.5	16.3	16.3
Heat pump version (I)															
Cooling mode	Cooling capacity (1)	kW	205.4	220.1	234.7	264.0	293.4	337.9	382.4	434.4	486.4	506.8	573.5	651.6	729.7
	Power input (2)	kW	46.4	49.9	52.5	59.5	66.5	75.6	84.8	96.6	108.3	113.5	127.2	144.8	162.5
	EER (3)	W/W	4.4	4.4	4.5	4.4	4.4	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
Heating mode	Heating capacity (4)	kW	233.6	250.8	265.6	300.0	334.4	383.9	433.4	493.1	552.9	575.9	650.1	739.7	829.3
	Power input (2)	kW	56.8	61.1	64.3	72.8	81.4	92.7	104.0	117.7	131.3	139.1	156.0	176.5	197.0
	COP (3)	W/W	4.1	4.1	4.1	4.1	4.1	4.1	4.2	4.0	4.4	4.4	4.4	4.4	4.4
Heating only version (Q)															
Heating	Heating capacity (4)	kW	231.8	248.8	263.6	297.7	331.7	380.8	430.0	489.6	549.3	571.3	645.0	734.4	823.9
	Power input (2)	kW	54.6	58.7	61.9	70.1	78.3	89.2	100.1	113.6	127.2	133.8	150.1	170.4	190.7
	COP (3)	W/W	4.2	4.2	4.3	4.2	4.2	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Technical characteristics															
Power supply			400 V/III/50 HZ with neutral												
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088												
	Type of compressor		Hermetic Scroll, Trio		Hermetic tandem scroll							Hermetic Scroll Trio			
	No. 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	m^3/h	36.6	39.2	41.9	47.1	52.3	60.2	68.2	77.4	86.6	90.4	102.3	116.1	130.0
	Type of heat exchanger		Stainless steel brazed plates												
	Hydraulic connections		VICTAULIC DN80		VICTAULIC DN100			VICTAULIC DN125				VICTAULIC DN150			
Hydraulic circuit Condenser side	Water flow	m^3/h	43.7	46.8	49.9	56.1	62.4	71.7	81.1	92.2	103.3	107.6	121.6	138.3	155
	Type of heat exchanger		Stainless steel brazed plates												
	Hydraulic connections		VICTAULIC DN80		VICTAULIC DN100			VICTAULIC DN125				VICTAULIC DN150			
Equipment sound pressure of Lp10 (5)		dB(A)	57	58	58	58	58	58	58	58	62	63	63	64	65
Empty weight		kg	1330	1420	1470	1560	1640	1680	1760	2000	2060	2470	2530	2600	2705

(1) Cooling conditions: 12/7ºC evaporator and 30/35ºC condenser.
(2) Nominal power input by compressors.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Heating conditions: 12/7ºC evaporator and 40/45ºC condenser.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Electronic control:

Keyter LANGIA units include as standard AQUAMANAGER programmable electronic control, specifically developed for the management of air-to-water and water-to-water equipment, with pGD1 user and maintenance terminal.



AQUAMANAGER

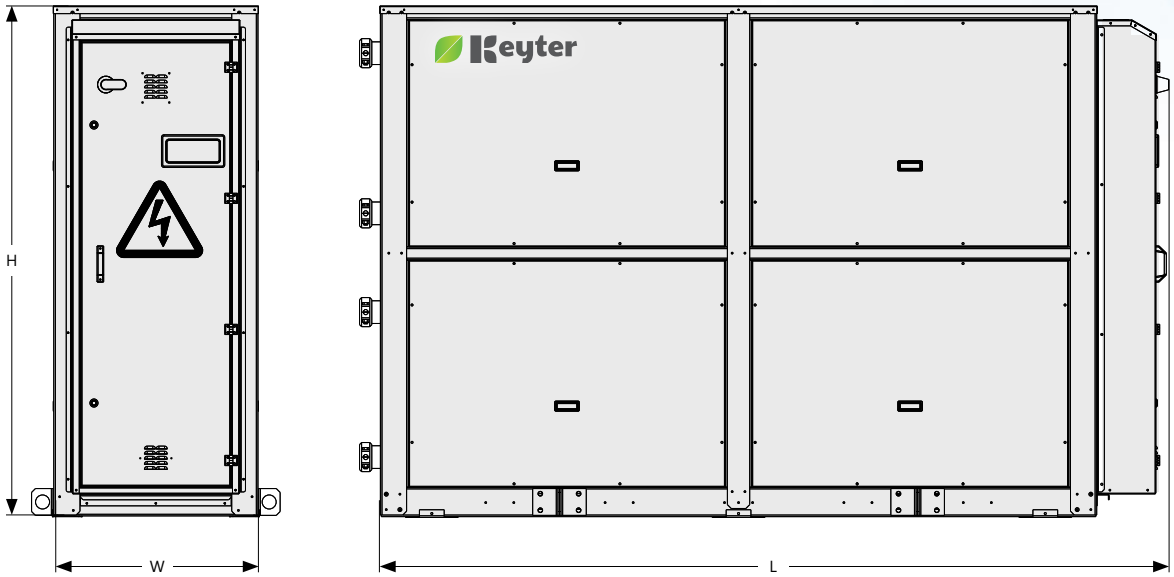
pGD1 terminal

Options:

- Panelled unit
- Acoustic jacket for compressors
- Panels with acoustic insulation
- Partial heat reclaim of hot gases
- Electrical cabinet on long side of the unit (see dimensions)
- Other electrical voltages (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)

LANGIA
dimensions

Dimensions:



Standard version dimensions (S)				
	Series 1	Series 2	Series 3	Series 4
L (*)	2041	2588	3078	3450
W	800	800	800	800
H	1750	2000	2000	2000
Dimensions of version with hydraulic kit (P)				
	Series 1	Series 2	Series 3	Series 4
L (*)	2588	3078	3450	3950
W	800	800	800	800
H	1750	2000	2000	2000

(*) Includes the electrical cabinet, its lever and the main switch, which is mounted as standard on the door on the shorter side of the unit.

LANGIA ECO

Water-to-water heat pump
R1234ze | 50 - 200 kW
environmentally-friendly and efficient

- ATEX multistage semi-hermetic compressors
- Leak detection system
- Hydraulic inversion cycle
- Automatic emptying system for the refrigerant circuit
- Independent electrical cabinet

R1234ze ODP=0 | GWP<1

ESEER 5.4
EER 4.1
BREEAM +2 points

Gallery of Innovation

ACTEA

HEAT PUMPS AND CHILLERS

water-to-water units with shell and tube heat exchanger

46 - 755 kW
54 - 829 kW

Multi-Scroll
Inverter
50 Hz
60 Hz
ACS

R410A
R134a
R1234ze

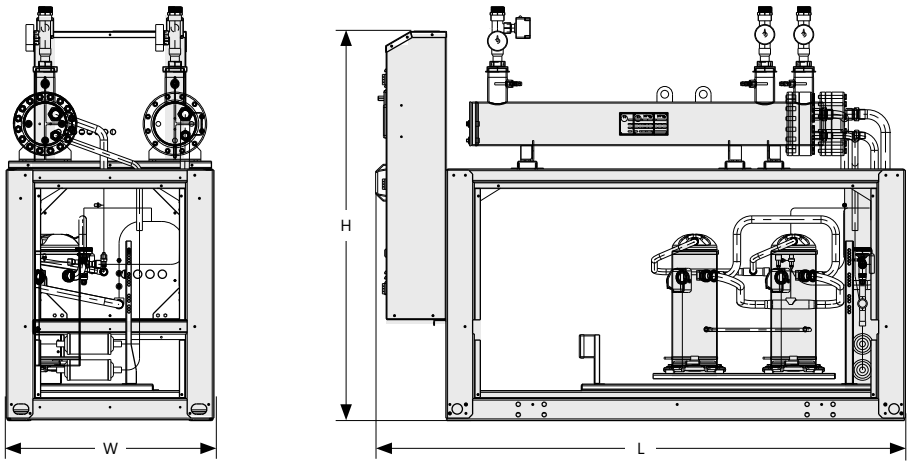
Hydraulic versions:

Keyter ZM - Standard version (S)

ZM units with shell and tube heat exchanger.

The ZM units have triple protection of heat exchanger that includes as standard flow switch, water anti-freeze protection and refrigerant anti-freeze protection.

Dimensions:



Standard version dimensions (S)				
	Series 1	Series 2	Series 3	Series 4
L (*)	2041	2588	3078	3450
W	800	800	800	800
H	1750	2000	2000	2000

(*) Includes the electrical cabinet, its lever and the main switch. The electrical cabinet is mounted as standard on the door on the shorter side of the unit . Optionally, it may be mounted on the longer side of the equipment (check dimensions).

ACTEA
technical data

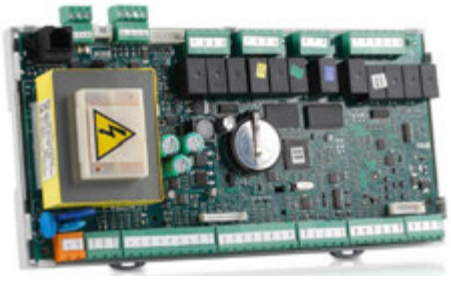
42 - 755 kW

KZM models			1045	1060	2080	2090	2120	2150	2240	3300	3380	3480	4570	4720
Cooling only version (R)														
Cooling	Cooling capacity (1)	kW	45.6	61.7	82.4	91.6	119.6	149.1	243.1	303.6	395.8	503.0	593.7	754.5
		TR	13	17.5	23.5	26	34	42.5	69.5	86.5	112.5	143	169	214.5
		kBTU/hr	155.6	210.5	281.2	312.6	408.1	508.8	829.5	1035.9	1350.5	1716.3	2025.8	2574.5
	Power input (2)	kW	9.5	12.9	16.3	19.3	25.1	31.6	50.8	64.2	82.0	105.6	123.1	158.4
	EER (3)	(W/W)	4.8	4.8	5.1	4.7	4.8	4.7	4.8	4.7	4.8	4.8	4.8	4.8
		BTU/(hrxW)	16.4	16.3	17.2	16.2	16.3	16.1	16.3	16.1	16.5	16.3	16.5	16.3
Heat pump version (I)														
Cooling mode	Cooling capacity	kW	41.6	56.3	75.2	83.7	108.7	136.0	234.7	293.4	382.4	486.4	573.5	729.7
	Power input (2)	kW	9.8	13.4	16.9	20.0	25.9	32.7	52.5	66.5	84.8	108.3	127.2	162.5
	EER (3)	W/W	4.2	4.2	4.5	4.2	4.2	4.2	4.5	4.4	4.5	4.5	4.5	4.5
Heating mode	Heating capacity (4)	kW	53.6	73.6	92.6	107.3	140.2	174.6	265.6	334.4	433.4	552.9	650.1	829.3
	Power input (2)	kW	12.0	16.6	20.9	24.4	31.7	40.1	64.3	81.4	104.0	131.3	156.0	197.0
	COP (3)	W/W	4.5	4.4	4.4	4.4	4.4	4.4	4.1	4.1	4.2	4.4	4.4	4.4
Heating only version (Q)														
Heating	Heating capacity (4)	kW	53.6	73.6	92.6	107.3	140.2	174.6	263.6	331.7	430.0	549.3	645.0	823.9
	Power input (2)	kW	11.6	15.9	20.1	23.5	30.5	38.5	61.9	78.3	100.1	127.2	150.1	190.7
	COP (3)	W/W	4.6	4.6	4.6	4.6	4.6	4.5	4.3	4.2	4.3	4.3	4.3	4.3
Technical characteristics														
Power supply			400 V/III/50 HZ with neutral											
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R410A/2088											
	Type of compressor		Scroll Sing.	Hermetic Tandem Scroll			Hermetic scroll, Single		Hermetic Tandem Scroll				Hermetic Scroll, Trio	
	No. circuits/compressors		1/ 1	1 / 2	1 / 2	1 / 2	2 / 2	2 / 2	2 / 4	2 / 4	2 / 4	2 / 4	2 / 6	2 / 6
	No. power stages		1	2	2	2	2	2	4	4	4	4	6	6
Hydraulic circuit evaporator side	Water flow	m^3/h	7.9	10.6	14.2	15.8	20.6	25.7	41.9	52.3	68.2	86.6	102.3	130.0
	Type of heat exchanger		Shell and tube											
	Hydraulic connections		1 1/2"	2"	2"	2"	2 1/2"	2 1/2"	VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN150	
Hydraulic circuit Condenser side	Water flow	m^3/h	9.8	13.4	16.9	19.6	25.8	31.9	49.9	62.4	81.1	103.3	121.6	155
	Type of heat exchanger		Shell and tube											
	Hydraulic connections		1 1/2"	2"	2"	2"	2 1/2"	2 1/2"	VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN150	
Equipment sound pressure of Lp10 (10)		dB(A)	40	38	39	44	45	47	58	58	58	62	63	65
Empty weight		kg	410	515	543	565	775	895	1470	1640	1760	2060	2530	2705

(1) Cooling conditions: 12/7ºC evaporator and 30/35ºC condenser.
(2) Nominal power input by compressors.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Heating conditions: 12/7ºC evaporator and 40/45ºC condenser.
(5) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

Electronic control:

Keyter ACTEA units include as standard AQUAMANAGER programmable electronic control, specifically developed for the management of air-to-water and water-to-water equipment, with pGD1 user and maintenance terminal.



AQUAMANAGER

pGD1 terminal

ONEIDA

CHILLERS

water-to-water screw chillers

170 - 1813 kW
150 - 1610 kW

Screw
Inverter
50 Hz
60 Hz
ACS

R134a R513A R450A R1234ze

Adaptation and Versatility

- High-performance chillers equipped with action screw compressors and low speed and the latest generation shell and tube heat exchangers
- Condensing pressure control as standard for all year operation
- Adaptability to the facility offering a wide range of models
- Maximum accessibility and easy maintenance

Energy efficiency

- High energy efficiency in partial and full load, reducing operating costs
- Compliance with ErP 2018 and ErP 2021
- NEW equipment available with inverter screw compressor as an option for maximum energy efficiency
- Electronic expansion valve for minimal energy consumption
- Hot gas partial heat reclaim system with plate heat exchanger for sanitary hot water

Low noise level

- Available panelled and closed unit with acoustic insulation
- Compressors available with acoustic jacket

Environment

- Optimised design for reduced refrigerant charge R-134a and low GWP refrigerants
- NEW availability of unit with low GWP refrigerants R-513A (ODP 0, GWP 513) and R-450A (ODP 0, GWP 547)
- NEW ONEIDA ECO availability of unit with low GWP refrigerant R-1234ze (ODP 0, GWP <1)

Easy control

- Electronic regulation and SIEMENS supervision for simple use and high performance
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Applications

Industry
Retail & Shopping centres
Culture
Hotels

ONEIDA
range specification

Standard equipments of the range

- Semi-hermetic compact screw compressors
- Shell and tube heat exchangers in evaporator and condensers
- Electronic expansion valve
- Triple protection for the heat exchanger with a water flow switch, refrigerant anti-freeze protection and water anti-freeze protection
- Compressor anti-vibration mounts
- Star-Delta start-up for compressors
- Glycol sweeping of the hydraulic circuit for negative temperatures
- General switch
- Programmable AQUAMATIX control (Siemens Climatix control)
- Climatix HMI user terminal for AQUAMATIX control
- RS485 communication interface for ModBus communication
- PREMIUM phase control relay, with phase failure detection and rotation direction protection
- Transformer for control system
- Clamps for transportation

Options

- Inverter version with one inverter compressor and the rest standard compressors
- Full Inverter version, with all the inverter compressors
- Ballast for network filtration and RFI filter, for optional inverter version
- High energy efficiency compressors (Bitzer CSW series)
- Original manufacturer high-performance acoustic jacket
- Sheet compartment for compressor protection
- Sheet compartment for compressors with acoustic insulation in panels
- Compressor suction shut-off valves
- Compressor port fitting for an economiser with a muffle (silencer) to absorb vibrations in the piping
- Oil level switch
- Partial heat reclaim of hot gases to produce sanitary hot water
- Total heat reclaim of hot gases
- Total heat reclaim of hot gases via a double shell and tube condenser
- Hydraulic connections with flanges
- Hydraulic kit with water circulation pump as an independent module
- Other electrical voltages (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)
- Numbering of cables in electrical cabinet
- Bacnet/Lonworks communication
- EXCELLENT phase control relay, adds phase imbalance, overvoltage and undervoltage detection
- Refrigerant leak detector (recommended for units with R1234ze refrigerant)
- Energy meter
- Skids for container transportation

ONEIDA
technical data

R134a

224 - 774 kW

KZT models			1240	1320	1370	1420	1460	1530	1600	1700	2800
Cooling only version (R) or water reversible heat pump (C)											
Powers (condensing water 30-35°C)	Cooling capacity (1)	kW	224.4	302.9	365.7	425.0	436.5	505.2	606.4	654.8	774.1
		TR	64	86.5	104	121	124.5	144	172.5	186.5	220.5
		kBTU/hr	765.8	1033.6	1247.8	1450.2	1489.2	1723.9	2069.3	2234.2	2641.2
	Power in the condenser	kW	270.4	366.3	435.2	504.1	522.3	604.9	720.8	782.8	920.0
	Power input (2)	kW	45.9	63.4	69.5	79.1	85.9	99.7	114.3	128.0	146.0
	EER (3)	W/W	4.9	4.8	5.3	5.4	5.1	5.1	5.3	5.1	5.3
		BTU/(Wxhr)	16.7	16.3	17.9	18.3	17.3	17.3	18.1	17.5	18.1
Powers (condensing water 40-45°C)	Cooling capacity (1)	kW	199.3	269.0	324.8	377.4	387.6	448.6	538.5	581.5	687.4
		TR	57	76.5	92.5	107.5	110.5	128	153.5	165.5	195.5
		kBTU/hr	680.1	917.9	1108.1	1287.9	1322.5	1530.8	1837.6	1984.0	2345.5
	Power in the condenser	kW	255.6	346.7	410.0	474.4	492.8	570.8	678.6	738.4	866.3
	Power input (2)	kW	56.3	77.7	85.2	97.0	105.2	122.2	140.1	156.9	178.9
	EER (3)	W/W	3.5	3.5	3.8	3.9	3.7	3.7	3.8	3.7	3.8
		BTU/(Wxhr)	12.1	11.8	13.0	13.3	12.6	12.5	13.1	12.6	13.1
ESEER (3)			6.0	5.8	6.4	6.6	6.2	6.2	6.5	6.3	6.5
SEER (4)			5.5	5.4	6.0	6.1	5.8	5.8	6.0	5.8	6.0
ηs,c (5)			214%	209%	231%	236%	223%	222%	233%	224%	233%
IPLV (6)		kW/TR	0.43	0.44	0.40	0.39	0.42	0.42	0.40	0.41	0.40
		BTU/(Wxhr)	27.4	26.8	29.5	30.1	28.5	28.5	29.8	28.7	29.8
SCOP (4)			5.4	5.3	5.8	5.9	5.6	5.6	5.8	5.6	5.8
ηs,h (5)			209%	205%	223%	227%	216%	216%	224%	217%	224%
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2
	No. power stages		4	4	4	4	4	4	4	4	8
Hydraulic circuit evaporator side	Water flow (30-35°C)	m^3/h	38.7	52.2	63.0	73.2	75.2	87.0	104.5	112.8	133.3
	Water flow (40-45°C)	m^3/h	34.3	46.3	55.9	65.0	66.8	77.3	92.8	100.2	118.4
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		VICTAULIC DN125			VICTAULIC DN150			VICTAULIC DN200		
Hydraulic circuit Condenser side	Water flow (30-35°C)	m^3/h	46.6	63.1	75.0	86.8	90.0	104.2	124.1	134.8	158.5
	Water flow (40-45°C)	m^3/h	44.0	59.7	70.6	81.7	84.9	98.3	116.9	127.2	149.2
	Type of heat exchanger		Shell and tube								
	Hydraulic connections	condenser 1	3"			VICTAULIC DN100			VICTAULIC DN125		3"
		condenser 2	-	-	-	-	-	-	-	-	VICTAULIC DN100
Sound pressure (Lp10) (7)		dB(A)	65.3	66.1	65.7	68.1	68.1	67.5	64.9	72.1	72.4
Weight		kg	1211	1714	1771	2621	2628	2674	2908	3040	4297

Codification:

KZT — Series

Size / Capacity

NS4Y

R - Cooling only
C - Reversible in water circuit, not reversible in the refrigerant circuit

N - Standard screw compressor / **V** - Inverter screw compressor
S - Standard version
4 - 400 V/III/50 Hz
Y - Refrigerant
Y - R134a / **T** - R513A / **J** - R450A / **E** - R1234ze

ONEIDA
technical data

R134a

800 - 1815 kW

KZT models			2850	2950	2M00	2M10	2M11	2M12	2M13	3M14	3M15	3M18
Cooling only version (R) or water reversible heat pump (C)												
Powers (condensing water 30-35ºC)	Cooling capacity (1)	kW	799.6	866.8	939.9	1012.8	1078.7	1154.0	1227.2	1300.4	1397.1	1813.0
		TR	227.5	246.5	267.5	288	307	328.5	349	370	397.5	515.5
		kBTU/hr	2728.2	2957.6	3207.1	3455.8	3680.7	3937.7	4187.4	4437.1	4767.1	6186.2
	Power in the condenser	kW	957.1	1037.9	1124.7	1211.3	1291.8	1381.7	1468.6	1555.4	1670.0	2154.1
	Power input (2)	kW	157.6	171.1	184.8	198.6	213.1	227.7	241.4	255.0	272.9	341.1
	EER (3)	W/W	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.1	5.3
		BTU/(Wxhr)	17.3	17.3	17.4	17.4	17.3	17.3	17.3	17.4	17.5	18.1
Powers (condensing water 40-45ºC)	Cooling capacity (1)	kW	710.0	769.7	834.7	899.4	957.9	1024.8	1089.8	1154.8	1240.7	1610.0
		TR	202	219	237.5	256	272.5	291.5	310	328.5	353	458
		kBTU/hr	2422.7	2626.5	2848.0	3068.8	3268.5	3496.8	3718.6	3940.3	4233.3	5493.5
	Power in the condenser	kW	903.2	979.4	1061.1	1142.7	1219.1	1303.9	1385.6	1467.3	1575.1	2028.0
	Power input (2)	kW	193.1	209.6	226.5	243.3	261.2	279.1	295.8	312.5	334.4	418.0
	EER (3)	W/W	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.9
		BTU/(Wxhr)	12.5	12.5	12.6	12.6	12.5	12.5	12.6	12.6	12.7	13.1
ESEER (3)			6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.2	6.3	6.5
SEER (4)			5.8	5.8	5.8	5.8	5.7	5.8	5.8	5.8	5.8	6.0
ηs,c (5)			222%	222%	223%	224%	222%	222%	223%	224%	224%	233%
IPLV (6)		kW/TR	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.42	0.41	0.40
		BTU/(Wxhr)	28.5	28.5	28.6	28.6	28.4	28.5	28.5	28.6	28.7	29.8
SCOP (4)			5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.8
ηs,h (5)			216%	216%	216%	217%	215%	216%	216%	217%	218%	225%
Technical characteristics												
Power supply			400 V/III/50 HZ without neutral									
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R134a/1300									
	Type of compressor		Semi-Hermetic Compact Screw									
	No. circuits/compressors		2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	3/3	3/3
	No. power stages		8	8	8	8	8	8	8	8	12	12
Hydraulic circuit evaporator side	Water flow (30-35°C)	m^3/h	137.7	149.3	161.9	174.5	185.8	198.8	211.4	224.0	240.6	312.3
	Water flow (40-45°C)	m^3/h	122.3	132.6	143.8	154.9	165.0	176.5	187.7	198.9	213.7	277.3
	Type of heat exchanger		Shell and tube									
	Hydraulic connections		VICTAULIC DN200									VICTAULIC DN250
Hydraulic circuit Condenser side	Water flow (30-35°C)	m^3/h	164.9	178.8	193.7	208.7	222.5	238.0	253.0	267.9	287.7	371.0
	Water flow (40-45°C)	m^3/h	155.6	168.7	182.8	196.8	210.0	224.6	238.7	252.7	271.3	349.3
	Type of heat exchanger		Shell and tube									
	Hydraulic connections	condenser 1	3"				VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 2	VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 3	-	-	-	-	-	-	-	-	VICTAULIC DN100	VICTAULIC DN125
Sound pressure (Lp10) (7)		dB(A)	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	74.8	74.8
Weight		kg	4285	4399	4575	4705	5574	5609	5659	5862	8046	8795

(1) Nominal cooling capacity for a water inlet/outlet temp. in the evaporator of 12/7ºC.
(2) Nominal power input by compressors.
(3) EER and ESEER calculated based on EN 14511.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

ONEIDA
technical data

R513A 224 - 773 kW

KZT models			1240	1320	1370	1420	1460	1530	1600	1700	2800
Cooling only version (R) or water reversible heat pump (C)											
Powers (condensing water 30-35°C)	Cooling capacity (1)	kW	224.0	302.3	365.0	424.2	435.6	504.2	605.2	653.5	772.5
		TR	64	86	104	121	124	143.5	172.5	186	220
		kBTU/hr	764.3	1031.5	1245.3	1447.3	1486.3	1720.4	2065.1	2229.7	2635.9
	Power in the condenser	kW	271.9	368.4	437.5	506.7	525.1	608.1	724.4	787.0	924.7
	Power input (2)	kW	47.9	66.1	72.5	82.5	89.5	103.9	119.2	133.5	152.2
	EER (3)	W/W	4.7	4.6	5.0	5.1	4.9	4.9	5.1	4.9	5.1
		BTU/(Wxhr)	16.0	15.6	17.2	17.5	16.6	16.6	17.3	16.7	17.3
Powers (condensing water 40-45°C)	Cooling capacity (1)	kW	198.9	268.5	324.1	376.7	386.8	447.7	537.5	580.3	686.0
		TR	57	76.5	92.5	107.5	110	127.5	153	165	195.5
		kBTU/hr	678.7	916.0	1105.9	1285.3	1319.8	1527.8	1833.9	1980.1	2340.8
	Power in the condenser	kW	257.6	349.4	412.9	477.8	496.5	575.1	683.5	743.9	872.5
	Power input (2)	kW	58.7	81.0	88.8	101.1	109.7	127.4	146.1	163.6	186.5
	EER (3)	W/W	3.4	3.3	3.6	3.7	3.5	3.5	3.7	3.5	3.7
		BTU/(Wxhr)	11.6	11.3	12.4	12.7	12.0	12.0	12.6	12.1	12.5
ESEER (3)			5.7	5.6	6.2	6.3	6.0	5.9	6.2	6.0	6.2
SEER (4)			5.3	5.2	5.7	5.8	5.5	5.5	5.8	5.6	5.8
ηs,c (5)			204%	200%	221%	225%	213%	212%	223%	214%	222%
IPLV (6)		kW/TR	0.45	0.46	0.42	0.41	0.44	0.44	0.42	0.43	0.42
		BTU/(Wxhr)	26.2	25.7	28.3	28.9	27.3	27.2	28.5	27.5	28.5
SCOP (4)			5.2	5.1	5.6	5.7	5.4	5.4	5.6	5.4	5.6
ηs,h (5)			201%	197%	214%	218%	208%	207%	216%	209%	216%
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2
	No. power stages		4	4	4	4	4	4	4	4	8
Hydraulic circuit evaporator side	Water flow (30-35°C)	m^3/h	38.6	52.1	62.9	73.1	75.0	86.8	104.2	112.6	133.1
	Water flow (40-45°C)	m^3/h	34.3	46.2	55.8	64.9	66.6	77.1	92.6	100.0	118.2
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		VICTAULIC DN125			VICTAULIC DN150			VICTAULIC DN200		
Hydraulic circuit Condenser side	Water flow (30-35°C)	m^3/h	46.8	63.5	75.4	87.3	90.5	104.8	124.8	135.6	159.3
	Water flow (40-45°C)	m^3/h	44.4	60.2	71.1	82.3	85.5	99.1	117.7	128.1	150.3
	Type of heat exchanger		Shell and tube								
	Hydraulic connections	condenser 1	3"			VICTAULIC DN100			VICTAULIC DN125		3"
		condenser 2	-	-	-	-	-	-	-	-	VICTAULIC DN100
Sound pressure (Lp10) (7)		dB(A)	65.3	66.1	65.7	68.1	68.1	67.5	64.9	72.1	72.4
Weight		kg	1211	1714	1771	2621	2628	2674	2908	3040	4297

Electronic control:

Keyter ONEIDA units include as standard AQUAMATIX programmable electronic control (Siemens Climatix control), specifically developed for the management of air-to-water and water-to-water equipment, with Climatix HMI user terminal.

AQUAMATIX

Climatix HMI terminal

ONEIDA
technical data

R513A

800 - 1810 kW

KZT models			2850	2950	2M00	2M10	2M11	2M12	2M13	3M14	3M15	3M18
Cooling only version (R) or water reversible heat pump (C)												
Powers (condensing water 30-35°C)	Cooling capacity (1)	kW	798.0	865.1	938.0	1010.8	1076.5	1151.7	1224.8	1297.8	1394.3	1809.4
		TR	227	246	267	287.5	306.5	327.5	348.5	369	396.5	514.5
		kBTU/hr	2722.7	2951.7	3200.7	3448.8	3673.3	3929.9	4179.0	4428.2	4757.6	6173.8
	Power in the condenser	kW	962.3	1043.4	1130.7	1217.8	1298.8	1389.2	1476.4	1563.7	1678.9	2165.0
	Power input (2)	kW	164.3	178.4	192.7	207.0	222.2	237.4	251.7	265.9	284.6	355.7
	EER (3)	W/W	4.9	4.8	4.9	4.9	4.8	4.9	4.9	4.9	4.9	5.1
		BTU/(Wxhr)	16.6	16.5	16.6	16.7	16.5	16.6	16.6	16.7	16.7	17.4
Powers (condensing water 40-45°C)	Cooling capacity (1)	kW	708.6	768.2	833.0	897.6	956.0	1022.8	1087.6	1152.5	1238.2	1606.8
		TR	201.5	218.5	237	255.5	272	291	309.5	328	352.5	457
		kBTU/hr	2417.9	2621.2	2842.3	3062.7	3262.0	3489.8	3711.1	3932.4	4224.9	5482.5
	Power in the condenser	kW	910.0	986.8	1069.2	1151.3	1228.4	1313.8	1396.1	1478.4	1586.9	2042.6
	Power input (2)	kW	201.4	218.6	236.2	253.7	272.4	291.0	308.4	325.9	348.7	435.9
	EER (3)	W/W	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.7
		BTU/(Wxhr)	12.0	12.0	12.0	12.1	12.0	12.0	12.0	12.1	12.1	12.6
ESEER (3)			5.9	5.9	6.0	6.0	5.9	5.9	6.0	6.0	6.0	6.2
SEER (4)			5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.6	5.8
ηs,c (5)			213%	212%	213%	214%	212%	212%	213%	214%	214%	223%
IPLV (6)		kW/TR	0.44	0.44	0.44	0.43	0.44	0.44	0.44	0.43	0.43	0.42
		BTU/(Wxhr)	27.3	27.2	27.3	27.4	27.2	27.2	27.3	27.4	27.5	28.6
SCOP (4)			5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.4	5.6
ηs,h (5)			208%	207%	208%	209%	207%	207%	208%	209%	209%	216%
Technical characteristics												
Power supply			400 V/III/50 HZ without neutral									
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R513A/573									
	Type of compressor		Semi-Hermetic Compact Screw									
	No. circuits/compressors		2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	3/3	3/3
	No. power stages		8	8	8	8	8	8	8	8	12	12
Hydraulic circuit evaporator side	Water flow (30-35°C)	m^3/h	137.4	149.0	161.6	174.1	185.4	198.4	211.0	223.5	240.2	311.7
	Water flow (40-45°C)	m^3/h	122.1	132.3	143.5	154.6	164.7	176.2	187.3	198.5	213.3	276.8
	Type of heat exchanger		Shell and tube									
	Hydraulic connections		VICTAULIC DN200									VICTAULIC DN250
Hydraulic circuit Condenser side	Water flow (30-35°C)	m^3/h	165.8	179.7	194.8	209.8	223.7	239.3	254.3	269.3	289.2	372.9
	Water flow (40-45°C)	m^3/h	156.7	170.0	184.2	198.3	211.6	226.3	240.5	254.6	273.3	351.8
	Type of heat exchanger		Shell and tube									
	Hydraulic connections	condenser 1	3"				VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 2	VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 3	-	-	-	-	-	-	-	-	VICTAULIC DN100	VICTAULIC DN125
Sound pressure (Lp10) (7)		dB(A)	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	74.8	74.8
Weight		kg	4285	4399	4575	4705	5574	5609	5659	5862	8046	8795

(1) Nominal cooling capacity for a water inlet/outlet temp. in the evaporator of 12/7°C.
(2) Nominal power input by compressors.
(3) EER and ESEER calculated based on EN 14511.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

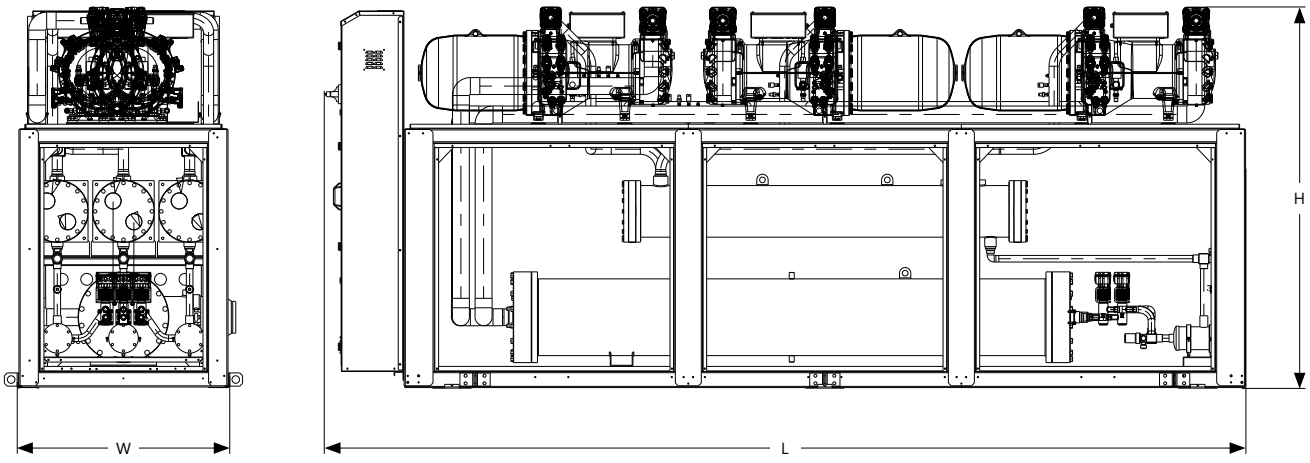
ONEIDA
technical data

R1234ze

170 - 590 kW

KZT models			1240	1320	1370	1420	1460	1530	1600	1700	2800
Cooling only version (R) or water reversible heat pump (C)											
Powers (condensing water 30-35°C)	Cooling capacity (1)	kW	170.3	229.9	277.6	322.6	331.3	383.5	460.3	497.0	587.5
		TR	48.5	65.5	79	92	94.5	109	131	141.5	167.5
		kBTU/hr	581.2	784.5	947.1	1100.7	1130.3	1308.4	1570.6	1695.7	2004.7
	Power in the condenser	kW	203.4	275.5	327.6	379.6	393.1	455.2	542.6	589.1	692.6
	Power input (2)	kW	33.1	45.6	50.1	57.0	61.8	71.8	82.3	92.2	105.1
	EER (3)	W/W	5.1	5.0	5.5	5.7	5.4	5.3	5.6	5.4	5.6
		BTU/(Wxhr)	17.6	17.2	18.9	19.3	18.3	18.2	19.1	18.4	19.1
Powers (condensing water 40-45°C)	Cooling capacity (1)	kW	151.3	204.2	246.5	286.5	294.2	340.5	408.8	441.3	521.7
		TR	43	58.5	70.5	81.5	84	97	116.5	125.5	148.5
		kBTU/hr	516.2	696.7	841.0	977.5	1003.8	1161.9	1394.7	1505.9	1780.2
	Power in the condenser	kW	191.8	260.1	307.8	356.3	369.9	428.5	509.6	554.3	650.5
	Power input (2)	kW	40.5	55.9	61.3	69.8	75.8	88.0	100.9	113.0	128.8
	EER (3)	W/W	3.7	3.7	4.0	4.1	3.9	3.9	4.1	3.9	4.1
		BTU/(Wxhr)	12.7	12.5	13.7	14.0	13.2	13.2	13.8	13.3	13.8
ESEER (3)			6.3	5.9	6.4	6.5	6.2	6.2	6.4	6.4	6.6
SEER (4)			5.8	5.7	6.3	6.4	6.1	6.1	6.3	6.1	6.3
ηs,c (5)			226%	221%	244%	249%	235%	235%	246%	237%	246%
IPLV (6)		kW/TR	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
		BTU/(Wxhr)	28.9	28.3	31.1	31.8	30.1	30.0	31.4	30.3	31.4
SCOP (4)			5.7	5.6	6.0	6.1	5.9	5.8	6.1	5.9	6.1
ηs,h (5)			219%	215%	234%	238%	226%	226%	235%	228%	235%
Technical characteristics											
Power supply			400 V/III/50 HZ without neutral								
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1								
	Type of compressor		Semi-Hermetic Compact Screw								
	No. circuits/compressors		1/1	1/1	1/1	1/1	1/1	1/1	1/1	1/1	2/2
	No. power stages		4	4	4	4	4	4	4	4	8
Hydraulic circuit evaporator side	Water flow (30-35°C)	m³/h	29.3	39.6	47.8	55.6	57.1	66.0	79.3	85.6	101.2
	Water flow (40-45°C)	m³/h	26.1	35.2	42.5	49.3	50.7	58.7	70.4	76.0	89.9
	Type of heat exchanger		Shell and tube								
	Hydraulic connections		VICTAULIC DN125			VICTAULIC DN150			VICTAULIC DN200		
Hydraulic circuit Condenser side	Water flow (30-35°C)	m³/h	35.0	47.5	56.4	65.4	67.7	78.4	93.5	101.5	119.3
	Water flow (40-45°C)	m³/h	33.0	44.8	53.0	61.4	63.7	73.8	87.8	95.5	112.1
	Type of heat exchanger		Shell and tube								
	Hydraulic connections	condenser 1	3"			VICTAULIC DN100			VICTAULIC DN125		3"
		condenser 2	-	-	-	-	-	-	-	-	VICTAULIC DN100
Sound pressure (Lp10) (7)		dB(A)	65.3	66.1	65.7	68.1	68.1	67.5	64.9	72.1	72.4
Weight		kg	1211	1714	1771	2621	2628	2674	2908	3040	4297

Dimensions (standard units without hydraulic kit):



Dimensions (standard units without hydraulic kit)			
	Series 1	Series 2	Series 3
L	4835	4835	5835
W	900	1100	1600
H	2350	2350	2450

In units with an optional hydraulic kit, this is provided in an independent module (see dimensions in the technical documentation).

ONEIDA
technical data

R1234ze 607 - 1376 kW

KZT models			2850	2950	2M00	2M10	2M11	2M12	2M13	3M14	3M15	3M18
Cooling only version (R) or water reversible heat pump (C)												
Powers (condensing water 30-35°C)	Cooling capacity (1)	kW	606.9	657.9	713.4	768.7	818.7	875.9	931.5	987.0	1060.4	1376.1
		TR	173	187.5	203	219	233	249.5	265	281	301.5	391.5
		kBTU/hr	2070.7	2244.8	2434.2	2622.9	2793.6	2988.7	3178.2	3367.8	3618.2	4695.3
	Power in the condenser	kW	720.3	781.1	846.4	911.7	972.2	1039.9	1105.2	1170.6	1256.9	1621.6
	Power input (2)	kW	113.5	123.2	133.1	143.0	153.5	163.9	173.8	183.6	196.5	245.6
	EER (3)	W/W	5.3	5.3	5.4	5.4	5.3	5.3	5.4	5.4	5.4	5.6
		BTU/(Wxhr)	18.3	18.2	18.3	18.3	18.2	18.2	18.3	18.3	18.4	19.1
Powers (condensing water 40-45°C)	Cooling capacity (1)	kW	538.9	584.2	633.5	682.6	727.1	777.8	827.2	876.5	941.7	1222.0
		TR	153.5	166.5	180.5	194.5	207	221.5	235.5	249.5	268	347.5
		kBTU/hr	1838.8	1993.5	2161.6	2329.2	2480.8	2654.1	2822.4	2990.7	3213.1	4169.6
	Power in the condenser	kW	678.0	735.2	796.6	857.8	915.1	978.8	1040.1	1101.5	1182.5	1522.9
	Power input (2)	kW	139.1	150.9	163.1	175.2	188.1	200.9	213.0	225.0	240.8	301.0
	EER (3)	W/W	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	3.9	4.1
		BTU/(Wxhr)	13.2	13.2	13.3	13.3	13.2	13.2	13.3	13.3	13.3	13.9
ESEER (3)			6.3	6.3	6.3	6.5	6.5	6.5	6.5	6.5	6.5	6.6
SEER (4)			6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.1	6.4
ηs,c (5)			235%	235%	235%	236%	234%	235%	235%	236%	237%	246%
IPLV (6)		kW/TR	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
		BTU/(Wxhr)	30.0	30.0	30.1	30.2	30.0	30.0	30.1	30.2	30.3	31.5
SCOP (4)			5.9	5.8	5.9	5.9	5.8	5.8	5.9	5.9	5.9	6.1
ηs,h (5)			226%	226%	227%	227%	226%	226%	227%	227%	228%	236%
Technical characteristics												
Power supply			400 V/III/50 HZ without neutral									
Refrigerant circuit	Refrigerant fluid/GWP	Kg CO_2	R1234ze/< 1									
	Type of compressor		Semi-Hermetic Compact Screw									
	No. circuits/compressors		2/2	2/2	2/2	2/2	2/2	2/2	2/2	2/2	3/3	3/3
	No. power stages		8	8	8	8	8	8	8	8	12	12
Hydraulic circuit evaporator side	Water flow (30-35°C)	m^3/h	104.5	113.3	122.9	132.4	141.0	150.9	160.4	170.0	182.7	237.0
	Water flow (40-45°C)	m^3/h	92.8	100.6	109.1	117.6	125.2	134.0	142.5	151.0	162.2	210.5
	Type of heat exchanger		Shell and tube									
	Hydraulic connections		VICTAULIC DN200									VICTAULIC DN250
Hydraulic circuit Condenser side	Water flow (30-35°C)	m^3/h	124.1	134.5	145.8	157.0	167.5	179.1	190.4	201.6	216.5	279.3
	Water flow (40-45°C)	m^3/h	116.8	126.6	137.2	147.8	157.6	168.6	179.2	189.7	203.7	262.3
	Type of heat exchanger		Shell and tube									
	Hydraulic connections	condenser 1	3"				VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 2	VICTAULIC DN100		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN125		VICTAULIC DN100	VICTAULIC DN125
		condenser 3	-	-	-	-	-	-	-	-	VICTAULIC DN100	VICTAULIC DN125
Sound pressure (Lp10) (7)		dB(A)	72.9	72.9	72.9	72.9	72.9	72.9	72.9	72.9	74.8	74.8
Weight		kg	4285	4399	4575	4705	5574	5609	5659	5862	8046	8795

(1) Nominal cooling capacity for a water inlet/outlet temp. in the evaporator of 12/7°C.
(2) Nominal power input by compressors.
(3) EER and ESEER calculated based on EN 14511.
(4) Seasonal Energy Efficiency Ratio (SEER) for cooling factor and seasonal coefficient of performance for heating (SCOP), calculated based on standard EN 14825:2013.
(5) Seasonal Energy Efficiency Ratio for cooling (ηs,c) and heating (ηs,h) of spaces, in line with Ecodesign Regulation EU 2016/2281.
(6) Seasonal Energy Efficiency factor in line with AHRI Standards 550/590.
(7) Sound pressure level in dB(A) measured in a free field at 10 m from the source.

GENERAL HOSPITAL | SPAIN - CLINICAL HOSPITAL | SPAIN - HOSPITAL FOR CHILDREN AND WOMEN | ECUADOR - STELLA MARIS SCHOOL | SPAIN

HOTEL CALA ROMANI | SPAIN - HOTEL 7PINES | SPAIN - SITGES BOOKSHOP | SPAIN - FELIX SOLIS WINE STORES | SPAIN - GAMESA | SPAIN

terminal units

Fancoil units
technical data

230 V-I-50 Hz. Free discharge

Series			FM/FMO				FOH/FIH					
Model			02	03	04	06	025	035	050	070 FIH	070 FOH	090
Cooling capacity												
High/medium sp. total cooling capacity (1)		kW	2.5/2.0	3.8/3.0	5.3/4.2	7.4/5.8	2.9/2.8	3.8/3.6	6.6/6.1	7.6/7.1	8.6/8.4	10.3/9.6
High/medium sp. sensible cooling capacity (1)		kW	1.7/1.4	2.5/2.0	3.4/2.7	4.8/3.8	2.0/1.9	2.5/2.4	4.2/3.9	4.9/4.6	5.6/5.4	6.6/6.1
Heating capacity, 2 pipes version												
High/medium sp. heating capacity (2)		kW	3.1/2.5	4.4/3.5	6.1/4.7	8.6/6.7	3.7/3.5	4.4/4.2	7.6/7.1	8.7/8.2	10.1/9.7	11.8/11.0
Medium speed water flow		l/h	344	521	718	1000	478	612	1044	1219	1442	1647
Heating capacity, 4 pipes version												
High/medium sp. heating capacity			2.7/2.3	4.1/3.4	5.5/4.5	7.8/6.4	3.0/3.0	4.1/4.0	6.4/6.1	8.3/7.9	9.2/9.0	10.8/10.3
Medium speed water flow			204	302	399	565	262	343	533	695	788	901
Technical characteristics												
Medium/high speed air flow		m^3/h	370/280	505/390	690/515	995/740	450/425	505/470	900/820	985/910	1160/1115	1360/1245
Sound pressure level (3)		dB(A)	34	39	35	41	35	35	38	34	39	39
Weight		kg	25.9	30.1	35.5	41.4	17.5	20.9	25.1	34.5	34.5	46.5
Dimens. L x W x H (4)	FMO/FOH horiz. vers.	mm	840 x 585 x 230	1040 x 585 x 230	1240 x 585 x 230	1440 x 585 x 230	700 x 495 x 230	900 x 495 x 230	1100 x 495 x 230	-	1500 x 495 x 230	1700 x 495 x 230
	FM/FIH vertical version	mm	840 x 220 x 485	1040 x 220 x 485	1240 x 220 x 485	1440 x 220 x 485	740 x 220 x 495	940 x 220 x 495	1140 x 220 x 495	1540 x 220 x 495	-	1740 x 220 x 495

FMO fancoil

Horizontal cased fancoil unit with direct supply and return from the bottom.

FM fancoil

Vertical cased fancoil unit with linear supply for wall installation.

FOH fancoil

Horizontal uncased fancoil unit with available pressure up to 50 Pa.

FIH fancoil

Vertical uncased fancoil unit with available pressure up to 50 Pa.

230 V-I-50 Hz. Available pressure: 40 Pa (CK) and 50 Pa (TO)

Series			CK						TO			
Model			09	11	17	20	23	32	30	35	50	60
Cooling capacity												
High/medium sp. total cooling capacity (1)		kW	4.3/4.1	6.1/5.7	9.3/8.9	10.5/10.0	13.8/13.3	16.8/15.8	24.1/22.8	25.9/25.1	35.4/34.0	42.2/39.9
High/medium sp. sensible cooling capacity (1)		kW	2.9/2.8	3.9/3.7	6.0/5.8	6.8/6.5	8.9/8.6	10.9/10.2	15.5/14.7	16.7/16.2	22.7/21.8	27.2/25.7
Heating capacity, 2 pipes version												
High/medium sp. heating capacity (2)		kW	5.5/5.3	7.2/6.6	11.4/10.9	12.8/12.1	17.0/16.3	20.1/18.8	28.0/26.3	29.9/28.9	41.4/39.5	49.9/46.9
Medium speed water flow		l/h	702	972	1528	1720	2278	2716	3905	4298	5829	6838
Heating capacity, 4 pipes version												
High/medium sp. heating capacity			4.5/4.4	6.0/5.6	9.0/8.7	10.5/10.0	12.9/12.4	16.2/15.5	22.6/21.6	25.0/24.3	32.4/31.5	38.7/36.9
Medium speed water flow			386	495	763	878	1090	1363	1893	2131	2763	3228
Technical characteristics												
Medium/high speed air flow		m^3/h	745/705	870/790	1515/1425	1650/1540	2250/2125	2500/2300	3250/3020	3420/3280	4900/4640	6020/5580
Sound pressure level (3)		dB(A)	44	45	46	47	49	49	48	53	52	53
Weight		kg	26	29.5	36	42	55	65.5	96	106	135	176
Dimensions L x W x H (4)		mm	700 x 620 x 275	900 x 620 x 275	1100 x 620 x 275	1300 x 620 x 275	1500 x 620 x 275	1900 x 620 x 275	1400 x 840 x 420	1600 x 840 x 420	1800 x 840 x 420	2000 x 840 x 420

230 V-I-50 Hz. Available pressure: 50 Pa (TB)

TB model			10	11	22	23	31	32
Cooling capacity								
High/medium sp. total cooling capacity (1)		kW	10.3/10.0	11.1/10.7	20.4/19.8	22.0/20.8	29.0/28.1	31.5/30.4
High/medium sp. sensible cooling capacity (1)		kW	6.7/6.5	7.2/6.9	13.2/12.8	14.2/13.4	18.7/18.2	20.3/19.6
Heating capacity, 2 pipes version								
High/medium sp. heating capacity (2)		kW	12.1/11.7	13.1/12.5	23.7/22.9	25.7/24.2	33.7/32.8	37.0/35.7
Medium speed water flow		l/h	1708	1831	3389	3576	4826	5222
Heating capacity, 4 pipes version								
High/medium sp. heating capacity			9.1/8.9	9.7/9.4	17.9/17.4	19.0/18.2	25.1/24.5	26.7/26.0
Medium speed water flow			782	821	1527	1599	2151	2283
Technical characteristics								
Medium/high speed air flow		m^3/h	1403/1345	1550/1470	2731/2627	3021/2806	3946/3812	4416/4217
Sound pressure level (3)		dB(A)	50	50	53	53	55	54
Weight		kg	42	47	72	78	96	103
Dimensions L x W x H (4)		mm	980 x 650 x 394	980 x 650 x 394	1580 x 650 x 394	1580 x 650 x 394	1980 x 650 x 394	1980 x 650 x 394

CK fancoil

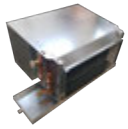
Horizontal uncased fancoil unit with available pressure up to 150 Pa.

TO fancoil

Horizontal uncased fancoil unit with available pressure up to 120 Pa.

TB fancoil

Horizontal uncased fancoil unit with available pressure up to 180 Pa.



Fancoil units technical data

230 V-I-50 Hz. Free discharge

Series			CD/CT							HW		
Model			CT 031	CT 049	CT 065	CT 075	CD 090	CD 102	CD 122	070	090	180
Cooling capacity												
High/medium sp. total cooling capacity (1)		kW	3.1/2.8	4.9/4.1	6.6/5.5	7.6/6.1	9.0/6.8	10.2/8.4	12.2/9.2	2.2/2.0	3.3/2.7	4.9/4.3
High/medium sp. sensible cooling capacity (1)		kW	2.0/1.8	3.2/2.7	4.2/3.6	4.8/3.9	5.9/4.4	6.7/5.4	7.9/6.0	1.4/1.3	2.2/1.8	3.3/2.9
Heating capacity, 2 pipes version												
High/medium sp. heating capacity (2)		kW	3.8/3.4	6.0/4.9	7.3/6.1	8.5/6.8	10.2/7.4	11.5/9.2	13.7/10.2	2.8/2.5	4.1/3.3	6.3/5.5
Medium speed water flow		l/h	483	696	945	1045	1172	1436	1575	345	458	741
Heating capacity, 4 pipes version												
High/medium sp. cooling capacity (1)			3.1/2.8	4.9/4.1	5.3/4.6	6.1/5.0	6.9/5.3	7.6/6.3	8.7/6.8	-	-	-
High/medium sp. heating capacity			5.3/4.8	6.2/5.3	6.5/5.7	7.3/6.2	8.6/6.9	9.4/8.0	10.4/8.6	-	-	-
Medium speed water flow			422	463	504	541	605	704	751	-	-	-
Technical characteristics												
Medium/high speed air flow		m^3/h	580/500	750/580	800/650	950/730	1100/780	1250/980	1510/1080	360/320	560/420	850/710
Sound pressure level (3)		dB(A)	36	39	41	46	32	40	44	34	35	46
Weight		kg	18		19.2			38		9.0		17.0
Dimensions L x W x H (4)	Unit	mm	555 x 555 x 250		555 x 555 x 250		1170 x 555 x 250			795 x 195 x 283		1250 x 195 x 320
	Panel	mm	620 x 620 x 30		620 x 620 x 30		1220 x 620 x 30			-		-

CT/CD **fancoil**

Cassette fancoil for installation in false ceilings, with 2 or 4 pipes system for heating and cooling operation. The dimensions of the chassis and the external panel are compatible with most European false ceiling standards.

HW fan

Wall-type fan coil for installation on the wall and heating and cooling operation

230 V-I-50 Hz. Free discharge

Series			CC fan			
Model			031	049	065	075
Cooling capacity						
High/medium sp. total cooling capacity (1)		kW	3.0/2.7	4.8/3.9	6.3/5.3	7.2/5.8
High/medium sp. sensible cooling capacity (1)		kW	1.9/1.7	3.1/2.6	4.0/3.4	4.6/3.7
Heating capacity, 2 pipes version						
High/medium sp. heating capacity (2)		kW	3.6/3.3	5.8/4.7	7.0/5.8	8.1/6.4
Medium speed water flow		l/h	469	663	908	998
Heating capacity, 4 pipes version						
High/medium sp. cooling capacity (1)			3.0/2.7	4.8/3.9	5.2/4.4	5.8/4.8
High/medium sp. heating capacity			5.1/4.6	6.0/5.1	6.3/5.5	7.0/5.9
Medium speed water flow			406	451	481	519
Technical characteristics						
Medium/high speed air flow		m^3/h	550/475	715/550	760/620	900/690
Sound pressure level (3)		dB(A)	39	47	49	52
Weight		kg	19		20.2	
Dimens. L x W x H (4)	Unit	mm	570 x 570 x 270			
	Panel	mm	620 x 620 x 40			

Coanda fan

Cassette fancoil with coanda effect for installation in false ceiling with 2-tube system.

(1) Cooling potential for high/medium fan velocity, with indoor air 27ºC, 50% RH and water inlet/outlet temp. 7/12ºC.

(2) Heating capacity with 2 tubes for indoor air 20ºC and water inlet/outlet temp. 50/45ºC; with 4 tubes calculated for air 20ºC and water inlet/outlet temp. 70/60ºC.

(3) Noise pressure levels at medium fan velocity based on local attenuation of 9 dB(A) FM fan/FMO fan/CK fan/CD/CT fan, 18 dB(A) FOH fan/FIH fan, 20dB(A) CK fan and 18 dB(A) TO/TB fan.

(4) Unit dimensions (Length x Width x Height).

TITAN

AIR HANDLING UNITS
air handling units

- 2000 m3/h - 46000 m3/h
- EC
- AER+ ACS
- SPECIAL DEVELOPMENTS

Indoor air quality

- High filtration efficiency compliant with IDAs: IDA1 and IDA2, high-efficiency active polarisation as an alternative to F filters

Energy efficiency

- High efficiency ventilation section with plug&fan type electronic fans with high available pressure and minimum energy consumption

Environment

- Extraction air energy reclaim via cooling system, rotary heat exchanger and a cross-flow plate heat exchanger

Adaptation

- Adaptability to the facility offering a wide range of model possibilities
- Units with water coils or direct expansion

Structure

- Equipment with high strength equipped with a 50 mm thick sandwich panel for installation outdoors or indoors
- Maximum accessibility and easy maintenance via removable panels with hinges

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Applications

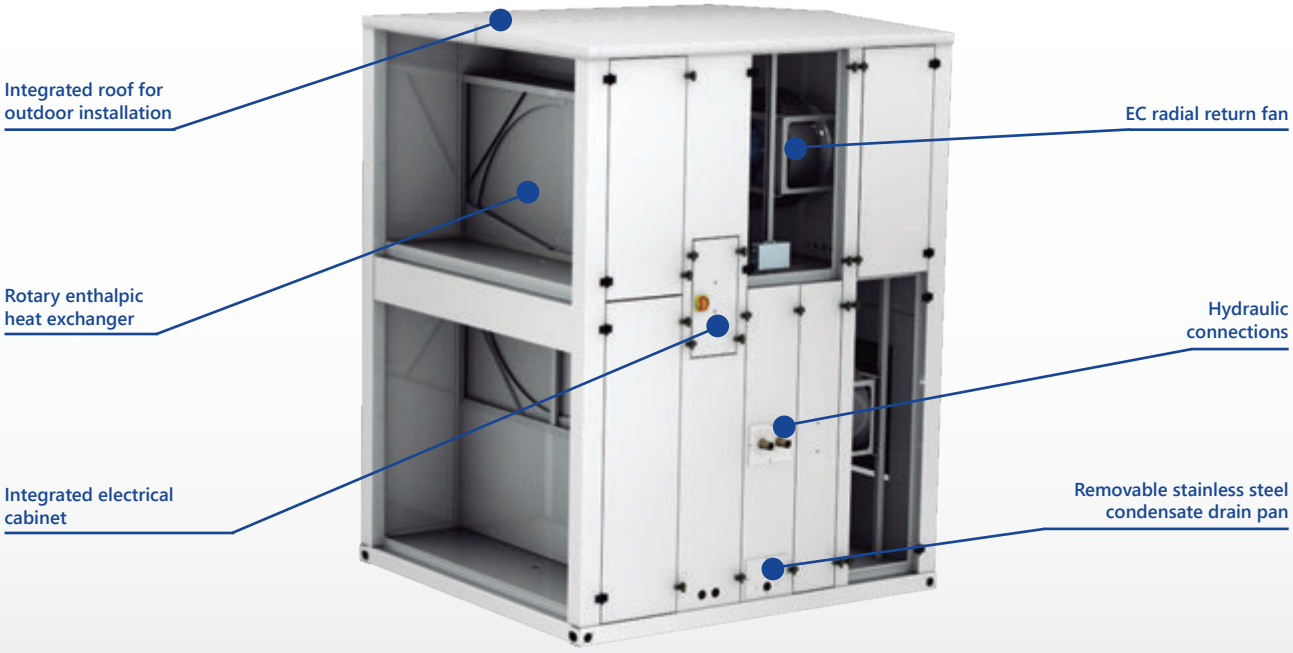
Industry | Retail & Shopping centres | Education | Hospitals & Laboratories

and other applications, please consult us

TITAN versions

Keyter TITAN TS - Heat Reclaim with crossflow plate heat exchanger

Keyter TITAN TS - Heat Reclaim with rotary heat exchanger



DAIRA

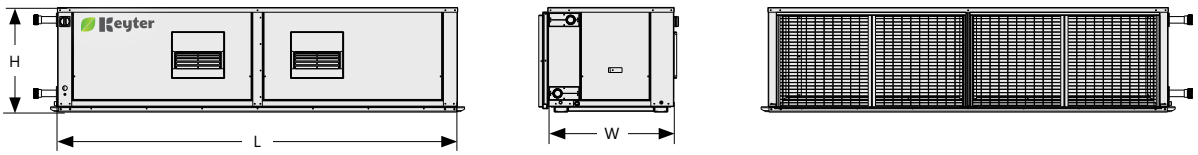
AIR HANDLING UNITS

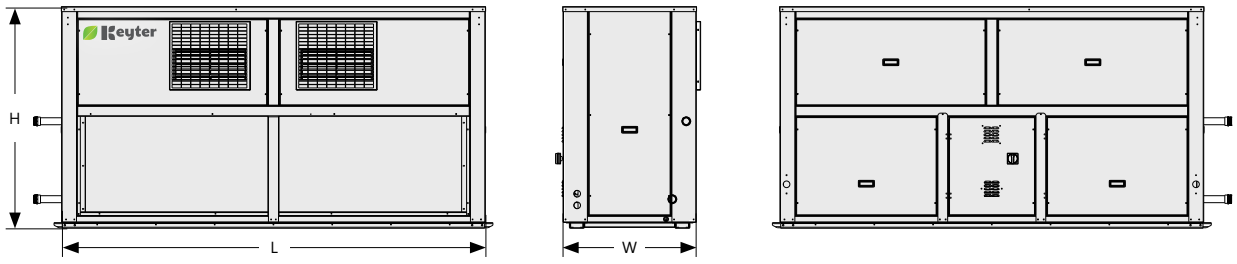
3000 m3/h - 17000 m3/h
16 - 102 kW | 22 - 126 kW

EC
50 Hz
60 Hz

SPECIAL DEVELOPMENTS

Dimensions:

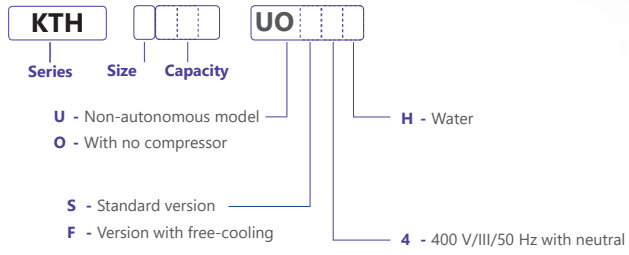




Horizontal unit dimensions (Keyter TH)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	906	1136	1339	2106	2556	2556	2556
W	806	806	806	806	806	856	856
H	660	660	660	660	660	660	960
Vertical unit dimensions (Keyter TV)							
	Series 0	Series 1	Series 2	Series 3	Series 4	Series 5	Series 6
L	906	1136	1339	2106	2556	2556	2556
W	806	806	806	806	806	856	856
H	1100	1331	1331	1334	1334	1629	1629

DAIRA
technical data

Codification:



(1) Nominal cooling capacity for indoor air temp. 27ºC/50% RH and water of 7/12ºC.

(2) Nominal power input by the fans on the indoor unit.

(3) Nominal heating capacity for indoor air temp. 20ºC and water temp. 40/45ºC.

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

Series/Model		TH 0015	TH 1022	TH 2026	TH 2039	TH 3041	TH 3045	TH 4060	TH 5080	TH 6080	TH 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
Power input (2)	kW	0.6	0.75	0.75	1.1	1.5	1.5	1.5	3	4	5.5
HEATING MODE											
Heating capacity (3)	kW	22.4	33.4	37.8	46.2	59.5	66.75	73.2	101.3	112.2	118.1
Power input (2)	kW	0.6	0.75	0.75	1.1	1.5	1.5	1.5	3.0	4.0	5.5
Indoor airflow	m^3/h	3000	4500	5000	6200	7000	9000	10500	12000	14000	17000
Indoor nominal available pressure	Pa	60	80	80	80	100	100	100	100	100	100
Weight	Kg	120	132	168	225	283	294	338	384	454	465
Sound pressure (4)	dB(A)	47	45	46	48	49	49	51	51	51	52

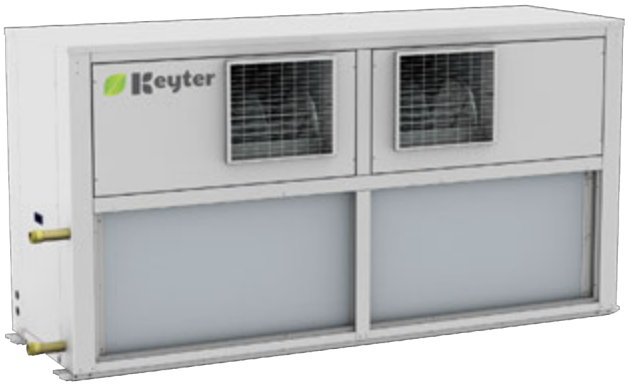
Series/Model		TV 0015	TV 1022	TV 2026	TV 2039	TV 3041	TV 3045	TV 4060	TV 5080	TV 6080	TV 6090
COOLING MODE											
Cooling capacity (1)	kW	15.9	23.6	30.4	36.8	45.2	52.1	63.1	81.6	89.6	102.3
Power input (2)	kW	0.6	0.75	0.75	1.1	1.5	1.5	1.5	3	4	5.5
HEATING MODE											
Heating capacity (3)	kW	22.2	32.9	39.1	47.6	61	69.4	88.5	104.6	117.5	126.1
Power input (2)	kW	0.6	0.75	0.75	1.1	1.5	1.5	1.5	3.0	4.0	5.5
Indoor airflow	m^3/h	3000	4500	5000	6200	7000	9000	10500	12000	14000	17000
Indoor nominal available pressure	Pa	60	80	80	80	100	100	100	100	100	100
Weight	Kg	192	236	248	260	415	436	589	638	638	671
Sound pressure (4)	dB(A)	47	45	46	48	49	49	51	51	51	52

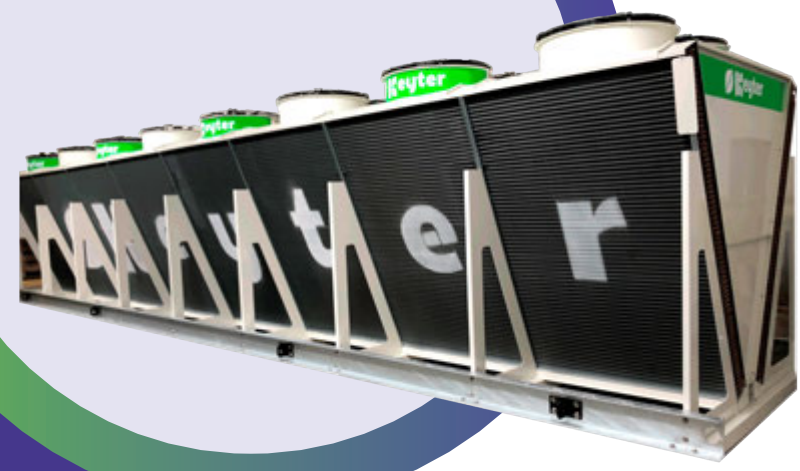
Options:

- Supply fans with EC technology
- Different possible assemblies for supply and return
- Free-cooling section
- F filtration section
- Auxiliary electrical heaters
- Auxliary hot water coil in-duct with three-way valve
- Clogged filter detector
- Differential pressure switch for airflow control
- Anti-corrosion coating for the indoor coil
- Three-way valve in separate kit
- Other electrical voltages (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)

KTH horizontal unit

KTV vertical unit





BELAIR

DRY COOLERS
for fluid cooling

51 - 847 kW

Keyter BELAIR is a new range of compact dry cooler units with a structure designed to aid transportation and lifting

Optimised design for dry operation or adiabatic cooling via an adiabatic panel with high efficiency and low pressure drop

Bespoke configuration

- Possibility of researching and designing bespoke equipment based on specifications thanks to the selection programme
- Different types of construction to adapt to the project specifications:

- Horizontal design
- Vertical design
- V-shaped equipment with dry cooling
- V-shaped equipment with adiabatic cooling

Adaptation

- Dry cooler unit with casing protected with weather-resistant polyester paint and high protection against UV rays
- Efficient operation based on variations in ambient temperature at the coil entrance

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- Units produced with high-performance heat exchangers
- Possibility of including a high-performance adiabatic cooling system with low loss of load to increase efficiency

Energy savings and control

- High efficiency ventilation units via dual speed AC axial fans or EC axial fans
- Adiabatic panel with low loss and high efficiency
- Control of adiabatic system that favours the use of the unit in dry mode and uses adiabatic mode in peak high outdoor temperatures for minimal consumption of water

Applications

Industry

Retail & Shopping centres

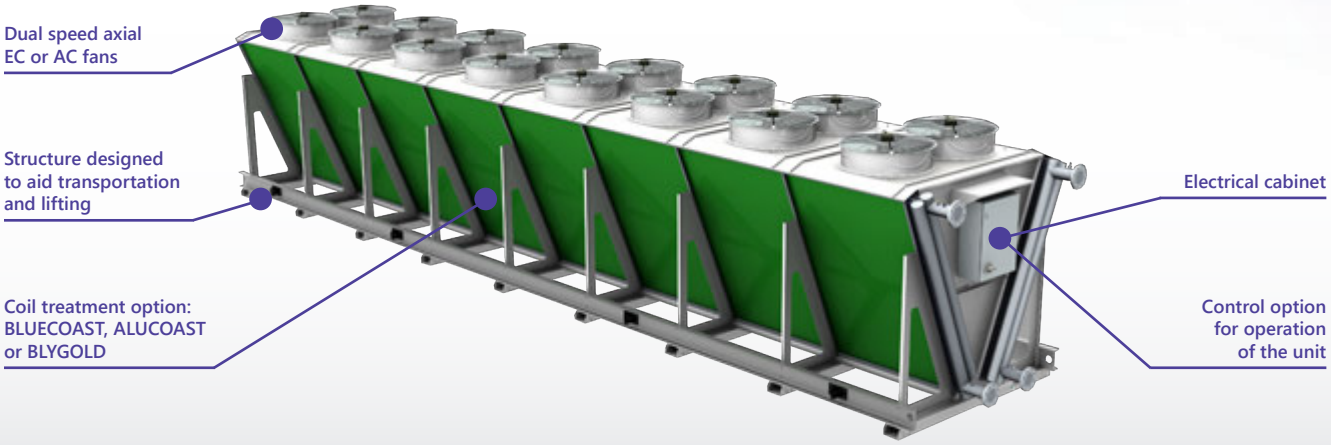
Hospitals

Supermarkets

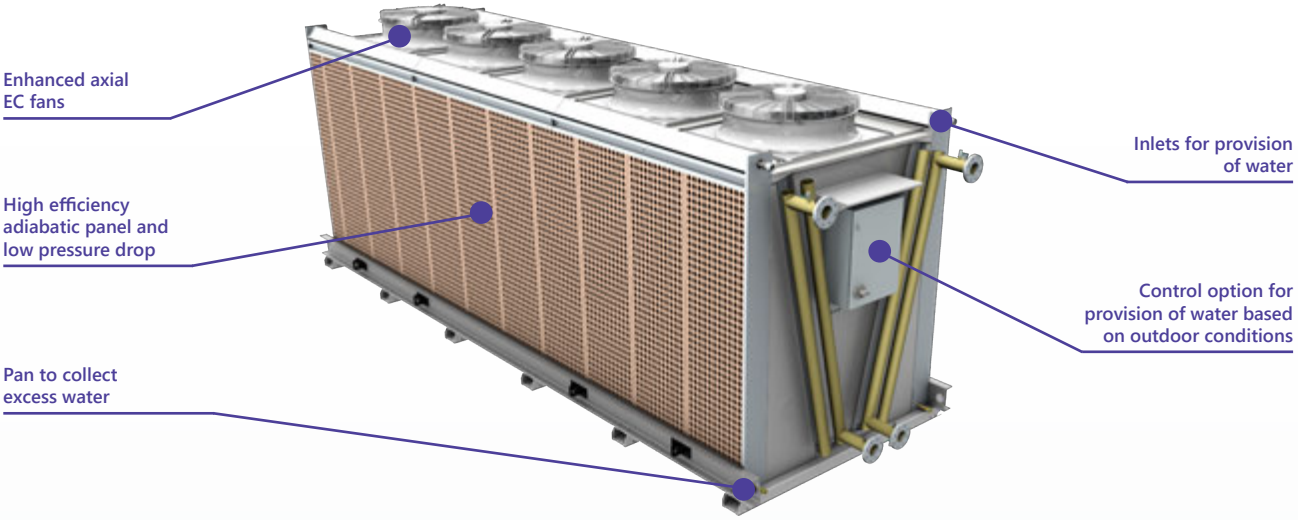
and other applications, please consult us

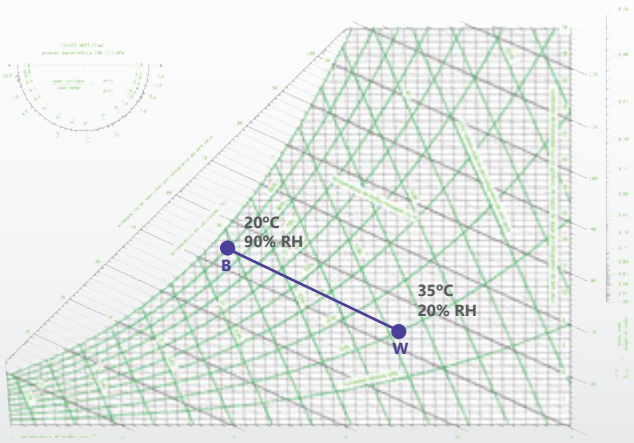
BELAIR versions

Keyter BELAIR dry cooling



Keyter BELAIR adiabatic cooling





Adiabatic cooling

Cooling via an adiabatic panel is a direct air cooling system without the possibility of spraying nor stagnation of water, thus there is no risk of legionella.

Via the use of high-performance panels and low pressure drop, efficiencies of over 90% are achieved. With this, there is a reduction in the air temperature up to 15ºC in hot and dry climates.

The control logic favours the use of the unit in dry mode and uses adiabatic mode in peak high outdoor temperatures.

GENERAL ELECTRIC | MALAYSIA - MOBILE MILITARY HOSPITALS | MOROCCO & SAUDI ARABIA

MALAGA AIRPORT | SPAIN - RAMPION OFFSHORE WIND FARM | EON

FUERTEVENTURA AIRPORT | SPAIN - ASTILLEROS ECUADOR | ECUADOR

life mobile solutions

LIFE IT&Power

Packaged air-to-air units for assembly in containers

Keyter LIFE IT&Power is a range of packaged autonomous air-to-air units with a special design adapted for indoor or outdoor installation in transportation containers. Optimised design with environmentally-friendly R-410A refrigerant in standard version or R-134a and special electrical switchgear in the high temperature version

Adaptation and Versatility

- Adaptability to various sizes of facility via a wide range of models
- Maximum accessibility and easy maintenance via removable panels

Operation under adverse conditions

- Version to work with refrigerant R-134a when operating in outdoor temperatures up to 55°C
- Possibility of protection of outdoor coils against external agents such as sand, dust, etc.
- Equipment with casing protected with weather-resistant polyester paint and high protection against UV rays

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

Energy efficiency

- Free-cooling possibility for free-cooling using outdoor air

Environment

- Reduced refrigerant charge R-410A (ODP 0, GWP 2088) or R-134a (ODP 0, GWP 1300)

Indoor air control

- Possibility of controlling the quality of the indoor air via provision of outdoor air
- Dehumidification system via control of humidity inside in areas of high outdoor humidity

Applications

Industry

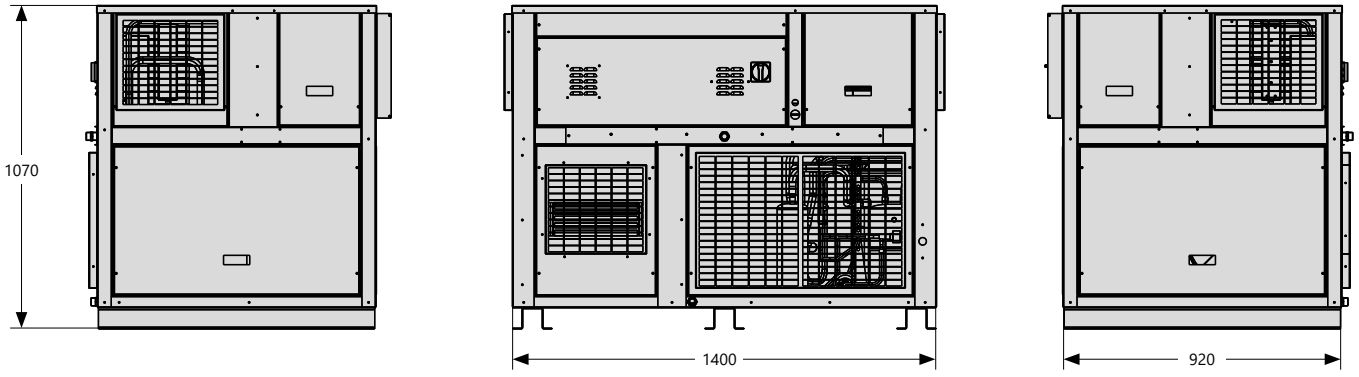
MILITARY
IT & COMMUNICATIONS
and other applications, please consult us

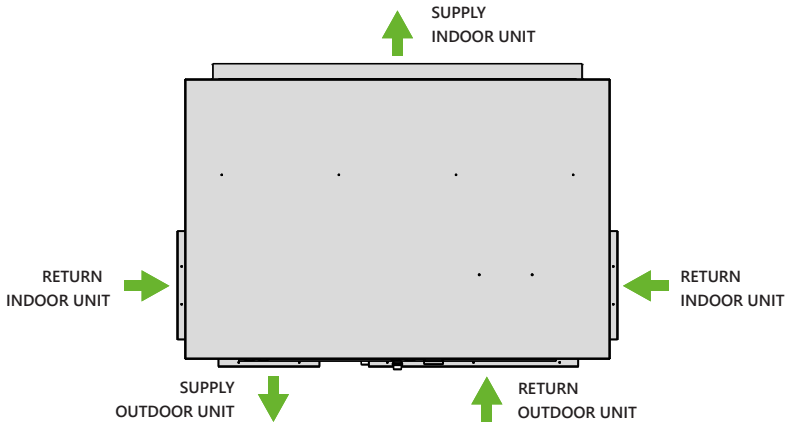
LIFE IT&Power
technical data

KCC-C model			0006	0010
Cooling only version (R)				
Cooling mode	Cooling capacity (1)	kW	9.1	12.3
		TR	2.6	3.5
		kBTU/hr	31	42
	Power input (2)	kW	3.1	5.2
	EER (3)	W/W	2.9	2.4
		BTU/W	10.0	8.1
	Maximum operating temperature	ºC	55	55
Technical characteristics				
Power supply			400 V/III/50 HZ with neutral	
Cooling circuit	Refrigerant fluid/GWP	kg CO2	R134a/1300	
	Type of compressor		Hermetic scroll	
	No. circuits/No. compressors		1/1	1/1
	No. power stages		1	1
Indoor fan	Supply airflow	m³/h	1500	2400
	Nominal available pressure	Pa	150	150
	Type of fan		EC plug fan	
	Number of fans		1	1
Outdoor fan	Outdoor airflow	m³/h	3500	4500
	Nominal available pressure	Pa	150	150
	Type of fan		EC plug fan	
Dimensions	Length	mm	1400	1400
	Width	mm	920	920
	Height	mm	1070	1070

(1) Total cooling capacity and sensible cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.

Dimensions:





Life IT&Power
technical data

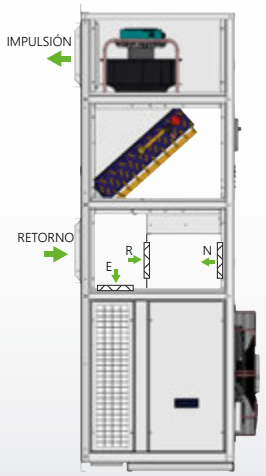
8 - 40 kW

KCV-CW model			C009-W	C114-W	C118-W	C222-W	C236-W	C241-W
Cooling only version (R)								
Powers under nominal conditions	Cooling capacity (1)	kW	8.4	14.7	17.7	23.6	34.2	40.2
		TR	2.4	4.2	5.0	6.7	9.7	11.4
		(kBTU/hr)	29	50	60	81	117	137
	Sensible cooling capacity (1)	kW	7.9	13.4	14.7	19.7	27.5	31.7
		TR	2.2	3.8	4.2	5.6	7.8	9.0
		(kBTU/hr)	27	46	50	67	94	108
	Power input (2)	kW	3.8	5.0	6.1	7.4	11.9	13.8
	EER (3)	W/W	2.2	2.9	2.9	3.2	2.9	2.9
		BTU/(hrxW)	7.5	10.0	9.9	10.9	9.8	9.9
Powers at maximum outdoor temperature	Cooling capacity (1)	kW	7.4	13.2	15.9	21.2	30.7	37.0
		TR	2.1	3.8	4.5	6.0	8.7	10.5
		(kBTU/hr)	25	45	54	72	105	126
	Sensible cooling capacity (1)	kW	7.4	12.8	13.9	18.6	26.0	30.2
		TR	2.1	3.6	4.0	5.3	7.4	8.6
		(kBTU/hr)	25	44	47	63	89	103
	Power input (2)	kW	4.6	5.8	7.1	8.8	13.8	15.8
	EER (3)	W/W	1.6	2.3	2.2	2.4	2.2	2.3
		BTU/(hrxW)	5.5	7.8	7.6	8.2	7.6	8.0
	Maximum outdoor temperature	ºC	45	45	45	45	45	45
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral					
Cooling circuit	Refrigerant fluid/GWP	kg CO2	R410A/2088					
	Type of compressor		Hermetic scroll					
	No. circuits/No. compressors		1/1	1/1	1/1	2/2	2/2	2/2
	No. power stages		1	1	1	2	2	2
Indoor fan	Supply airflow	m^3/h	2150	3020	3020	4500	6500	7500
	Nominal available pressure	Pa	150	150	150	150	150	150
	Type of fan		EC plug fan					
	Number of fans		1	1	1	1	1	1
Outdoor fan	Outdoor airflow	m^3/h	4000	5500	5500	9000	9000	9000
	Type of fan		Axial EC					
	Number x Fan diameter	N x mm	1 x 450	1 x 450	1 x 450	2 x 450	2 x 450	2 x 450
Dimensions	Length	mm	800	1000			1600	
	Width	mm	500	600			800	
	Height	mm	1600	1800			2050	

(1) Total cooling capacity and sensible cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors, outdoor fans and supply fan.
(3) EER and COP calculated based on standard EN 14511-2013.

Free-cooling

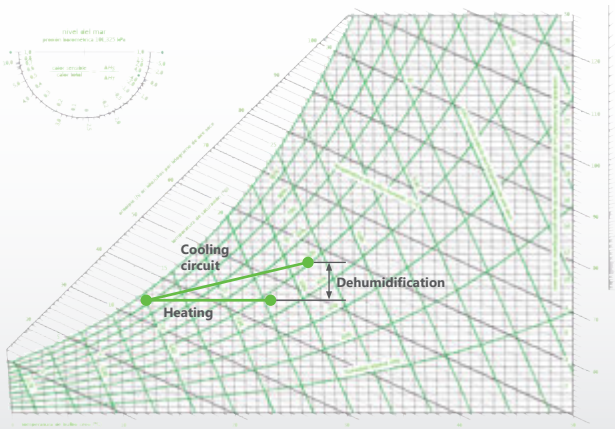
Keyter CV-C units may incorporate a system of air free-cooling. The free-cooling system is composed of three motorised dampers in the following form:



Humidity control

The configuration of the Keyter CV-C units enables the dehumidification of the room's air via electrical heaters in the unit air supply frame.

In this way, it is possible to control humidity in areas where, due to high outdoor humidity, issues related to high humidity inside may occur.



Life IT&Power dimensions

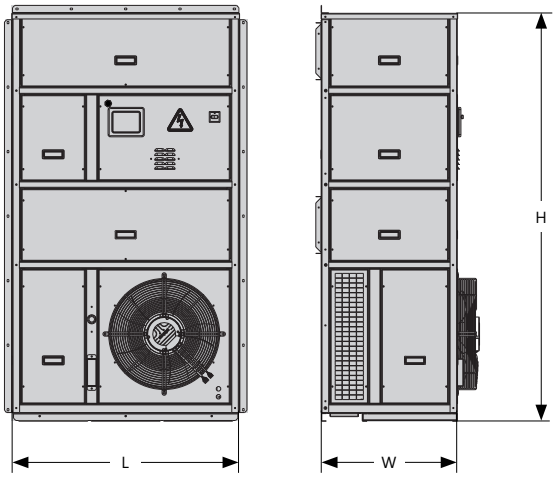
R134a

7 - 34 kW

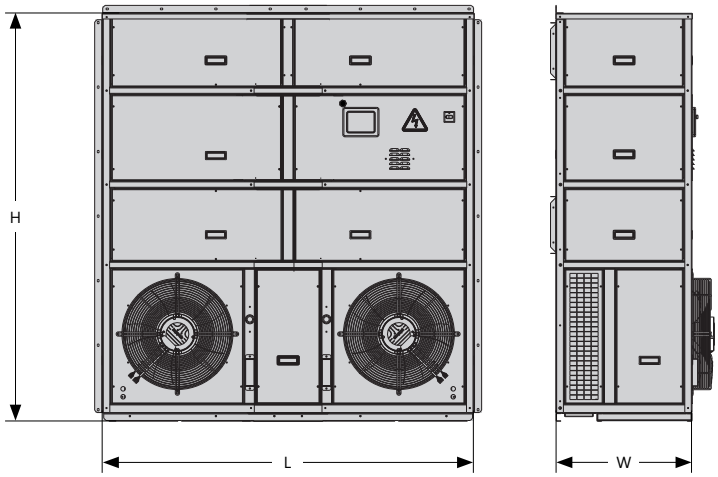
KCV-CY model			C007-Y	C110-Y	C114-Y	C220-Y	C223-Y	C235-Y
Cooling only version (R)								
Powers under nominal conditions	Cooling capacity (1)	kW	7.5	10.3	14.5	21.4	26.8	33.7
		TR	2.1	2.9	4.1	6.1	7.6	9.6
		(kBTU/hr)	26	35	49	73	91	115
	Sensible cooling capacity (1)	kW	7.4	9.9	13.4	18.7	24.2	28.8
		TR	2.1	2.8	3.8	5.3	6.9	8.2
		(kBTU/hr)	25	34	46	64	83	98
	Power input (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/(hrxW)	8.3	8.8	8.7	11.1	10.9	10.0
Powers at maximum outdoor 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/hr)	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/hr)	21	29	38	58	74	89
	Power input (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/(hrxW)	4.5	5.4	4.7	6.6	6.2	5.9
	Maximum outdoor temperature	°C	53	55	55	55	55	55
Technical characteristics								
Power supply			400 V/III/50 HZ with neutral					
Cooling circuit	Refrigerant fluid/GWP	kg CO2	R134a/1300					
	Type of compressor		Hermetic scroll					
	No. circuits/No. compressors		1/1	1/1	1/1	2/2	2/2	2/2
	No. power stages		1	1	1	2	2	2
Indoor fan	Supply airflow	m^3/h	2150	3020	3020	4500	6500	7500
	Nominal available pressure	Pa	150	150	150	150	150	150
	Type of fan		EC plug fan					
	Number of fans		1	1	1	1	1	1
Outdoor fan	Outdoor airflow	m^3/h	4000	5500	5500	9000	9000	9000
	Type of fan		Axial EC					
	Number x Fan diameter	N x mm	1 x 450	1 x 450	1 x 450	2 x 450	2 x 450	2 x 450
Dimensions	Length	mm	800	1000		1600		
	Width	mm	500	600		800		
	Height	mm	1600	1800		2050		

Dimensions:

Series 0-1



Series 2



Standard unit dimensions (mm)			
	Series 0	Series 1	Series 2
L	800	1000	1600
W	500	600	800
H	1600	1800	2050

LIFE SHELTER

Packaged air-to-air units for mobile air conditioning

Keyter LIFE Mobile KCH is a new range of packaged air-to-air unit with a special design to aid transportation. Optimised design with R-134a refrigerant and special electrical switchgear in the high temperature version

Adaptation and Versatility

- Maximum accessibility and easy maintenance via removable panels
- Stackable design for storage

Energy efficiency

- High efficiency ventilation units via outdoor and indoor fans with EC technology

Operation under adverse conditions

- Equipment to work with refrigerant R-134a when operating in outdoor temperatures up to 55°C
- Equipment with casing protected with weather-resistant polyester paint and high protection against UV rays

Environment

- Reduced refrigerant charge R-134a (ODP 0, GWP 1300)

Low noise level

- Easy movement thanks to wheels for transportation
- Simple installation of air ducts via rapid connections

Applications

Industry

Entertainment

MILITARY
TEMPORARY INSTALLATIONS
and other applications, please consult us

Easy control

- CAREL supervision and electronic control with high performance and easy operation
- Wide variety of communication protocols (Modbus, BACnet and LonWorks)

LIFE SHELTER
technical data

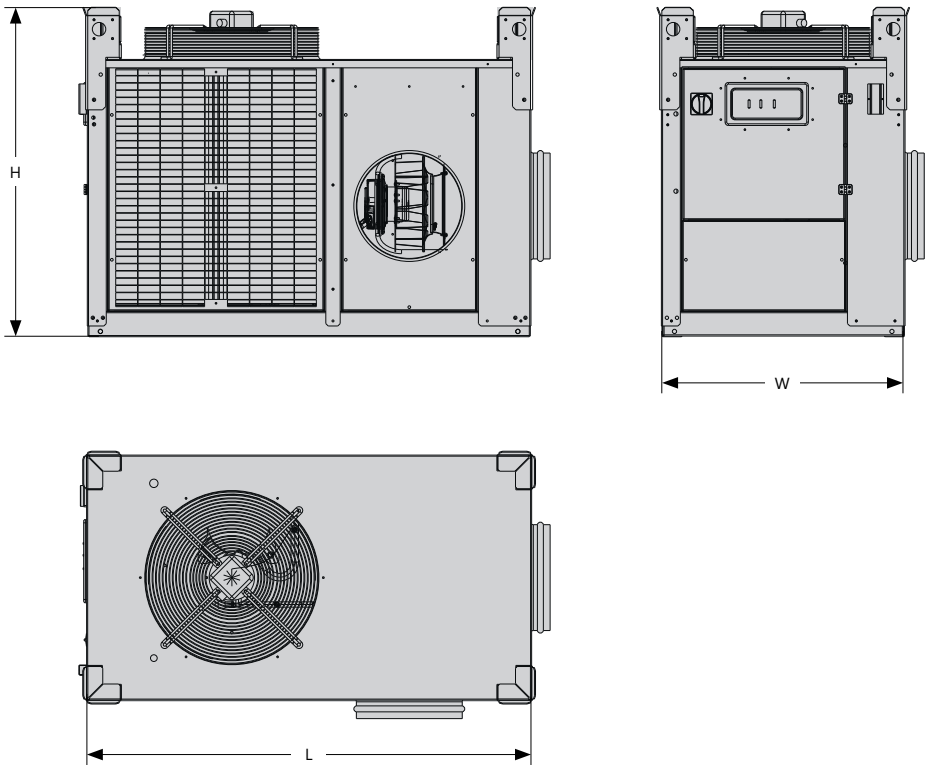
R134a

12 - 17 kW

KCC-C model			2012	2019
Cooling only version (R)				
Cooling mode	Cooling capacity (1)	kW	11.9	17.1
		TR	3.5	5
		kBTU/hr	41	58
	Power input (2)	kW	4.2	6.2
	EER (3)	W/W	2.8	2.8
		BTU/W	9.7	9.4
	Maximum operating temperature	ºC	55	55
Technical characteristics				
Power supply			400 V/III/50 HZ with neutral	
Cooling circuit	Refrigerant fluid/GWP	kg CO2	R134a/1300	
	Type of compressor		Hermetic scroll	
	No. circuits/No. compressors		1/1	1/1
	No. power stages		1	1
Indoor fan	Supply airflow	m^3/h	2200	3000
	Nominal available pressure	Pa	150	150
	No. x Type of fan		1 x EC plug fan	
Outdoor fan	Outdoor airflow	m^3/h	6400	7500
	Type of fan		Axial	
Dimensions (4)	Length	mm	1320	
	Width	mm	725	
	Height	mm	980	

(1) Total cooling capacity and sensible cooling capacity for indoor air temp. 27ºC/50% RH and outdoor air temp. 35ºC.
(2) Total power input by compressors and outdoor fans.
(3) EER and COP calculated based on standard EN 14511-2013.
(4) Dimensions of unit not including mobility elements.

Dimensions:



Dimensions (mm)	
	Series 2
L	1320
W	725
H	980

LIFE Offshore

Cooling and air conditioning solutions developed for the Marine and Offshore sectors for different applications, such as maritime vessels sent to shipyards or ship builders, as well as offshore applications such as the wind power and oil & gas industry

AIR-TO-AIR SOLUTIONS

- Air conditioning units with a special body produced in aluminium alloy with Cr-Mg, with high resistance to corrosion: ALUCOAST
- Units designed for work under extreme outdoor conditions thanks to their construction with special certified electrical cabinets with high IP protection and panels with highly waterproof seals
- Special outdoor fans for work in marine environments

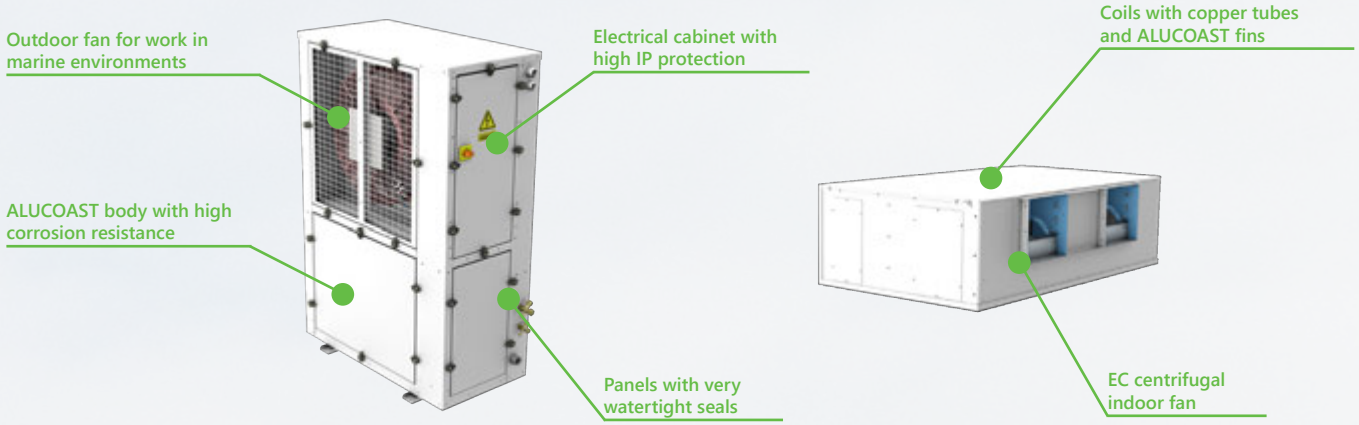
WATER-TO-AIR SOLUTIONS

- Cooling and air conditioning unit for maritime applications with direct condensation via sea water
- Equipment designed to work in aggressive conditions with exchange coil with high protection and a cupronickel shell and tube heat exchanger for direct condensation using sea water
- Has condensation pressure regulation via a 3-way valve and EC radial fans resulting in a very high performance

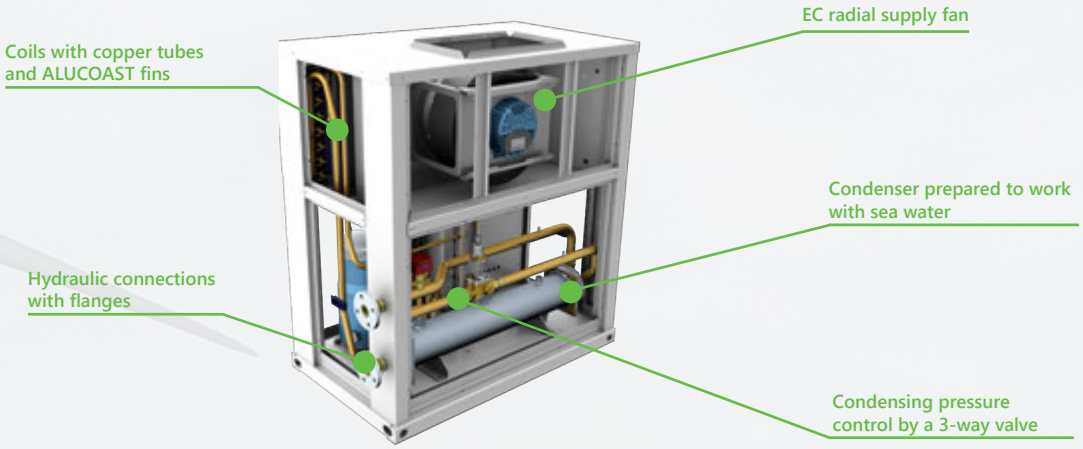
WATER-TO-WATER CHILLERS

- Chillers that use water cooling with condensation via special cupronickel shell and tube heat exchangers with direct condensation using sea water
- Industrial design produced with screw compressors with the possibility of working with different refrigerants optimised for a compact design and with a robust structure that facilitates installation in narrow areas, as well as aiding transportation and lifting

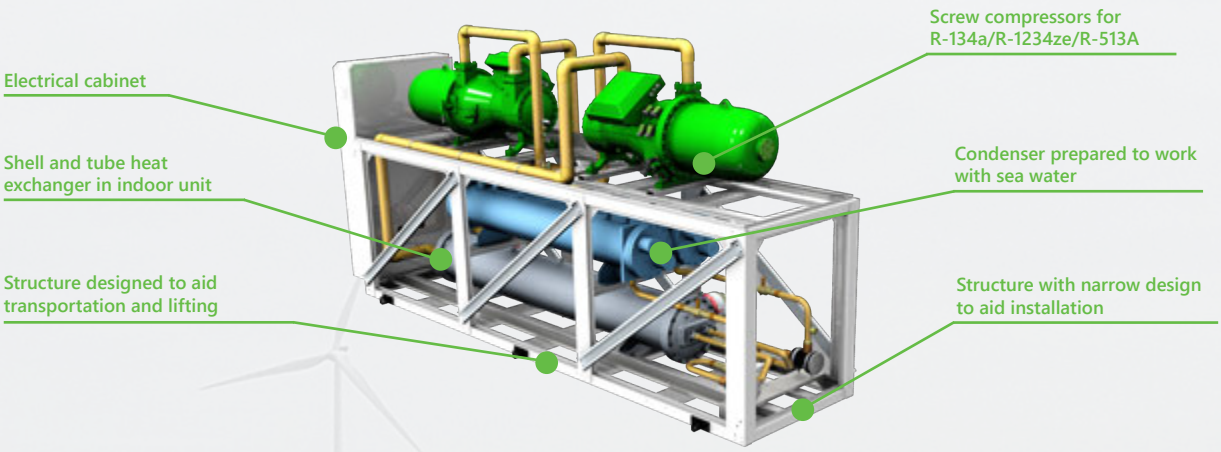
Air-to-air solution for offshore applications



Water-to-air solution condensed by sea water



Seawater-cooled water-to-water solution



LIFE Airports

Packaged units with air-to-air PCA DX technology (Preconditioned Air Direct eXpansion) for aircraft air conditioning and low height rooftop units for boarding bridges air conditioning

ASLAN

Keyter ASLAN units form a full range of autonomous PCA floor and suspended units for air conditioning in aircraft on the ground

This unit is composed of packaged autonomous units, either PC Air or Pre-Conditioned Air type, direct expansion, air-cooled to operate with all outdoor air, especially designed to provide air conditioning in aircraft and hangars with high pressure air supply and with the possibility of heating with a reversible heat pump with multiscroll technology in ON/OFF version or INVERTER version and a VAV (Variable Air Volume) system via a frequency shifter (Inverter)

The brand new unit design integrates different technology from the worlds of refrigeration, air conditioning and energy saving, making this unit the most versatile and advanced on the market for providing ventilation, cooling, dehumidification, heating and air filtration for the aircraft.
Includes unit from 80 kg/min. to 210 kg/min. in Narrow Body, Wide Body and Jumbo versions

SEILA

Keyter SEILA CRP is a new range of latest generation low height air-to-air rooftop unit, with a height of 700 mm, especially designed for facilities where there is a need for reduced unit height, such as boarding bridges in airports or transportation containers

*More information on pages 38 and 39

regulation and control

AQUAMICRO control platform

The configurable **AQUAMICRO** controller is intended for air-to-air, water-to-air, air-to-water and water-to-water air conditioning unit with a management capacity up to 2 circuits and 4 compressors, managing 2 outdoor fans (with the possibility of on/off or proportional), indoor fan and water pumps in the indoor and outdoor unit.

AQUAMICRO has a wide range of interfaces that make interaction with this system easy and effective. Available for installation in a panel with a Molex connector.

This platform offers compatibility with the supervision systems in the Carel or Modbus protocol for BMS systems.

Included in the ranges:

- Micro-Chillers **KWF**
- Chillers **KWE** (up to series 4)
- Air-to-air packaged units **KCT COMFORTER / KCV COMFORTER series 1 and 2**

The **microAD** user terminal is intended for the AQUAMICRO platform for air-to-air or water-to-air unit.

The microAD terminal is an LCD terminal with icons for remote mounting on the wall that has temperature or temperature and humidity sensors and management of operating times.

Intended for residential use or in small commercial applications.

Connection with aquamicro via RS485.

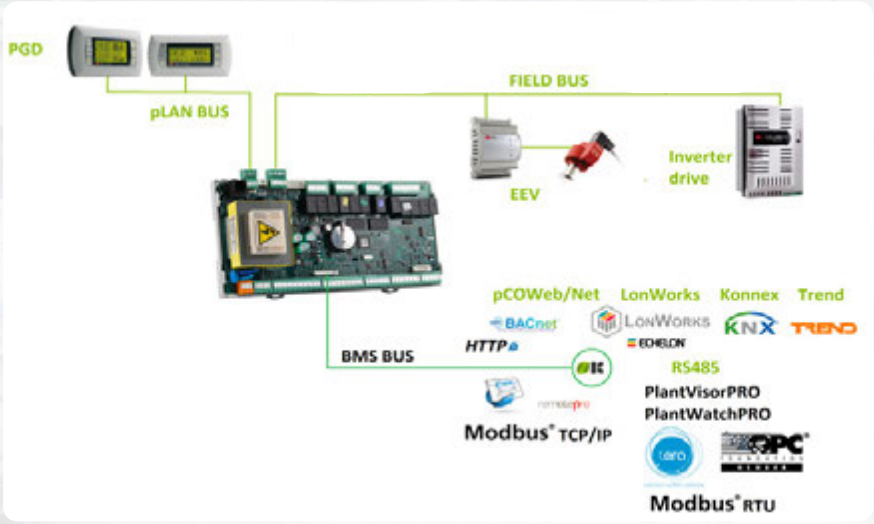
AQUAMANAGER control platform

The **AQUAMANAGER** programmable controller is available with open software developed by KEYTER for air-to-water and water-to-water air conditioning unit, capable of managing from one to 8 compressors in 4 circuits.

Provides control of outdoor fans (on/off or proportional) and up to 2 water pumps in the indoor and/or outdoor unit (air-to-water or water-to-water unit).

Included in the ranges:

Water-to-air HP/chillers
KWE/KWA-KWM-KWB
Water-to-water HP/chillers
KZV-KZB-KZM



The **pGD1** user and maintenance terminal is intended for the AQUAMANAGER platform for air-to-water or water-to-water unit.

This terminal is designed to offer high versatility and the possibility of customisation.
Possibility of mounting on a panel or the wall.

Directly supplied from the electronic panel, or via an external power supply, may be installed 200 m from the machine thanks to the TCONN card. Possibility of connection in the pLan network up to 15 units viewed from the same maintenance terminal.

For energy saving, it has a free-cooling mode and other options such as an electronic expansion valve and a power meter.

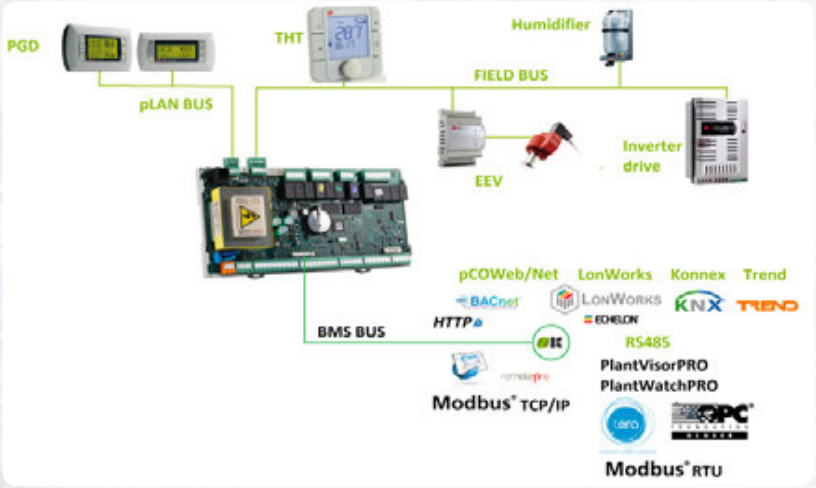
regulation and control

CLIMANAGER control platform

The CLIMANAGER programmable control is available for software openly designed by KEYTER for air-to-air air conditioning unit, able to manage up to 2 circuits with 4 compressors in addition to a heat reclaim circuit with an additional compressor (digital scroll and inverter).

It can control indoor and outdoor fans (on/off or proportional) and auxiliary heater amanagement.

Included in the ranges:
- Rooftop units **KCR, KGR**
- Wall-Top units **KCH**
- Split units **KDE**
- Packaged units **KCV, KCT** (depending on series)
- Water-to-air packaged units **KGH/KGV**



Has two terminals:

- pGD1 maintenance terminal
- The TH-Tune user terminal is a room terminal that enables the user to control the temperature and humidity.

Connected via a fieldbus in RS485, manages simple operating commands from the unit and operating time programming. Also contains warnings via alarms in the unit.

For energy saving, it can be configured with three types of free-cooling or free-heating: thermal, enthalpic or thermo-enthalpic.

Air quality control may be performed via CO_2 and VOC sensors.

May include other options such as energy meters, smoke alarms, electronic expansion valves and humidifiers.

Supervision systems by

pCO Web: The inclusion of this card in the AQUAMANAGER or CLIMANAGER platforms enables supervision of a single piece of unit via Ethernet-based protocols, such as BACnet IP, Modbus TCP/IP and SNMP. Includes a Web Server system that contains HTML pages related to the application.

PlantWatchPRO: A complete, reliable solution for the management, monitoring and optimisation of small and medium air conditioning facilities. For installation, an RS485 supervision card is required in each unit to be monitored.

PlantVisorPRO: A complete and reliable solution for the management, monitoring and optimisation of large air conditioning facilities. Enables the customisation of the display of the unit via a layout of the levels as per user needs.

tERA: A complete, remote display solution for the supervision and maintenance of small and medium facilities. Thanks to its connectivity to the internet network via Ethernet or GSM, it enables access to the system remotely from any location with an internet connection, and it has a web and mobile interface.

certifications

EC DECLARATION OF CONFORMITY

CE DECLARATION OF CONFORMITY
DECLARACION DE CONFORMIDAD CE
DÉCLARATION DE CONFORMITÉ CE
DICHIARAZIONE DI CONFORMITÀ CE
EC-CONFORMITEITSVERKLARING
EC-KONFORMITÄTSERKLÄRUNG

The manufacturer / El fabricante / Le fabricant / Il fabricante / De Fabrikant / Der Hersteller:

KEYTER TECHNOLOGIES S.L.
Pol. Ind. Los Santos s/n
14900 Lucena (Córdoba)
SPAIN / ESPAÑA / ESPAGNE / SPAGNA / SPANJE / SPANIEN

Declara bajo su responsabilidad, que el producto detallado / *Declares under its responsibility, that the following product / Déclare sous sa responsabilité, que le produit ci-dessous détaillé / Dichiara sotto la propria responsabilità che il prodotto qui seguito citato / verklaart op eigen verantwoordelijkheid dat de hieronder genoemde producten / erklärt unter eigener Verantwortung, dass die unten aufgeführten Produkte:*

Model / *modelo / modèle* / modello / model / Modell:

Year of manufacturing / *año de construcción / année de fabrication / Anno*

Serial number / *Número de serie* / N*uméro de série / Numero di serie / Serienummer / Serienummer:*

Is in conformity with the provisions of the following Directives / *Es conforme a las disposiciones de las directivas / Est conforme aux dispositions des directives suivantes / È conforme alle disposizioni delle Direttive / Voldoet aan de volgende Europese Richtlijnen / Konform ist mit den Bestimmungen der Richtlinie:*

Machine directive / *Directiva de máquinas* / *Directive Machines / Direttiva Macchine / Machinerichtlijn / Maschinenrichtlinie:*	**2006/42/CE**
Electromagnetic compatibility / *Compatibilidad electromagnética* / sur la Compatibilité electromagnétique / *Compatibilità electtromagnetica / Elektromagnetische compatibiliteit / Elektromagnetische Verträglichkeit:*	**2014/30/UE**
Low tension / *Baja tensión / Basse tensión / Bassa Tensione / Laagspanningsrichtlijn / Maschinenrichtlinie:*	**2014/35/UE**
Ecodesign requeriments / *Requisitos diseño ecológicos / Exigences en matière d´ecoconception / Specifiche per la progettazione ecocompatibile / Festlegung von Anforderungen an die umweltgerechte gestaltung / Eisen intake ecologisch ontwerp:*	**2009/125/CE** **EU/2016/2281**
Pressure Equipment / *Equipos a presión / Equipment sous pression / Apparecchi a pressione / Richtlijn Drukapparatuur / Richtlinie über Druckgeräte :*	**2014/68/EU**
RoHS Restriction of certain Hazardous Substances in electric and electronic equipment / *Directiva RoHS / Directive RoHS / Direttiva RoHS / RoHS Richtlijn / RoHS Richtlinie:*	**2011/65/CE**
Substances that deplete the ozone layer / Sustancias que agotan la capa de ozono / S*ubstances qui appauvrissent la couche d'ozone / Sostanze che riducono lo strato di ozono / Stoffe die zum Abbau der Ozonschicht führen / Ozonlaag afbrekende stoffen:*	**1005/2009/CE**
Fluorinated greenhouse gases / *Gases fluorados de efecto invernadero / Gaz à effet de serre fluorés / Gas fluorurati a effetto serra / Fluorierte Treibhausgase / Gefluoreerde broeikasgassen*:	**517/2014/UE**
Certified on the / *Certificado el día / Certifié le jour / Certificado il / Certificaat op / Zertifikat auf:*	**11/07/2018 0:00:00**

Antonio Blanco Luque
Director General / *Chief Executive Officer*

2014/30/EU ELECTROMAGNETIC COMPATIBILITY

ilac-MRA ENAC ENSAYOS Nº 51/LE147

Informe de ensayo nº:
Test report No:

NIE: 49368REM.002

Test Report

EN 61000-6-2 (2005) / AC (2005): Electromagnetic compatibility (EMC) – Part 6-2: Generic standards - Immunity for industrial environments
&
EN 61000-6-4 (2007) / A1 (2011): Electromagnetic compatibility (EMC) – Part 6-4: Generic standards - Emission standard for industrial environments.

Identificación del objeto ensayado / Identification of item tested	CLIMATE CONTROL EQUIPMENT
Marca / Trade	KEYTER PERSEA
Modelo y/o referencia tipo / Model and /or type reference	KCR-7300
Otra identificación del producto / Other identification of the product	S/N: 160118A004
Versión final del HW / Final HW version	Rey 1.111
Versión final del SW / Final SW version	2.0
Características / Features	Not provided data
Fabricante / Manufacturer	KEYTER TECHNOLOGIES, S.L. C/ José Estrada Orellana, S/N. Polig. Ind. Los Santos - Aptdo. de correos 650. 14900. Lucena. Córdoba. Spain.
Método de ensayo solicitado, norma / Test method requested, standard	EN 61000-6-2 (2005) / AC (2005) & EN 61000-6-4 (2007) / A1 (2011)
Resultado / Summary	IN COMPLIANCE
Aprobado por (nombre / cargo y firma) / Approved by (name / position & signature)	Rafael López Martín LAB EMC Manager
Fecha de realización / Date of issue	2016-05-17
Formato de informe No. / Report template No	FDT08_18

PRESSURE EQUIPMENT 97/23/EC

PRESURE EQUIPMENT 97/23 CE DIRECTIVE

TÜVRheinland®

CERTIFICADO

Vigilancia de la verificación final
Monitoring of final Assessment
Directiva 97/23/CE

Certificado Nº.: DEP.A1.000537
Certificate-No.:

Nombre y domicilio social del fabricante: Name and address of the manufacturer:	KEYTER TECHNOLOGIES, S.L. P.I. LOS SANTOS S/N 14900 - LUCENA

De acuerdo con el resultado de las pruebas, el fabricante es autorizado a marcar los equipos a presión fabricados en el rango de este módulo con el marcado:
According to the test results, the manufacturer is entitled to mark the pressure equipment produced within the range of this module with the mark:

CE .1027

Examinado según Directiva 97/23/CE: *Tested acc. To Directive 97/23/EC:*	**Control interno de la fabricación con vigilancia de la verificación final (Módulo A1)** *Internal manufacturing checks with monitoring of the final assessment (Module A1)*
Informe Nº.: *Test report No.:*	33289898
Descripción del tipo: *Description of pressure equipment:*	ENFRIADORAS Y BOMBAS DE CALOR GAMAS KWF,KWE,KCR,KCH,KDR y RT
Validez del certificado hasta: *Validity of the Certificate until:*	30/10/2014
Nombre y dirección taller *Manufacturing plant:*	KEYTER TECHNOLOGIES, S.L. P.I. LOS SANTOS S/N 14900 - LUCENA

Madrid, 14 de Julio de 2014

Joaquín Mur

Organismo Notificado Nº 1027
Notified Body, ID-No.

TÜV Rheinland Ibérica Inspection, Certification & Testing, S.A.
Parc de Negocis Mas Blau – Ed. Osiris
c/ Garrotxa, 10-12
E-08820 El Prat de Llobregat

Tel. +34 93 4 781 131
Fax +34 93 4 780 785
e-Mail info@es.tuv.com

MACHINERY SAFETY 2006/42/EC ELECTRICAL SAFETY - LOW VOLTAGE 2014/35/EU

AT4 wireless, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España
www.at4wireless.com · C.I.F. A29 507 456

AT4 wireless a DEKRA company

DEKRA

Informe de ensayo nº:
Test report No:

NIE: 49368RSE.001

Test report
Safety of machinery. Electrical equipment of machines. Part 1: General requirements
Safety of machinery. Safety distances to prevent hazard zones being reached by upper and lower limbs
Acoustics. Determination of sound power levels and sound energy levels of noise sources using sound pressure. Survey method using an enveloping measurement surface over a reflecting plane

Identificación del objeto ensayado / Identification of item tested	REFRIGERATION / AIR CONDITINING UNIT
Marca / Trade	KEYTER
Modelo y/o referencia tipo / Model and /or type reference	PERSEA KCR-7300
Otra identificación del producto / Other identification of the product	REFRIGERATION / AIR CONDITINING UNIT. Equipment with metallic enclosure and protection against electric shock class I. Hardware version: Rey 1.111, Software version:2.0, Serial number: 160118A004.
Características / Features	400V 3~ , 50Hz, 117.1 kW, 256.1 A
Fabricante / Manufacturer	KEYTER TECHNOLOGIES, S.L. C/ José Estrada Orellana, S/N. Polig. Ind. Los Santos - Aptdo. de correos 650. 14900. Lucena. Córdoba. Spain.
Método de ensayo solicitado, norma / Test method requested, standard	IEC 60204-1: 2005 + A1 : 2008 / EN 60204-1: 2006 + A1: 2009 + Corr:2010 / UNE EN 60204-1: 2007 + A1: 2009 + Corr:2010 (Except clauses 4.4.6 and 11.3) ISO 13857:2008 / EN ISO 13857: 2008 / UNE EN ISO : 2008 ISO 3746 :2010 / EN ISO 3746 :2010 / UNE-EN ISO 3746 :2011
Resultado / Summary	IN COMPLIANCE
Aprobado por (nombre / cargo y firma) / Approved by (name / position & signature)	Rafael González SE Lab. Manager
Fecha de realización / Date of issue	2016-05-25
Formato de informe No. / Report template No	FSE259_02 + FSE34_02 + FSE433_0

RoHS Restriction of certain Hazardous Substances in electrical and electronic unit

AT4 wireless, S.A.U.
Parque Tecnológico de Andalucía,
c/ Severo Ochoa nº 2 · 29590 Campanillas · Málaga · España
www.at4wireless.com · C.I.F. A29 507 456

AT4 wireless a DEKRA company

DEKRA

Informe de ensayo nº:
Test report No:

NIE: 49368RSE.002

Test report
Restriction of the use of certain hazardous substances in electrical and electronic equipment.

Identificación del objeto ensayado / Identification of item tested	CLIMATE CONTROL EQUIPMENT
Marca / Trademark	KEYTER PERSEA
Modelo y/o referencia tipo / Model and /or type reference	KCR-7300
Other identification of the product	CLIMATE CONTROL EQUIPMENT. Equipment with metallic enclosure and protection against electric shock class I.
Características / Features	400V 3~ , 50Hz, 117.1 kW, 256.1 A
Fabricante / Manufacturer	KEYTER TECHNOLOGIES S.L. POLIG. IND. LOS SANTOS 14900 LUCENA (CÓRDOBA) ESPAÑA
Método de ensayo solicitado, norma / Test method requested, standard	Annex II of the European Union Directive 2011/65/UE POSE000 (General procedure of Safety Lab)
Resultado / Summary	SEE RESULTS IN APPENDIX A.
Aprobado por (nombre / cargo y firma) / Approved by (name / position & signature)	Rafael González SE Lab. Manager
Fecha de realización / Date of issue	2016-05-23
Formato de informe No. / Report template No	FSE485_03

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

DEKRA

TÜVRheinland CERTIFIED

Sales and warranty

GENERAL SALES CONDITIONS:

Unless specific and prior agreement between Keyter Technologies, SL (hereinafter Keyter) and buyer, the following sales conditions shall be applied.
The present terms cancel and replace any former published or printed version of any Keyter documentation.

BRANDING:
The products sold by Keyter are marketed under Keyter brand.
The buyer is not entitled to amend marks and/or logos on the equipment, on its packaging and/or in any other documentation, nor add any mark, nor use any mark, logo and/or brand property of Keyter, unless expressly authorized by Keyter.

SPECIFICATIONS:
The data and characteristics contained in this catalogue are provided as an indication, as a consequence of the quick technology changes, safety, regulations and product improvement, and so the specifications are subject to change without prior notice and to be confirmed in case of order.

ORDERS:
Orders are to be placed in writing and shall be confirmed by the seller via an order of acknowledgement indicating lead time, under reserve of the right to withdraw. Once manufacturing commences, the order may not be cancelled.

DELIVERY:
Products are to be delivered in FCA Keyter (14900 Lucena, Spain) position, according to Incoterms 2010.

MODIFICATIONS, RETURN AND CANCEL OF ORDERS:
No changes, cancel or return of products shall be accepted once the production of them has started, except in case of written specific and prior consent from the seller. When accepted, if applicable, transport costs are to be covered by the buyer, being understood that the products are returned in the same conditions as originally delivered, including packaging. Keyter reserves its right to charge a fee as depreciation, handling, inspection, repairing and other incurred costs by Keyter.
Once accepted, orders shall not be amended nor cancelled without Keyter specific and prior consent.

PACKAGING:
The price of the products include standard packaging for road transport, not appropriated for sea transport.

PAYMENT:
Unless specific and prior agreement, the invoices are to be paid at the order placement by bank transfer to the communicated bank account. The seller reserves the right to withhold the delivery of pending orders in case circumstances of payment risk are identified by the seller.

COMMISSIONING:
The commissioning of the products is excluded. Notwithstanding the aforementioned and related to some products, the seller can require the assistance to the commissioning by an official technical service of the manufacturer in order to validate the guarantee certificate.

INSTALLATION:
The buyer recognizes and accepts that Keyter products are capital goods to be integrated into an installation. Therefore, the buyer undertakes to comply with the applicable legislation and to guarantee the quality of installation, which shall be carried out by an authorized party according to local and global applicable regulation.

RESOLUTION OF CONFLICTS:
The trade of Keyter products is submitted to the Spanish law. Any conflict or disagreement will be subject to legal arbitration of the Chamber of Commerce of Córdoba, Spain. In case of legal claims the parties expressly accept to submit to the jurisdiction of the Courts and Tribunals of Lucena (Córdoba), Spain.

GENERAL WARRANTY CONDITIONS:

Keyter warranties the products under Keyter brand, unequivocally identified with serial and model number in the Warranty Certificate expedited by Keyter and to be supplied together with the products, according to the following terms and conditions.

WARRANTY PERIOD:
The products have a warranty period of 12 months from invoicing date. In case the commissioning is carried out by a Keyter's Official Technical Service the warranty will be extended to 12 months from commissioning date, with a maximum limit of 15 months from invoice date. The warranty period for repairs and spare parts is 6 months from reparation or shipping date of the spare parts, unless the remaining warranty period is longer.

WARRANTY COVERAGE:
Keyter's warranty covers every manufacturing defect during the warranty period as long the products are installed and maintained according to in-vigor regulations and operated under normal conditions according to the limits of specifications in Technical Catalogues and Manuals.

EXCLUSION OF WARRANTY COVERAGE:
Workforce, labor, traveling and other expenses or costs.
Refrigerant gas supply is excluded.
The consumable and/or replacement materials used for preventive maintenance are excluded.
Operation faults, faulty components or parts and other defects that are not attributable to Keyter.
Cost originated in difficult access to the equipment or installation and any auxiliary item needed for handling, operating and/or moving the equipment or parts.
Parts and components not supplied from Keyter or following written instructions from Keyter.
Damage, faults and/or defaults resulting from lack or improper maintenance, improper use, alteration or addition.
Corrosion or deterioration of heat exchangers due to the aggressive nature of the fluids through them.
Corrosion of the unit due to exposure to aggressive environment.
Damages due to ice, fire or any extraordinary cause.
Damages caused by unit operating with a faulty voltage or a poor connection to the electrical network or connected to any kind of generator.

WARRANTY PROCEDURES:
RIn order to place an on-site warranty assistance it is mandatory to meet the following requirements:
Supply from the installer and/or maintenance company detailed written information on the causes and failures of the equipment, installation, facilities and safety measures in the installation.
In case the commissioning is to be carried out by a Keyter's Official Technical Service, the Pre-Commissioning Document shall be filled and returned to Keyter, as well as ensuring the proper operation conditions in the installation. In case the commissioning is not included in the sale, it shall be accepted previously.
In case any part of the equipment is replaced during the technical assistance or any spare part is delivered under warranty, those faulty parts stay as a property of Keyter and shall be returned.
The installer or maintainer of the installation are called to be present at the site in order to provide access to the installation, to have the usual tools and to operate on the installation when requested by Keyter's Official Technical Service.
The works performed by Keyter's Official Technical Service are in compliance with in-vigor with every risk prevention regulation. The equipment, installations, hard access and/or any other circumstance not depending on Keyter that make impossible to comply with in-vigor regulations will result in stopping the tasks, being the customer responsible to cover the expenses and delays.

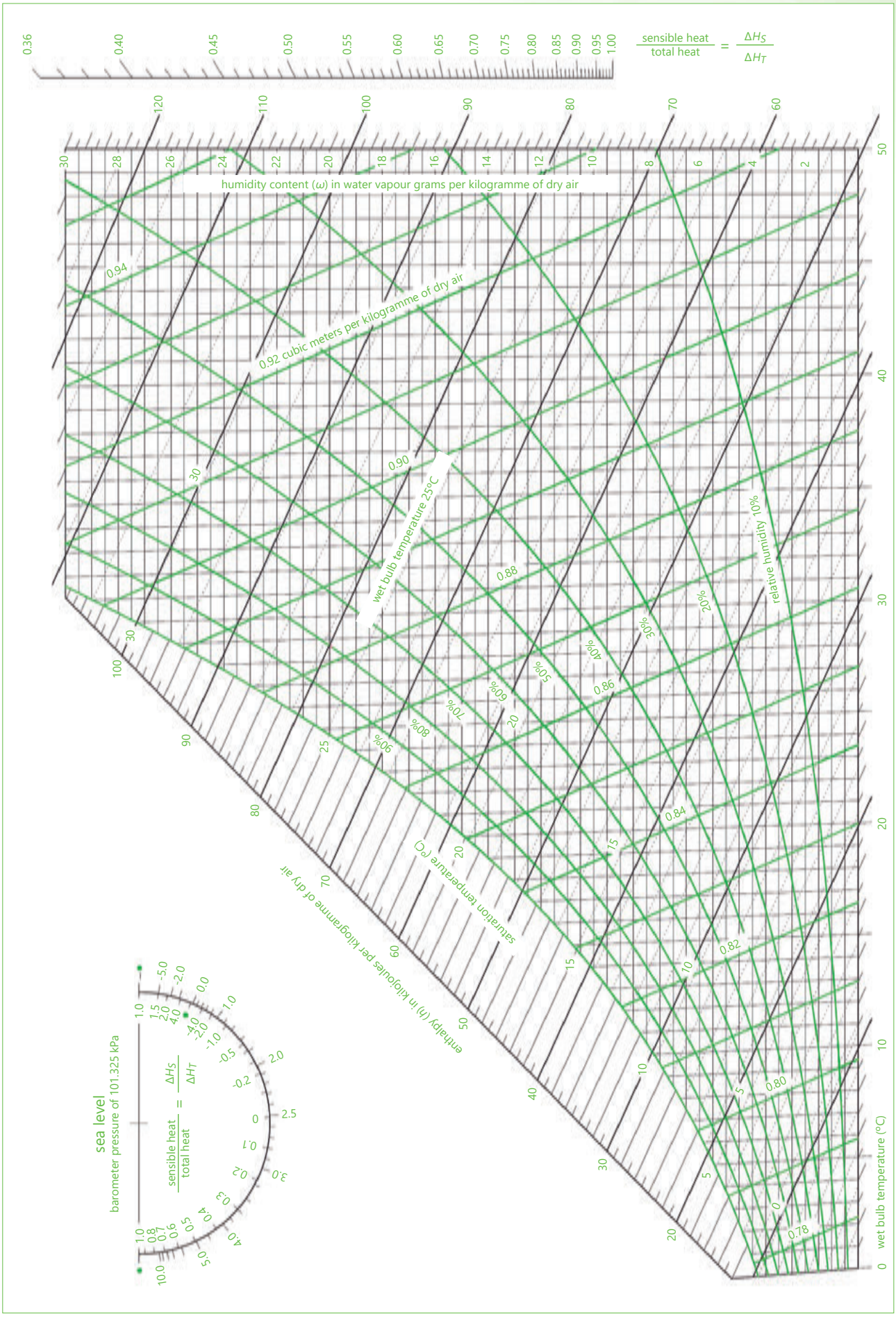
WARRANTY CONDITIONS:
The warranty is conditioned to all the following:
Payment on time of Keyter's invoices, not to void the warranty.
Presence of a manufacturing default or faulty spare part, that is unequivocally attributable to Keyter and accepted by Keyter's Technical Service.
Proper and correct installation, operation and maintenance of the equipment, in compliance with the in-vigor regulations.
Commissioning carried out by a Keyter's Official Technical Service, when requested by Keyter.
Equipment not being modified or handled by others than Keyter's.

DISCLAMER
Keyter does not accept any responsibility that may result from any event not expressly included in this warranty conditions and declines any responsibility for damages to persons or assets that may be caused by abnormal installation of the equipment.

Acceptance of these warranty conditions implies acceptance of the entire conditions. No modification on these conditions shall be accepted, unless priory agreed by the parties.

Keyter reserves the right to modify the information provided in this catalogue with no prior notice.

psychrometric diagram



Keyter

natural experience

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rooftop & wall-top units

dehumidifiers

packaged units and split systems

chillers and heat pumps

AHUs and terminal units

special developments

Keyter Technologies, SL
PI Los Santos, C/ José Estrada Orellana, 2
14900 Lucena - Córdoba - Spain
+34 957 51 07 52 | keyter@keyter.es

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