rcgroup.it

1963 2013

fifty cool years

Chillers 2014

start here

rcgroupairconditioning

rcgroup.it

1 9 6 3 2 0 1 3

fifty**cool**years

Please register on our web site www.rcgroup.it
for the download of all technical and commercial documentation.

ISO 9001:2008 CERTIFICATION

RC Group has been the first Italian company in its segment to get the ISO 9001 in October 13th, 1991 with certificate ICIM 0018: all the processes are certified to assure products and services in compliance with the corporate policy.

Certifications for RC GROUP SpA production plants:
Valle Salimbene (PV) e Zeccone (PV) - Italy

Certifications for RC GROUP SpA production plants:
Foshan, Guangzhou - People Republic of China (PRC)

ISO 14001:2004 CERTIFICATION

RC Group chose to establish, implement, maintain and improve its environmental management system. Its organization is certified according to UNI EN ISO 14001:2004.

Certifications for RC GROUP SpA production plants:
Valle Salimbene (PV) e Zeccone (PV) - Italy

Certifications for RC GROUP SpA production plants:
Foshan, Guangzhou - People Republic of China (PRC)

EUROVENT CERTIFICATION

RC GROUP SpA participates in the EUROVENT program for: LCP and HP (Liquid Chilling Packages and Heat Pumps).

Check ongoing validity of certification on-line:
www.eurovent-certification.com

Eurovent is an international organization of manufacturers that working to improve the standards of products for air-conditioning and refrigeration systems throughout the European market.
The members of this organization voluntarily submit their products to a network of independent laboratories approved for testing and evaluation in accordance with European and international standards.
The participation in this certification program ensure that the specifications of the products presented by RCGroup in its commercial and technical literature are clear and transparent.

GOST CERTIFICATION

RC GROUP S.p.A. participates in the GOST certification program, valid for the Russian market.

Logos, Trade Marks and Companies Name are property of respective Owners

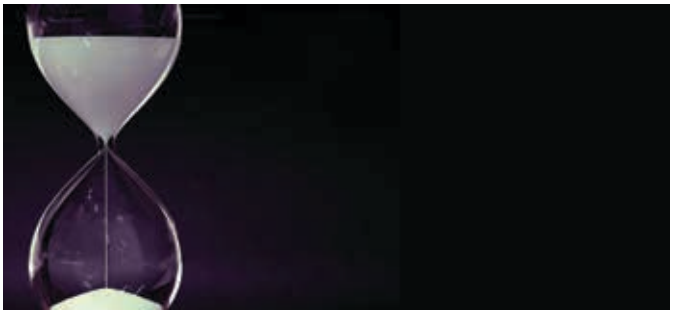
TIME

RC Group started its activity in 1963, devoting itself to the then emerging technologies for data center cooling technology, telecommunication, metrology labs, etc. ...

Only a short time later RC Group opens a new universe with a wide range of refrigeration, heat pump and multifunction units able to satisfy every possible demand for comfort and to satisfy several industrial cooling processes.

Since 2011, RC Group joins DeLclima SpA, the holding company of De' Longhi group, mainly devoted to the production and sale of equipment for air conditioning.

www.del-clima.com
www.rcgroup.it



QUALITY & ENVIRONMENT

Through the originality of its projects, RC Group demonstrates its prompt ability to address and meet new and different demands by continuing to develop innovative responses.

The assurance of the quality of all products from RC Group factory is determined by rigorous tests carried out in the laboratories and in the numerous test benches, where each device is electrically and hydraulically connected to carry out functional calibrations according to the specific requirements of each single customer.

All the design, production and test procedures are in accordance with ISO 9001 norms. In the respect of the environmental protection RCGroup is certified in accordance with ISO14001 norms.

SATISFACTION

Time, space, technological evolution, quality and environment, tailor-made solutions all together can only focus to the achievement of our main aim: the full customer satisfaction, either for properly tested products or for the capillary presence of skilled technicians and the of the thick service network on the territory, providing for the units maintenance.

Over against the newest overview in continuous change, the proposal of complete solutions conceived for the efficiency and functionality only can supply the right response to the market.

This is the today's strategy that is giving big satisfaction results to the end-users, buyers and RC Group.

TAILOR-MADE SOLUTIONS

Always, RC Group raises challenges, facing new application realities within a market in continuous evolution and offering tailor-made solutions meeting with accurate precision the single customer needs.

In several cases, thanks to its experience linked to innovation, RC Group has proposed and realized efficient and dedicated solutions also in the most critical contexts.
Instruments to speed-up the process for the realization of its projects, increasing the customer satisfaction degree.

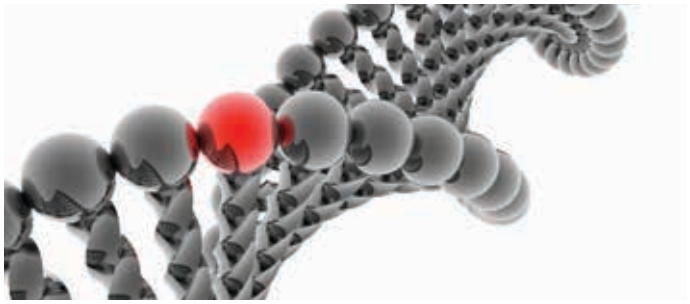
Nowadays, RC Group is facing the market as supplier of several products: air conditioners and liquid chillers, covering a range of cooling capacities from 5 to over 2000 kW per unit to satisfy any kind of needs.

TECHNOLOGICAL EVOLUTION

RC Group products are the result of a technological growth based on the experiences gained in over fifty years of activity in the air conditioning for data centers applications, metrology labs, telecommunication and comfort, besides all several and specific equipment for refrigeration and water heating of small, medium and large capacity.

The company designs and produces through sophisticated computerized systems that allow to obtain perfect and high quality equipments in respect of the current European and Worldwide regulations.
Tridimensional CAD, thermodynamic and acoustical simulators for machines and plants design ….. and RC World.

A unique commercial software at disposal of the sales network, able to manage all RC Group “World” through few links: from the comparison of the technical data to the product selection, up to the commercial offer and order processing.



SPACE

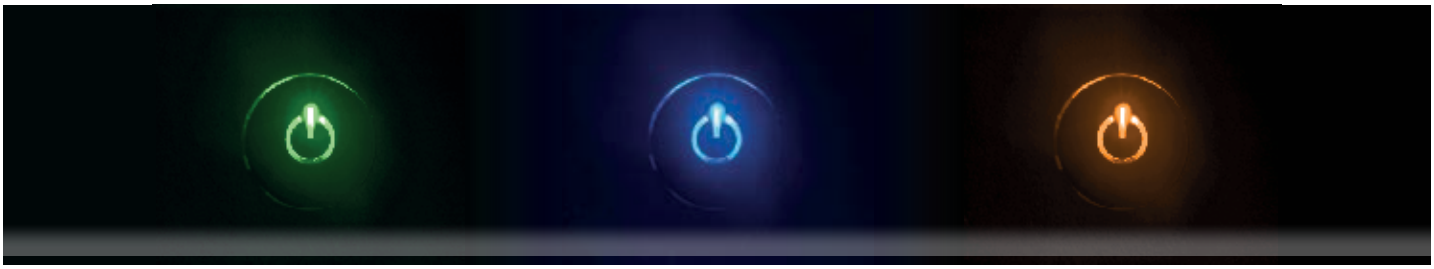
The character of the company and its philosophy of research and development, design and production, were quickly recognized and appreciated by the market, first in Italy and then in the World.

RC Group manufactures air conditioners and small, medium and large capacity liquid chillers at its three plants in Pavia (Italy).

A fourth production unit, only for precision air conditioning equipment manufacture is located in Foshan (China) to give a quick and economically competitive response to all requests from the Far East.

The commercial and service widespread coverage is made up of a number of agencies and service centers in Italy as well as many product distribution and service companies in the rest of the World, always being in the middle of the action. Wherever you are, RC Group is always at your side.

THREE PRODUCTION SECTORS IN ONE ONLY SOLUTION



IT cooling | **Chillers** | **Heat Pumps & Multifunction**

IT cooling
Precision air conditioners designed for data centers, telephone exchanges, shelters.

Chillers
Liquid chillers for food, textile, pharmaceutical and electronic big industries.

Heat pumps & Multifunctions
Multifunction liquid chillers and heat pumps suitable for installation in supermarkets and business centers, banks, public offices, airports, hospitals.

Since over fifty years, RC Group supplies reliable and flexible solutions and it is today considered market leading company in precision air conditioning and refrigeration with hi-tec content.

Legenda

Symbols used
in the catalogue.

New product

A Energy Class Machine

Only cooling

Scroll type compressor

Rotary type compressor

Oil free centrifugal compressor

Inverter driven compressor

Compressor without oil lubrication system

R410A Refrigerant charge

R134a Refrigerant charge

Direct free-cooling system

Axial fans with brushless type EC electric motor

Axial fans with AC electric motor

Plug fan with brushless type EC electric motor

Plug fan with AC electric motor

Microchannel type condensing coil

Plate type evaporator

Shell and tube type evaporator

Flooded shell and tube evaporator

Indoor installation

Outdoor installation

Split-system machine

AIR COOLED LIQUID CHILLERS WITH AXIAL FAN

SMART

Air cooled liquid chillers equipped with scroll compressor and axial fans.

pg:25

UNICO

Air cooled liquid chillers equipped with scroll compressors and axial fans.

pg:33

PYXIS U

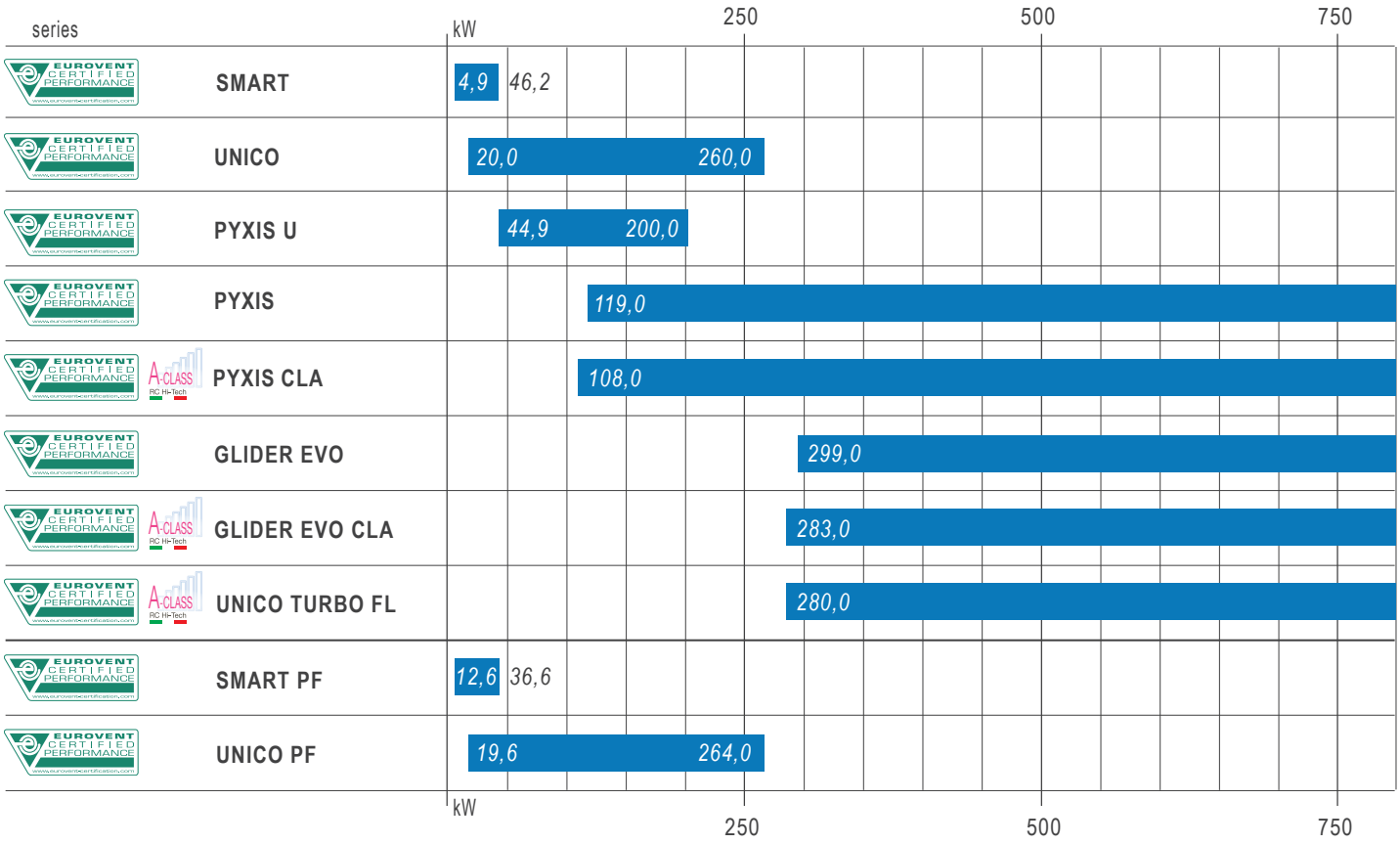
Air cooled liquid chillers equipped with scroll compressors, axial fans and microchannel condensing coils.

pg:49

PYXIS

Air cooled liquid chillers equipped with scroll compressors, axial fans and microchannel condensing coils.

pg:57



AIR COOLED LIQUID CHILLERS WITH PLUG-FAN

SMART PF

Air cooled liquid chillers equipped with scroll compressor and plug fan.

pg:29

UNICO PF

Air cooled liquid chillers equipped with scroll compressors and plug fan.

pg:41

AIR COOLED LIQUID CHILLERS WITH AXIAL FANS

PYXIS CLA

Air cooled liquid chillers with A-class energy efficiency equipped with scroll compressors, axial fans and microchannel condensing coils.

pg:65

GLIDER EVO

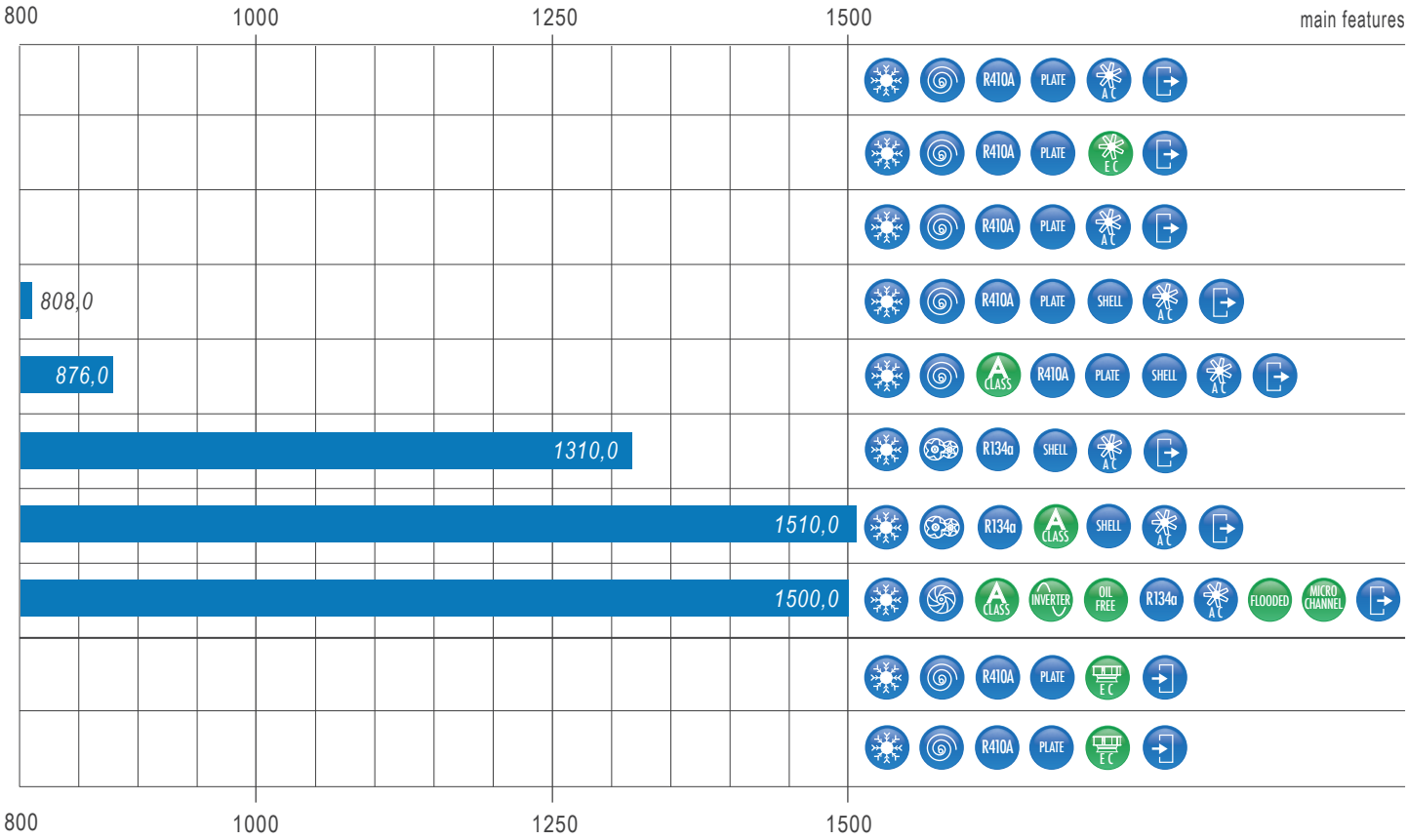
Air cooled liquid chillers equipped with screw compressors and axial fans.

pg:75

GLIDER EVO CLA

Air cooled liquid chillers with A-class energy efficiency equipped with screw compressors and axial fans.

pg:83



AIR COOLED LIQUID CHILLERS WITH AXIAL FANS AND CENTRIFUGAL OIL-FREE COMPRESSORS

UNICO TURBO FL

Air cooled liquid chillers in A-class energy efficiency equipped with oil-free centrifugal compressors with magnetic levitation bearings, flooded evaporator and microchannel condensing coils.

pg:93

AIR COOLED LIQUID CHILLERS WITH FREE-COOLING SYSTEM WITH AXIAL FANS

MAXIMO

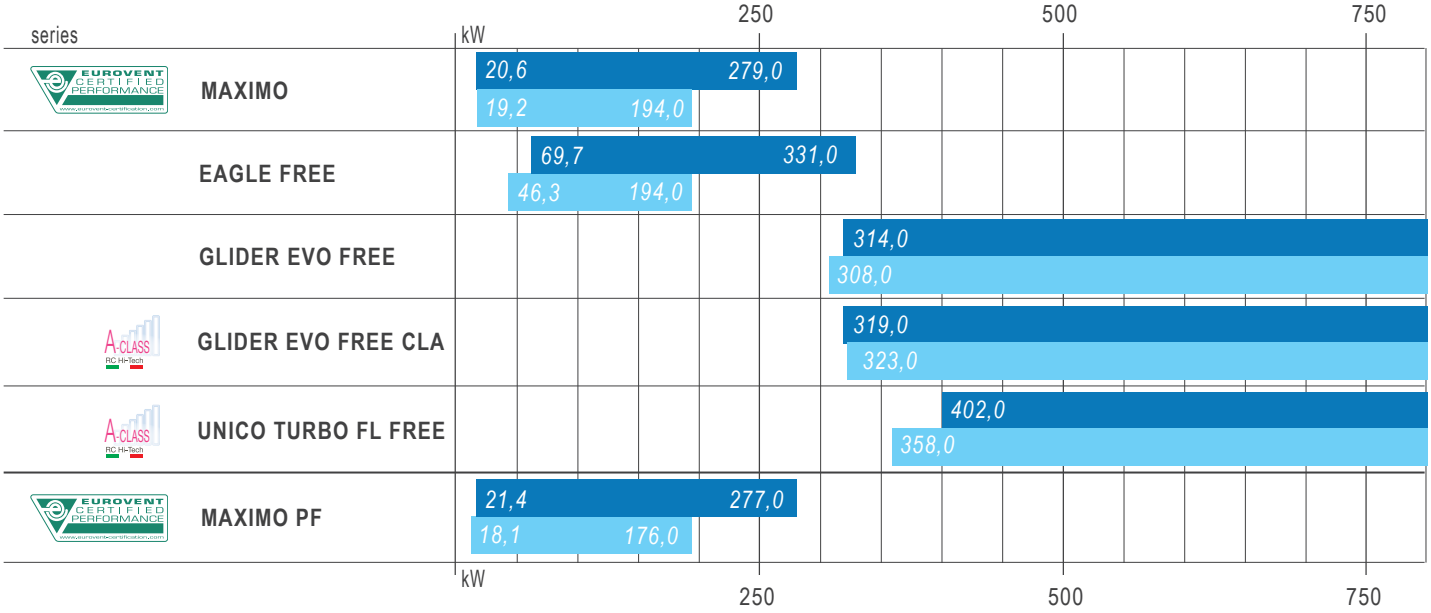
Air cooled liquid chillers with free-cooling system equipped with scroll compressors and axial fans.

pg:99

EAGLE FREE

Air cooled liquid chillers with free-cooling system equipped with scroll compressors and axial fans.

pg:115



AIR COOLED LIQUID CHILLERS WITH FREE-COOLING SYSTEM WITH PLUG FAN

MAXIMO PF

Air cooled liquid chillers with free-cooling system equipped with scroll compressors and plug fan.

pg:107

AIR COOLED LIQUID CHILLERS WITH FREE-COOLING SYSTEM WITH AXIAL FANS

GLIDER EVO FREE

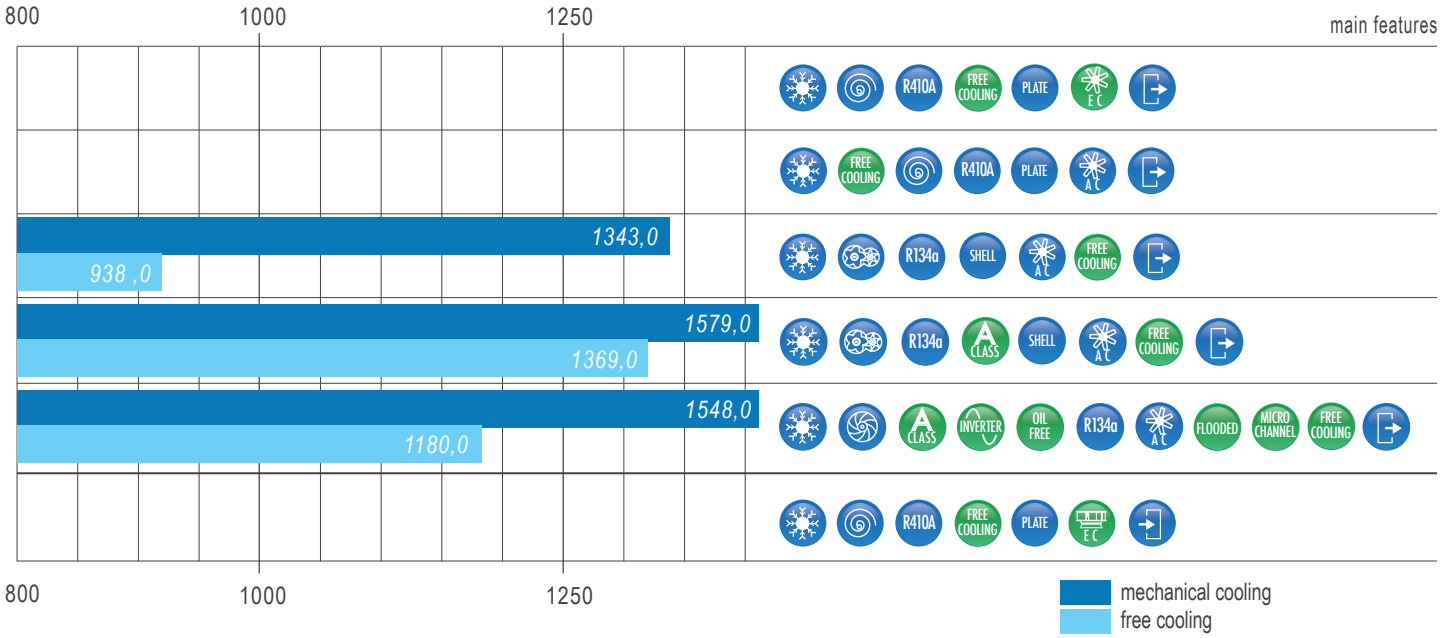
Air cooled liquid chillers with free-cooling system equipped with screw compressors and axial fans.

pg:121

GLIDER EVO FREE CLA

Air cooled liquid chillers in A-class energy efficiency with free-cooling system equipped with screw compressors and axial fans.

pg:129



AIR COOLED LIQUID CHILLERS WITH FREE-COOLING SYSTEM WITH AXIAL FANS AND CENTRIFUGAL OIL-FREE COMPRESSORS

UNICO TURBO FL FREE

Air cooled liquid chillers in A-class energy efficiency equipped with oil-free centrifugal compressors with magnetic levitation bearings, flooded evaporator and microchannel condensing coils.

pg:137

WATER COOLED LIQUID CHILLERS

NEMO

Water cooled liquid chillers equipped with scroll compressor.

pg:143

MANTA

Water cooled liquid chillers equipped with scroll compressors.

pg:147

FRIGO SCREW K

Water cooled liquid chillers equipped with a single screw compressor.

pg:153

WATER COOLED LIQUID CHILLERS EQUIPPED WITH CENTRIFUGAL OIL-FREE COMPRESSORS

INVERTER

LOW NOISE

FRIGO TURBO K

Water cooled liquid chillers equipped with oil-free centrifugal compressors with magnetic levitation bearings and plate type heat exchanger.

pg:173

INVERTER

A-CLASS

LOW NOISE

FRIGO TURBO FL

Water cooled liquid chillers equipped with A-class energy efficiency equipped with oil-free centrifugal compressors with magnetic levitation bearings and flooded evaporator.

pg:169

WATER COOLED LIQUID CHILLERS

FRIGO SCREW CLA

Water cooled liquid chillers with A-class energy efficiency equipped with screw compressors.

pg:157

FRIGO SCREW CLA PLUS

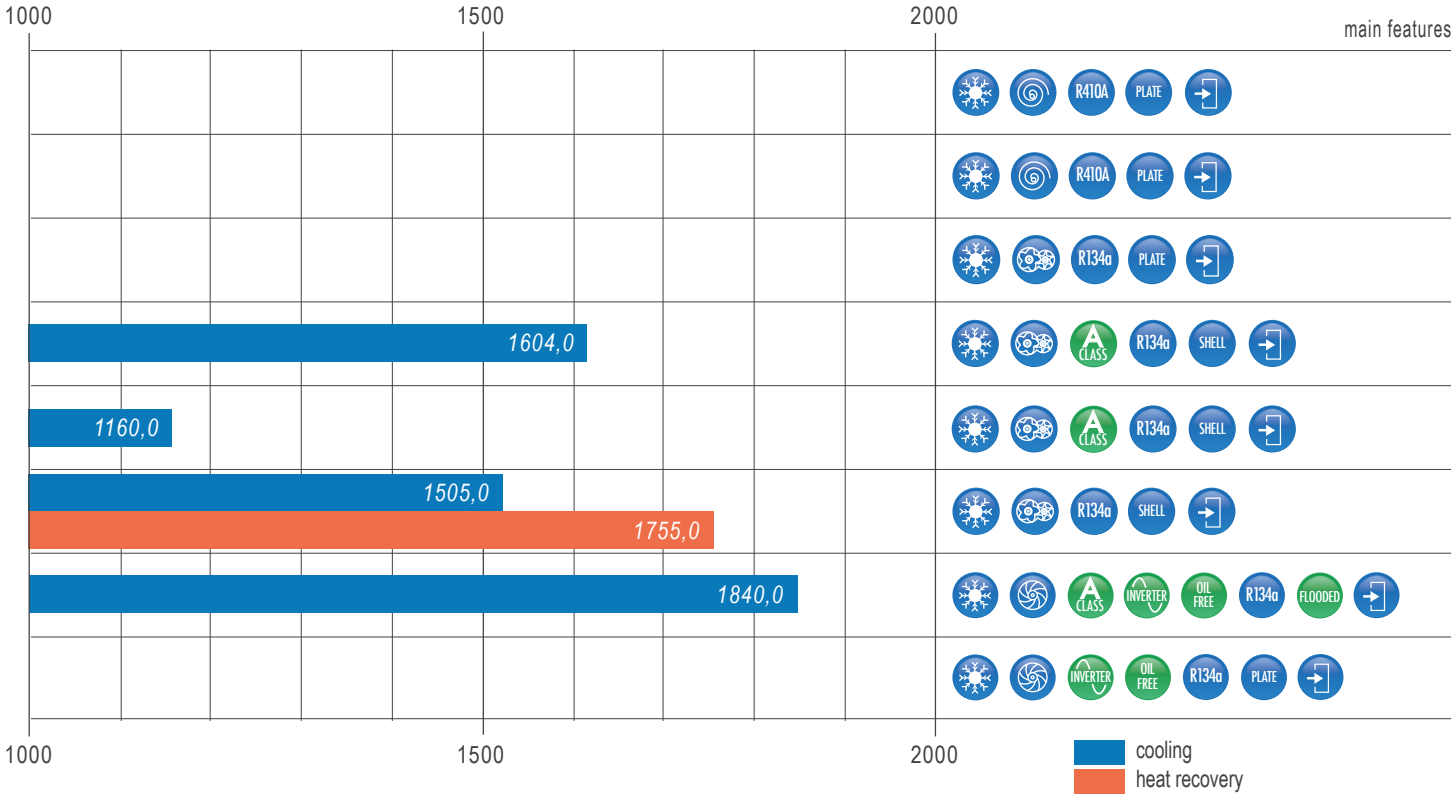
Water cooled liquid chillers with A+class energy efficiency equipped with screw compressors

pg:161

FRIGO SCREW HR

Water cooled liquid chillers equipped with screw compressors and total heat recovery.

pg:165



DRY COOLERS

DRY COOLER

8,3 ÷ 172,0 kW

Dry coolers equipped with axial fans

pg:201

DRY COOLER PF

8,8 ÷ 89,0 kW

Dry coolers equipped with plug fan

pg:203

MOTOEVAPORATING UNITS

NEMO A

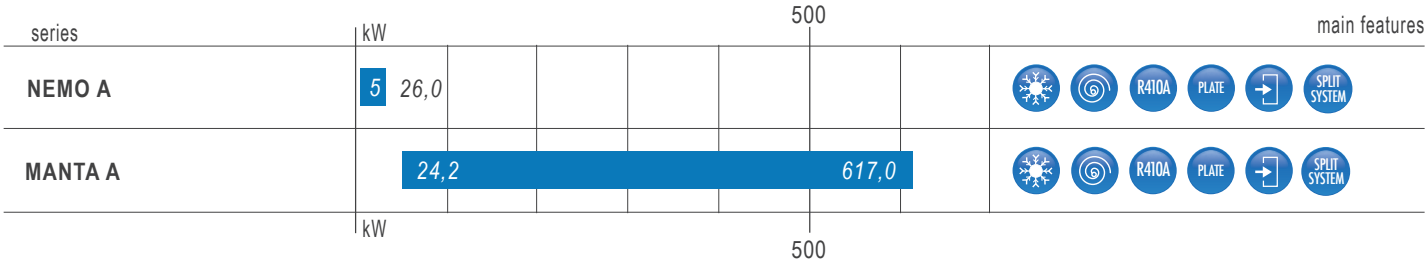
Motoevaporating units equipped with scroll compressor.

pg:177

MANTA A

Motoevaporating units equipped with scroll compressors.

pg:183



AIR COOLED CONDENSERS

TEAM MATE

12,1 ÷ 307,0 kW

Air cooled condensers equipped with axial fans

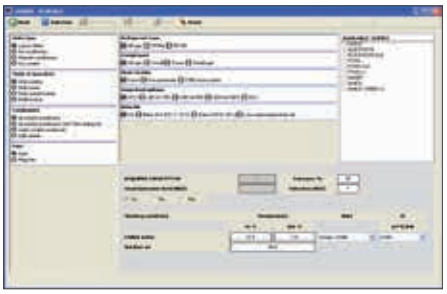
pg:193

TEAM MATE PF

12,1 ÷ 154,0 kW

Air cooled condensers equipped with plug fan

pg:197



RC WORLD

RC GROUP products selection software.

pg:207

SPECTRUM

RC GROUP energy performance estimation software for chillers and heat pumps

pg:208

SEQUENCER

Sequencer for chillers, heat pumps and multifunction units

pg:209

RILHEVA

Performance and quality remote monitoring.
GPRS solution for unattended monitoring.

pg:210

Web & Social Media

RC GROUP WEB

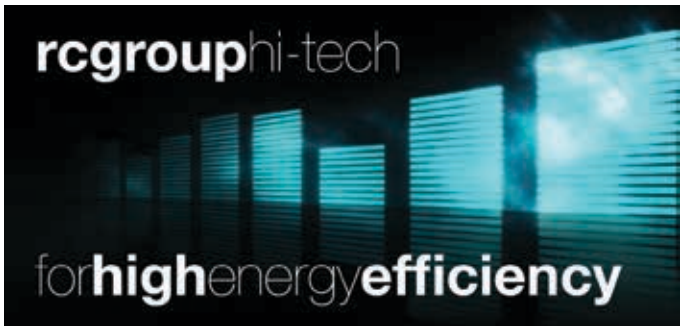
http://www.rcgroup.it/EN/

YOU TUBE CHANNEL

http://www.youtube.com/user/RCGroupSpA1

LINKEDIN

http://www.linkedin.com/company/rc-group



ELECTRONIC EXPANSION VALVES

The electronic expansion valves have many benefits. They grant a higher energy efficiency combined to a better stability of the system.

FEATURES

- High capacity modulation
- Precision control
- Wide range of operation
- Able to follow punctually plant demand and environmental condition change
- Better use of compressors
- Bi-directional flow

BENEFITS

- Energy saving
- Better stability of the system, combined to inverter driven compressors
- Replace the operation of two traditional expansion valves in reverse cycle heat pumps

FLOODED EVAPORATOR

The TURBO FL liquid chillers are equipped with flooded evaporator, where the refrigerant in the evaporation phase is outside of the tube bundle.
This heat exchange solution allows to obtain a greater energy efficiency of the system because it reduces the differential between the refrigerant expansion temperature and the liquid cooled temperature.
Moreover the circulation of the liquid inside the tubes of the heat exchanger can be varied considerably in relation to the cooling load, reducing the energy engaged by the pumping system.

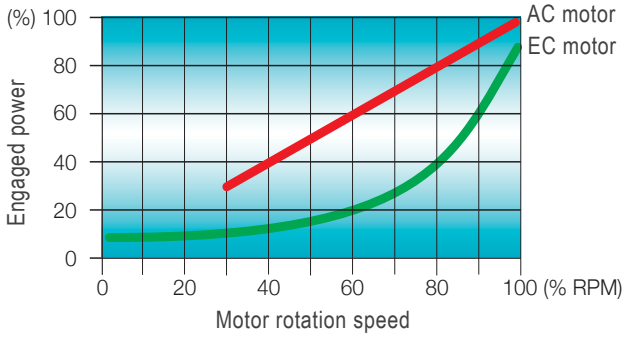
FANS WITH BRUSHLESS TYPE EC MOTOR

The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.

These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise.

EC MOTORS FEATURES

- Synchronous brushless motor
- Integrated electronic commutated system
- High efficiency (83-86%)
- Minimum power input
- Stepless rotation speed control with 0-10VDC proportional signal
- No electromagnetic noise



FANS FEATURES

Plug-fan
- High discharge head centrifugal fans installed on chillers for indoor installation

Axial fans
- Fans installed on chillers for outdoor installation

BENEFITS

- Dramatic reduction in power required
- The power required decreases with the reduction of power motor revolutions
- More efficient than traditional motor
- Average energy saving of 30%
- Longer lifetime (no brush and commutation erosion)
- Reduction of electromagnetic interference
- Minimal noise emission

ADVANTAGES OF THE "MICROCHANNEL TECHNOLOGY"

The micro-channel condensing coils are the ideal choice for operation with refrigerant pressures up-to 45 bar and they are optimise on the liquid chillers with R134a and R410A refrigerant charge.

The micro-channel condensing coils are in aluminium and they are perfectly suitable for the civil and industrial applications cooling, while the protection function of the oxide layer allows an optimum resistance to corrosion also in case of aggressive ambient conditions.

The optional version with special protective surface treatment - acrylic painting TK Pro - allows to obtain a high resistance to salt spray while maintaining the same conditions of heat exchange capacity.

The use of aluminium for the micro-channel condensers manufacture is able to offer the possibility for very light machinery: the coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity. The reduced air resistance of the micro-channel coils allows to drastically reduce the fans motors electric energy consumption.

At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.

FEATURES

- High energy efficiency
- Low refrigerant charge
- Increased thermal performance
- Quick response at temperature changes
- Reduced pressure drop
- Noise reduction
- High pressure resistance
- Brazed 100% Aluminium construction

BENEFITS

- Savings on electricity bills
- Up to 75% lower refrigerant charge when compared to traditional coil
- Reduced footprint of outdoor units
- Reduced environmental impact
- Reliable and stable operation
- Perfect for a wide range of refrigerants and applications
- High corrosion resistance and easily recyclable
- Up to 50% lighter than traditional coils
- Easy to clean

MICROPROCESSOR CONTROL SYSTEM WITH GRAPHIC DISPLAY

MP.COM microprocessor system with graphic symbol for control and monitor of operating and alarms status. The system includes:

- Voltage free contact for remote general alarm.
- Main components hour-meter.
- Nonvolatile "Flash" memory for data storage.
- Menu with protection password.
- LAN connection.

MICROPROCESSOR CONTROL SYSTEM WITH TOUCH SCREEN DISPLAY

(only for TURBO FL series)

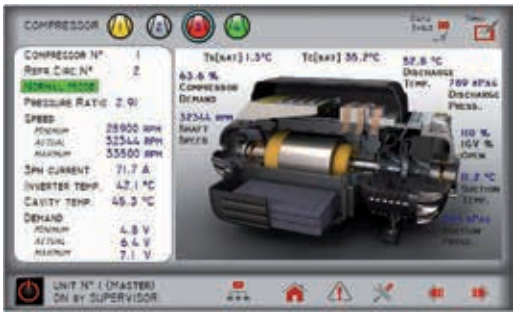
Microprocessor control system with new high resolution touch screen 7" graphic display for the management and monitoring of the working and alarm statuses. The system includes:

- Voltage free contact for general alarm.
- Main components hour meter, with programmed maintenance intervention.
- "Data logger" integrated function for the events and alarms recording.
- "On-line trends" function, freely configurable and specially conceived for maintenance and diagnostic purposes.
- High level of data exchange with microprocessor typical of the compressors.
- "Flash" memory for the data storage in case of lack of power supply.
- Energy performances monitoring function in real and cumulated (optional) time.
- Menu management with protection password.

The totally new graphic interface is characterized by an extremely simple electronic navigation and by several information, merged by function in rational way.

Among the several new available graphical charts, a synoptic of the machine is foreseen that – combined with the above mentioned "On-line trends" – allows at the same time a brief and simplified analysis of the units working status.

The unit settings are merged according to a new logic and they have been reduced, since many of them have been eliminated through an innovative new auto-adaptive type control techniques.



MAGNETIC LEVITATION CENTRIFUGAL COMPRESSOR DIRECTLY DRIVEN BY BUILT-IN INVERTER

The TURBO FL liquid chillers are equipped with two-stage centrifugal compressor with variable speed, which is able to follow punctually plant demands, obtaining values of energy efficiency ratio (EER) growing in a narrowing of the cooling load.

The compressors of the TURBO FL liquid chillers are equipped with magnetic levitation oil-free bearings which compared to traditional ball bearings, completely eliminate all the maintenance procedures of lubrication.

INVERTER
RC Hi-Tech

NO NEED OF POWER FACTOR CORRECTION

The power factor of the centrifugal compressor (cos-φ) is always close to unity under all load conditions. This does not require the use of any power factor correction capacitors.

MINIMUM STARTING CURRENT (LRA)

The compressors built-in inverter system is able to limit the starting current for each compressor to 5 Ampere.

Other types of compressors having the same capacity can produce starting currents up to hundreds of Ampere. This low inrush current prevents any voltage fluctuation on the mains.
Start-up transients are negligible and without any negative effect on the connected equipment (lighting systems, computer, electric- medical instruments etc.).

INVERTER SYSTEM

The compressor driven by an inverter varies the load continuously and the regulation of the refrigerant circuit can be easily adapted, without oscillations and transients, the operating conditions required.

The system is highly efficient since it is supplying the energy necessary to satisfy the required thermal load only; furthermore it is possible to supply thermal or cooling energy even in case of overload conditions of the system. The working range, in comparison to the nominal values of cooling capacity output, varies on average from 20% to 110%.

QUIET OPERATION

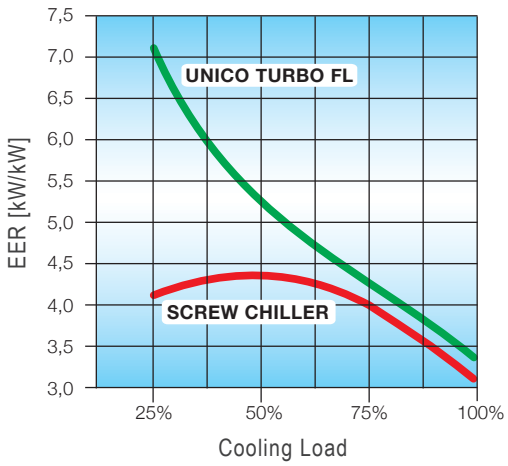
TURBO FL machines are also extremely quiet.
This promotes their use in noise sensitive locations such as old city centres, hotels, offices and residential buildings.

AN EFFICIENT ENERGY USE

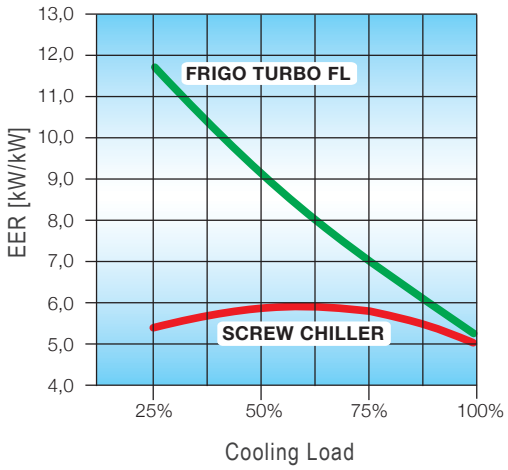
One of the most important characteristics of TURBO FL machines is their high energy efficiency and consequently high ESEER values, both at design and at the various operating conditions experienced during the year.
The diagram compare the EER curves of TURBO FL with centrifugal compressors vs. screw compressors.

The considerable improvement of the centrifugal unit under all load conditions is well illustrated.
The following charts have been prepared in accordance with EUROVENT standards.
Therefore, the air and water temperatures specified by these standards have been considered at partial load.

Air cooled liquid chiller



Water cooled liquid chiller



RELIABILITY

With their reliable operation the TURBO FL series is well suited for every application from comfort cooling, through the high-tech industrial sector and especially mission critical strategic applications (like hospitals, clean rooms, web farms, data centres, telecommunication exchanges, air-traffic control centres).

Their operating reliability is guaranteed 24 hours/day for 365 days/year.

INDIRECT FREE COOLING SYSTEM

The indirect free cooling system consists in the complete cooling of the chilled water of the existing cooling system with the outside air.

The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

GLYCOL FREE SYSTEM

The accessory allows to use pure water instead of antifreeze solutions in the hydraulic circuit of the plant. This accessory is factory assembled and it don't modify the machine dimensions.

An intermediate heat exchanger divides the hydraulic circuit into two parts; one part includes the chiller with the Glycol-Free hydraulic circuit with Free-Cooling coils and the centrifugal pump.
The other part includes the evaporator and the plant hydraulic circuit.

The Glycol-Free hydraulic system (free-cooling coil and centrifugal pump) must be filled with an antifreeze solution having a concentration suitable to the operation conditions of the machine, while the plant hydraulic system will be filled with pure water.

PUMPING GROUPS

RC Group propose a complete sets of optional accessories for chilled water pumping.
To satisfy different plant needs are available pumping groups with one, two, three pumps with low, medium and high discharge heads.

LOW NOISE EMISSIONS

RC Group allows to select the units, not only for the required cooling capacity, but even for the units' environmental acoustic impact.
This allows to answer to the law requirements against noise.

Two kits for the reduction of the noise emissions are available:

- LNO kit, for a noise reduction
- ELN kit, for an extreme noise reduction

A CLASS ENERGY EFFICIENCY

The best and most accurate components applied to the chillers grants high energy efficiency with EER higher than 3,1 for air cooled units and even higher than 5,05 for water cooled units.
This values satisfy the Eurovent conditions to join the energy efficiency A class.

chillers

SMART: Air cooled liquid chillers
for outdoor installation, equipped with scroll compressor and axial fans
Cooling Capacity: **4,9 ÷ 46,2 kW**

smart

rcgroupairconditioning

R410A PLATE A C

MAIN FEATURES
- Air cooled liquid chiller.
- 18 models available, for a wide selection opportunity.
- Average step of 10kW.
- EER up to 3,33.
- ESEER up to 4,10.
- Scroll compressor.
- R410A Refrigerant charge.
- Single air circuit.
- Plate type heat exchanger.
- Axial fans AC.
- Single air circuit.
- Suitable for outdoor installation.

MAIN BENEFITS
- High ESEER.
- Availability of pumping groups..
- Easily of maintenance.
- Eurovent Certification.

OUTDOOR INSTALLATION
The machines are made with weather resistant materials and suitable for outdoor installation.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: -8÷18°C
Ambient temperature: -10÷46°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
- Anticondensate insulation made of neoprene.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL
- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops.
- Frame in galvanized steel.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT
- Thermostatic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Safety valve on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- R410A refrigerant charge.

HYDRAULIC ASSEMBLY
- 3 speed water pump from model M5 to model T15, both included.
- Single spped water pump from model T19 to model T49, both included.
- Expansion tank.
- Safety valve.
- Manual filling assembly.
- Pressure gauge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety from model T19 included.
- Contactors for compressor..
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 230/1/50 for M models
- Power supply: 400/3/50+N for T models

CONTROL SYSTEM
- Microprocessor control. The system includes:
  - Display for the visualization of the alarm codes, set values and temperature values.
  - Dynamic set point.
  - Compressor running hour meter.
  - Contact for general alarm remotization.
  - “Low Temperature” set for operation with chilled water production up to -8°C.
  - Menu with protection password.

OPTIONAL ACCESSORIES

SMART	M5	M6	M7	M9	M11	T6	T7	T9	T11	T13	T15
Condensate collection pan	-	-	-	-	-	-	-	-	-	-	-
1003 - Water mesh filter (kit)	●	●	●	●	●	●	●	●	●	●	●
733 - Additional water pump	-	-	-	-	●	-	-	-	●	●	●
764 - Water tank	●	●	●	●	●	●	●	●	●	●	●
765 - Pipes water tank (kit)	●	●	●	●	●	●	●	●	●	●	●
117 - Low water temperature set	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	-	-	-	-	-	-	-	-	-	-	-
920 - Remote control kit	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	-	-	-	-	-	-	-	-	-	-	-
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MODEL	T19	T22	T26	T33	T35	T40	T49
Condensate collection pan	●	●	●	●	-	-	-
1003 - Water mesh filter (kit)	●	●	●	●	●	●	●
733 - Additional water pump	-	-	-	-	-	-	-
764 - Water tank	●	●	●	●	-	-	-
765 - Pipes water tank (kit)	●	●	●	●	-	-	-
117 - Low water temperature set	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●
920 - Remote control kit	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	-	-	-	-	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA SMART

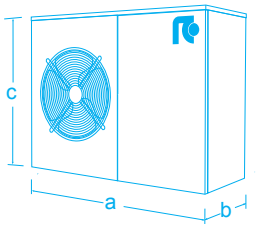
	SMART		M5	M6	M7	M9	M11	T6	T7	T9	T11
STANDARD	**Cooling capacity (1)**	**kW**	**4,9**	**5,6**	**6,8**	**8,7**	**10,3**	**5,6**	**6,9**	**9,1**	**11,5**
	Unit power input	kW	2,1	2,1	2,6	3,3	4,0	2,1	2,6	3,3	4,4
	Evaporator water flow rate	m³/h	0,9	1,0	1,2	1,5	1,8	1,0	1,2	1,6	2,0
	Evaporator pressure drop	kPa	22	22	31	36	27	22	31	35	31
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1	1
	Axial fans AC	n.	1	1	1	1	2	1	1	1	2
	Total air flow	m³/h	2400	3500	3500	4200	6800	3500	3500	4200	6800
	Air circuits	n.	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	1,4	1,7	2,7	2,4	2,4	1,7	2,7	2,4	2,4
	Gas circuits	n.	1	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	17,9	17,9	20,9	24,9	32,9	7,4	7,9	9,9	12,9
	Unit starting current (LRA)	A	59,0	62,0	83,0	98,0	132,0	33,0	36,0	49,0	66,0
	EER (1)	kW/kW	2,34	2,63	2,65	2,63	2,55	2,64	2,67	2,75	2,59
	ESEER		2,87	3,36	3,38	3,25	3,19	3,38	3,40	3,40	3,28
	Sound power level [Lw] (2)	dB(A)	64,0	68,9	69,5	69,5	72,8	68,9	69,5	69,5	72,8
	Average sound pressure level [Lpm] (3)	dB(A)	50,1	55,1	55,1	55,1	58,0	55,1	55,1	55,1	58,0
	Net weight	kg	80	85	100	105	125	85	100	105	125
	Hydraulic connections										
	Evaporator IN/OUT – ISO 228/1 – G	Ø	3/4"	3/4"	3/4"	3/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"	1 1/4"
	Pumping group										
	3-speed water pump	kW	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22	0,22
	Single speed water pump	kW	--	--	--	--	--	--	--	--	--
OPT	Additional 3-speed water pump	kW	--	--	--	--	0,22	--	--	--	0,22
	Water tank - volume	l	30	30	30	30	30	30	30	30	30

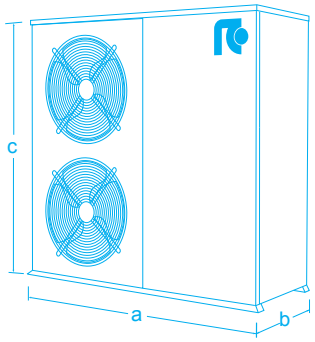
	SMART		T13	T15	T19	T22	T26	T33	T35	T40	T49
STANDARD	**Cooling capacity (1)**	**kW**	**13,3**	**15,4**	**18,2**	**20,6**	**29,2**	**31,0**	**32,5**	**37,2**	**46,2**
	Unit power input	kW	4,8	5,8	7,2	8,5	8,8	12,4	11,7	14,2	18,0
	Evaporator water flow rate	m³/h	2,3	2,6	3,1	3,5	5,0	5,3	5,6	6,4	7,9
	Evaporator pressure drop	kPa	41	34	40	40	45	43	37	37	39
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1	1
	Axial fans AC	n.	2	2	2	2	3	3	2	2	2
	Total air flow	m³/h	6800	6400	7000	7000	10500	10500	14000	16000	19000
	Air circuits	n.	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	3,3	3,8	4,2	4,8	5,9	6,0	6,9	7,2	7,9
	Gas circuits	n.	1	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	14,7	17,9	21,8	26,8	28,7	33,7	36,4	43,4	50,4
	Unit starting current (LRA)	A	66,0	76,0	97,0	113,0	120,9	142,9	145,6	179,6	230,6
	EER (1)	kW/kW	2,76	2,67	2,52	2,43	3,33	2,51	2,77	2,62	2,56
	ESEER		3,37	3,31	3,11	3,03	4,10	3,15	3,42	3,19	3,16
	Sound power level [Lw] (2)	dB(A)	72,8	73,3	78,5	78,6	77,5	77,5	80,4	81,3	85,5
	Average sound pressure level [Lpm] (3)	dB(A)	58,0	58,2	63,0	63,1	62,1	62,1	64,3	65,1	69,1
	Net weight	kg	145	155	245	250	320	325	335	340	420
	Hydraulic connections										
	Evaporator IN/OUT – ISO 228/1 – G	Ø	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"
	Pumping group										
	3-speed water pump	kW	0,22	0,22	--	--	--	--	--	--	--
	Single speed water pump	kW	--	--	0,55	0,55	0,55	0,55	0,55	0,55	0,75
OPT	Additional 3-speed water pump	kW	0,22	0,22	--	--	--	--	--	--	--
	Water tank - volume	l	30	30	60	60	60	60	--	--	--

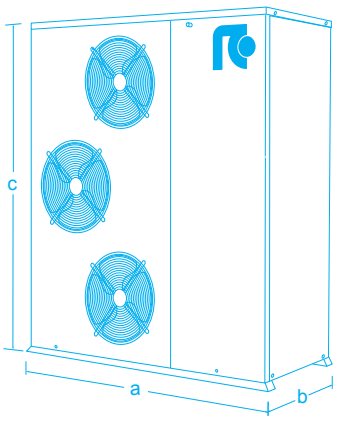
1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.

DIMENSIONS (mm)

SMART		M5	M6	M7	M9	M11	T6	T7	T9	T11	T13	T15	T19	T22	T26	T33	T35	T40	T49
a	mm	900	900	900	900	900	900	900	900	900	900	900	1450	1450	1450	1450	1508	1508	1758
b	mm	370	370	370	370	370	370	370	370	370	370	420	550	550	550	550	613	613	613
c	mm	640	640	940	940	1240	640	940	940	1240	1240	1390	1200	1200	1700	1700	1700	1700	1700







SMART PF: Air cooled liquid chillers
for indoor installation, equipped with scroll compressor and plug fan
Cooling Capacity: **12,6 ÷ 36,6 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

smart pf

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES
- Air cooled liquid chiller.
- 9 models available, for a wide selection opportunity.
- Average step of 3kW.
- EER up to 2,65.
- ESEER up to 3,25.
- Scroll compressors.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchangers.
- Plug fan EC.
- Single air circuit.
- Suitable for indoor installation.

MAIN BENEFITS
- Availability of kit for the reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Plug fan EC for an high efficiency.
- Easily of maintenance.
- Eurovent Certification.

FANS WITH BRUSHLESS TYPE EC MOTOR
The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise.

INDOOR INSTALLATION
The machines are designed for indoor installation and ducting for air suction and discharge.
For outdoor installation the use of the dedicated optional kit is mandatory.
The machine must be installed under a cover or anyway protected against atmospherics agent.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: -8÷18°C
Ambient temperature: -10÷46°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
- Anticondensate insulation made of neoprene.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL
- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops.
- Frame in galvanized steel.

FANS SECTION
- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

REFRIGERANT CIRCUIT
- Thermostatic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Safety valve on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- R410A refrigerant charge.

HYDRAULIC ASSEMBLY
- Pumping group with 1 pump, 2 poles electric motor.
- Expansion tank.
- Safety valve.
- Manual filling assembly.
- Pressure gauge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:
- Main switch with door lock safety from model T19 included.
- Contactors for compressor..
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 230/1/50 for M models
- Power supply: 400/3/50+N for T models

CONTROL SYSTEM
- Microprocessor control. The system includes:
  - Display for the visualization of the alarm codes, set values and temperature values.
  - Dynamic set point.
  - Compressor running hour meter.
  - Contact for general alarm remotization.
  - “Low Temperature” set for operation with chilled water production up to -8°C.
  - Menu with protection password.

OPTIONAL ACCESSORIES

SMART PF SIZE	T 13 P1 C0	T 15 P1 C0	T 18 P1 C0	T 22 P1 C1	T 24 P1 C1	T 28 P1 C1	T 32 P1 C1	T 36 P1 C1	T 42 P1 C1
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●
920 - Remote control kit	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

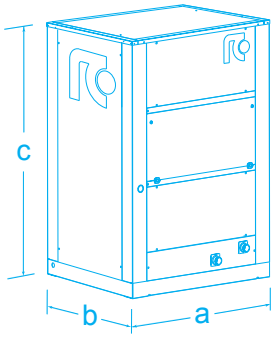
TECHNICAL DATA SMART PF

	SMART PF SIZE		T 13 P1 C0	T 15 P1 C0	T 18 P1 C0	T 22 P1 C1	T 24 P1 C1	T 28 P1 C1	T 32 P1 C1	T 36 P1 C1	T 42 P1 C1
STANDARD	**Cooling capacity (1)**	**kW**	**12,6**	**14,5**	**16,7**	**19,2**	**21,8**	**25,5**	**28,8**	**31,8**	**36,6**
	Unit power input	kW	5,0	6,0	6,9	7,2	8,4	10,2	11,4	13,1	15,9
	Evaporator water flow rate	m³/h	2,2	2,5	2,9	3,3	3,8	4,4	5,0	5,5	6,3
	Evaporator pressure drop	kPa	27	36	29	27	35	37	29	35	36
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1	1
	Centrifugal fans	n.	1	1	1	1	1	1	1	1	1
	Total air flow	m³/h	4000	4800	5500	6500	7000	8500	10000	11000	12000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	3,2	3,2	3,3	5,3	5,3	5,3	5,5	5,6	5,6
	Gas circuits	n.	1	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	13,4	16,6	16,6	20,3	25,3	26,3	29,9	35,9	38,9
	Unit starting current (LRA)	A	65,6	76,6	102,6	99,3	115,3	122,3	122,9	144,9	178,9
	EER (1)	kW/kW	2,53	2,43	2,41	2,65	2,58	2,51	2,52	2,43	2,30
	ESEER		3,16	3,02	3,01	3,25	3,18	3,13	3,18	3,01	2,79
	Sound power level [Lw] (2)	dB(A)	85,2	89,2	92,2	87,1	88,7	92,9	92,1	94,2	96,0
	Average sound pressure level [Lpm] (3)	dB(A)	69,5	73,4	76,4	70,6	72,1	76,3	75,6	77,6	79,4
	Net weight	kg	249,8	249,8	264,8	361,5	361,5	371,5	381,5	386,5	391,5
	Hydraulic connections										
	Evaporator IN/OUT - ISO 7/1 – R	Ø	1"	1"	1"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	Pumping group										
	1 pump - 2 poles electric motor	kW	0,5	0,5	0,5	1,0	1,0	1,0	1,0	1,0	1,0
OPT	Partial heat recovery (4)										
	Heating capacity	**kW**	**4,6**	**5,3**	**6,1**	**7,0**	**8,0**	**9,4**	**10,6**	**11,7**	**13,4**
LNO KIT 100%	**Cooling capacity (1)**	**kW**	12,6	14,5	16,7	19,2	21,8	25,5	28,8	31,8	36,6
	Unit power input	kW	5,0	6,0	6,9	7,2	8,4	10,2	11,4	13,1	15,9
	Total air flow	m³/h	4000	4800	5500	6500	7000	8500	10000	11000	12000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,53	2,43	2,41	2,65	2,58	2,51	2,52	2,43	2,30
	Sound power level [Lw] (2)	dB(A)	85,2	89,1	92,1	87,1	88,7	92,8	92,1	94,1	96,0
	Average sound pressure level [Lpm] (3)	dB(A)	69,4	73,4	76,4	70,5	72,1	76,2	75,5	77,5	79,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	12,2	14,1	16,2	18,7	21,2	24,7	27,9	30,9	35,4
	Unit power input	kW	5,2	6,2	7,2	7,5	8,8	10,6	11,8	13,5	16,5
	Total air flow	m³/h	3400	4080	4675	5525	5950	7225	8500	9350	10200
	External static pressure	Pa	36	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,35	2,27	2,24	2,48	2,42	2,34	2,36	2,29	2,14
	Sound power level [Lw] (2)	dB(A)	81,3	85,3	88,3	83,6	85,2	89,3	88,6	90,6	92,5
	Average sound pressure level [Lpm] (3)	dB(A)	65,6	69,5	72,5	67,0	68,6	72,7	72,0	74,0	75,9
LNO KIT 70%	**Cooling capacity (1)**	**kW**	11,6	13,5	15,5	17,9	20,3	23,6	26,7	29,5	33,8
	Unit power input	kW	5,5	6,6	7,7	7,9	9,3	11,1	12,5	14,2	17,3
	Total air flow		2800	3360	3850	4550	4900	5950	7000	7700	8400
	External static pressure	Pa	25	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,12	2,06	2,02	2,26	2,19	2,12	2,13	2,08	1,95
	Sound power level [Lw] (2)	dB(A)	76,8	80,7	83,6	79,4	81,0	85,1	84,4	86,4	88,3
	Average sound pressure level [Lpm] (3)	dB(A)	61,0	64,9	67,9	62,8	64,4	68,5	67,8	69,8	71,7

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE C	a	b	c
C0	1108	760	1460
C1	1250	890	1950



UNICO: Packaged air cooled liquid chillers
for outdoor installation, equipped with scroll compressors and axial fans
Cooling Capacity: **20 ÷ 260 kW**

unico

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES

- Air cooled liquid chiller.
- 29 models available, for a wide selection opportunity.
- Average step of 10kW.
- EER up to 3,22.
- ESEER up to 4,18.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- EC Axial fans.
- Single air circuit.
- Suitable for outdoor installation.

MAIN BENEFITS

- Units with two scroll compressors for each refrigerant circuit to reach a high efficiency.
- Units with one or two refrigerant circuits.
- High EER and ESEER.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of total or partial heat recovery system.
- EC Axial fans for a high efficiency.
- Easily of maintenance.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

FANS WITH BRUSHLESS TYPE EC MOTOR

The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL
- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Sub-cooling circuit to allow a significant increase in cooling capacity.
- Frame in galvanized steel.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Thermostatic expansion valve.
- Electronic expansion valve for models 197 P2 S and 230 P3 S. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure. The electronic expansion valve exclude the installation of the electromagnetic valve on liquid line.
- Sight glass.
- Electromagnetic valve on liquid line. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 - R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

UNICO	21 P1	24 P1	28 P1	30 P1	34 P1	40 P1	50 P1	52 P2	52 P2	58 P2	58 P2
	S	S	S	S	S	S	S	S	D	S	D
SIZE	C1	C1	C1	C1	C2	C2	C2	C2	C2	C3	C3
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	-	-	-	-	-	-	-	-	-	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
Silencing plenum on condensing air discharge	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

UNICO	62 P1	65 P2	65 P2	76 P2	76 P2	98 P2	98 P2	124 P2	124 P2	158 P2	158 P2
	S	S	D	S	D	S	D	S	D	S	D
SIZE	C3	C3	C3	C3	C3	C4	C4	C4	C4	C4	C4
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	●	●	●	●	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
Silencing plenum on condensing air discharge	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

UNICO SIZE	180 P2 S C5	180 P2 D C5	197 P2 S C5	197 P2 D C5	230 P3 S C5	240 P4 D C5	260 P4 D C5
739 - Pumping group (1 pump)	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●
Silencing plenum on condensing air discharge	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA UNICO

	UNICO		21 P1 S	24 P1 S	28 P1 S	30 P1 S	34 P1 S	40 P1 S	50 P1 S	52 P2 S
	SIZE		C1	C1	C1	C1	C2	C2	C2	C2
STANDARD	**Cooling capacity (1)**	**kW**	**19,8**	**22,4**	**26,5**	**29,2**	**34,0**	**39,0**	**49,6**	**50,5**
	Unit power input	kW	6,7	7,8	9,2	10,7	11,0	13,5	17,9	18,7
	Evaporator water flow rate	m³/h	3,4	3,9	4,6	5,0	5,8	6,7	8,5	8,7
	Evaporator pressure drop	kPa	28	36	38	29	38	39	35	36
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	2
	Capacity steps	n.	1	1	1	1	1	1	1	2
	Axial fans EC	n.	1	1	1	1	2	2	2	2
	Total air flow	m³/h	8500	8500	11000	11000	13000	15000	20500	20500
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,3	5,3	5,3	5,5	7,7	7,7	9,0	12,9
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	17,6	22,6	23,6	26,6	34,2	37,2	43,3	47,3
	Unit starting current (LRA)	A	96,6	112,6	119,6	119,6	143,2	177,2	228,3	143,3
	EER - Eurovent standard (1)	kW/kW	2,95	2,86	2,87	2,74	3,09	2,88	2,77	2,70
	ESEER		3,59	3,50	3,56	3,45	3,80	3,50	3,38	3,91
	Sound power level [Lw] (2)	dB(A)	81,1	81,5	82,2	81,4	82,2	84,9	89,0	86,1
	Average sound pressure level [LPm] (3)	dB(A)	64,6	64,9	65,6	64,8	64,9	67,7	71,8	68,9
	Net weight	kg	350	350	360	360	520	520	610	590
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"
	Evaporator IN/OUT - OD (4)	Ø mm	--	--	--	--	--	--	--	--
OPTIONAL	**Partial heat recovery-Heating Capacity (5)**	**kW**	**7,3**	**8,2**	**9,7**	**10,7**	**12,5**	**14,3**	**18,2**	**18,5**
	Total heat recovery-Heating capacity (6)	**kW**	**27,1**	**31,4**	**36,8**	**39,9**	**51,6**	**52,0**	**66,3**	**68,1**
	Pumping group									
	1 pump - 2 poles electric motor	kW	0,75	0,75	0,75	0,75	1,5	1,5	1,5	1,5
	2 pump - 2 poles electric motor	kW	--	--	--	--	--	--	--	--
	1 pump - 4 poles electric motor	kW	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55
	2 pump - 4 poles electric motor	kW	--	--	--	--	--	--	--	--
	Water tank - volume	l	130	130	130	130	210	210	210	210
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**19,8**	**22,4**	**26,5**	**29,2**	**34,0**	**39,0**	**49,6**	**50,5**
	Unit power input	kW	6,7	7,8	9,2	10,7	11,0	13,5	17,9	18,7
	Total air flow	m³/h	8500	8500	11000	11000	13000	15000	20500	20500
	EER - Eurovent standard (1)	kW/kW	2,95	2,86	2,87	2,74	3,09	2,88	2,77	2,70
	Sound power level [Lw] (2)	dB(A)	80,7	80,8	81,6	80,7	81,2	84,3	87,4	85,8
	Average sound pressure level [LPm] (3)	dB(A)	64,1	64,2	65,0	64,1	64,0	67,1	70,2	68,6
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**19,4**	**21,9**	**25,9**	**28,4**	**33,2**	**38,1**	**48,6**	**49,3**
	Unit power input	kW	6,7	7,9	9,2	10,8	11,2	13,6	17,9	18,7
	Total air flow	m³/h	7225	7225	9350	9350	11050	12750	17425	17425
	EER - Eurovent standard (1)	kW/kW	2,89	2,77	2,81	2,63	2,96	2,80	2,72	2,63
	Sound power level [Lw] (2)	dB(A)	77,0	77,2	78,0	77,2	77,8	80,7	84,4	82,1
	Average sound pressure level [LPm] (3)	dB(A)	60,4	60,7	61,4	60,6	60,6	63,5	67,2	64,9
ELN KIT	**Cooling capacity (1)**	**kW**	**18,9**	**21,1**	**25,0**	**27,3**	**32,0**	**36,8**	**47,1**	**47,5**
	Unit power input	kW	6,9	8,1	9,4	11,1	11,6	14,0	18,2	19,2
	Total air flow		5950	5950	7700	7700	9100	10500	14350	14350
	EER - Eurovent standard (1)	kW/kW	2,75	2,59	2,65	2,47	2,77	2,63	2,59	2,47
	Sound power level [Lw] (2)	dB(A)	73,1	73,6	74,2	73,5	74,4	76,9	81,7	78,0
	Average sound pressure level [LPm] (3)	dB(A)	56,5	57,0	57,7	57,0	57,2	59,7	64,5	60,7

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA UNICO

	UNICO		52 P2 D	58 P2 S	58 P2 D	62 P1 S	65 P2 S	65 P2 D	76 P2 S	76 P2 D
	SIZE		C2	C3	C3	C3	C3	C3	C3	C3
STANDARD	**Cooling capacity (1)**	**kW**	**50,5**	**57,7**	**60,8**	**61,2**	**64,8**	**64,7**	**75,4**	**75,0**
	Unit power input	kW	18,3	20,2	18,9	21,7	22,8	22,8	27,8	27,7
	Evaporator water flow rate	m³/h	8,7	9,9	10,5	10,5	11,1	11,1	13,0	12,9
	Evaporator pressure drop	kPa	21	36	19	30	35	21	37	23
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	1	2	2	2	2
	Capacity steps	n.	2	2	2	1	2	2	2	2
	Axial fans EC	n.	2	3	3	3	3	3	3	3
	Total air flow	m³/h	20500	22000	22000	23000	24000	24000	30000	30000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	9,3	9,0	12,7	12,4	13,1	12,7	13,6	13,5
	Gas circuits	n.	2	1	2	1	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	47,3	54,7	54,7	53,2	66,7	66,7	72,9	72,9
	Unit starting current (LRA)	A	143,3	147,7	147,7	276,7	175,7	175,7	212,9	212,9
	EER (1)	kW/kW	2,76	2,86	3,22	2,82	2,84	2,84	2,71	2,71
	ESEER		3,57	4,18	4,16	3,47	4,08	3,65	3,78	3,40
	Sound power level [Lw] (2)	dB(A)	86,1	85,9	85,9	91,6	85,7	85,7	86,1	86,1
	Average sound pressure level [L_{Pm}] (3)	dB(A)	68,9	68,0	68,0	73,8	67,8	67,8	68,2	68,2
	Net weight	kg	590	810	810	850	820	820	840	840
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	--	76,1	76,1	76,1	76,1	76,1	76,1	76,1
OPTIONAL	**Partial heat recovery-Heating Capacity (5)**	**kW**	**18,5**	**21,2**	**22,3**	**22,4**	**23,8**	**23,7**	**27,7**	**27,5**
	Total heat recovery-Heating capacity (6)	**kW**	**68,5**	**77,0**	**77,9**	**82,4**	**101,0**	**101,0**	**102,0**	**102,0**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,5	2,2	2,2	2,2	2,2	2,2	2,2	2,2
	2 pump - 2 poles electric motor	kW	--	2,2	2,2	2,2	2,2	2,2	2,2	2,2
	1 pump - 4 poles electric motor	kW	0,55	1,5	1,5	1,5	1,5	1,5	1,5	1,5
	2 pump - 4 poles electric motor	kW	--	1,5	1,5	1,5	1,5	1,5	1,5	1,5
	Water tank - volume	l	210	360	360	360	360	360	360	360
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**50,5**	**57,7**	**60,8**	**61,2**	**64,8**	**64,7**	**75,4**	**75,0**
	Unit power input	kW	18,3	20,2	18,9	21,7	22,8	22,8	27,8	27,7
	Total air flow	m³/h	20500	22000	22000	23000	24000	24000	30000	30000
	EER (1)	kW/kW	2,76	2,86	3,22	2,82	2,84	2,84	2,71	2,71
	Sound power level [Lw] (2)	dB(A)	85,8	85,5	85,5	89,4	85,4	85,4	85,7	85,7
	Average sound pressure level [L_{Pm}] (3)	dB(A)	68,6	67,6	67,6	71,6	67,5	67,5	67,8	67,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**49,2**	**56,3**	**59,3**	**59,7**	**63,1**	**62,9**	**73,7**	**73,3**
	Unit power input	kW	18,4	20,5	19,1	21,9	23,1	23,0	27,8	27,6
	Total air flow	m³/h	17425	18700	18700	19550	20400	20400	25500	25500
	EER (1)	kW/kW	2,68	2,75	3,10	2,73	2,73	2,73	2,65	2,66
	Sound power level [Lw] (2)	dB(A)	82,1	81,8	81,8	86,8	81,7	81,7	82,0	82,0
	Average sound pressure level [L_{Pm}] (3)	dB(A)	64,9	63,9	63,9	68,9	63,8	63,8	64,1	64,1
ELN KIT	**Cooling capacity (1)**	**kW**	**47,4**	**54,1**	**57,0**	**57,6**	**60,6**	**60,4**	**71,1**	**70,8**
	Unit power input	kW	18,8	21,3	19,9	22,5	23,9	23,8	28,2	28,1
	Total air flow		14350	15400	15400	16100	16800	16800	21000	21000
	EER (1)	kW/kW	2,52	2,54	2,86	2,56	2,54	2,54	2,52	2,52
	Sound power level [Lw] (2)	dB(A)	78,0	77,8	77,8	84,6	77,6	77,6	77,9	77,9
	Average sound pressure level [L_{Pm}] (3)	dB(A)	60,7	59,9	59,9	66,8	59,7	59,7	60,0	60,0

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA UNICO

	UNICO		98 P2 S	98 P2 D	124 P2 S	124 P2 D	158 P2 S	158 P2 D	180 P2 S	180 P2 D
	SIZE		C4	C4	C4	C4	C4	C4	C5	C5
STANDARD	**Cooling capacity (1)**	**kW**	**97,3**	**96,1**	**123,0**	**120,0**	**155,0**	**157,0**	**177,0**	**178,0**
	Unit power input	kW	34,6	34,3	44,4	44,0	60,3	60,4	64,6	64,7
	Evaporator water flow rate	m³/h	16,7	16,5	21,1	20,5	26,6	27,0	30,3	30,6
	Evaporator pressure drop	kPa	36	27	38	31	32	28	34	36
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Axial fans EC	n.	4	4	4	4	4	4	5	5
	Total air flow	m³/h	40000	40000	46000	46000	55800	55800	60000	60000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	18,9	19,3	23,5	24,1	24,6	24,9	47,4	47,8
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	86,5	86,5	108,4	108,4	142,2	142,2	161,7	161,7
	Unit starting current (LRA)	A	271,5	271,5	331,9	331,9	386,8	386,8	453,7	453,7
	EER (1)	kW/kW	2,81	2,80	2,77	2,73	2,57	2,60	2,74	2,75
	ESEER		3,93	3,52	3,86	3,42	3,62	3,27	3,92	3,47
	Sound power level [Lw] (2)	dB(A)	84,2	84,2	88,1	88,1	90,6	90,6	88,6	88,6
	Average sound pressure level [LPm] (3)	dB(A)	65,6	65,6	69,5	69,5	72,0	72,0	69,3	69,3
	Net weight	kg	1310	1310	1380	1380	1410	1410	1860	1860
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	**Partial heat recovery-Heating Capacity (5)**	**kW**	**35,7**	**35,3**	**45,0**	**43,9**	**56,9**	**57,7**	**64,8**	**65,3**
	Total heat recovery-Heating capacity (6)	**kW**	**130,0**	**129,0**	**165,0**	**162,0**	**213,0**	**217,0**	**241,0**	**243,0**
	Pumping group									
	1 pump - 2 poles electric motor	kW	2,2	2,2	2,2	2,2	2,2	2,2	4,0	4,0
	2 pump - 2 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	5,5	5,5
	1 pump - 4 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	4,0	4,0
	2 pump - 4 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	4,0	4,0
	Water tank - volume	l	520	520	520	520	520	520	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**97,3**	**96,1**	**123,0**	**120,0**	**155,0**	**157,0**	**177,0**	**178,0**
	Unit power input	kW	34,6	34,3	44,4	44,0	60,3	60,4	64,6	64,7
	Total air flow	m³/h	40000	40000	46000	46000	55800	55800	60000	60000
	EER (1)	kW/kW	2,81	2,80	2,77	2,73	2,57	2,60	2,74	2,75
	Sound power level [Lw] (2)	dB(A)	83,2	83,2	87,3	87,3	90,3	90,3	88,0	88,0
	Average sound pressure level [LPm] (3)	dB(A)	64,6	64,6	68,7	68,7	71,7	71,7	68,7	68,7
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**95,2**	**94,0**	**120,0**	**117,0**	**151,0**	**153,0**	**172,0**	**173,0**
	Unit power input	kW	34,7	34,6	44,3	44,0	59,7	59,8	65,2	65,3
	Total air flow	m³/h	34000	34000	39100	39100	47430	47430	51000	51000
	EER (1)	kW/kW	2,74	2,72	2,71	2,66	2,53	2,56	2,64	2,65
	Sound power level [Lw] (2)	dB(A)	79,9	79,9	83,8	83,8	86,6	86,6	84,4	84,4
	Average sound pressure level [LPm] (3)	dB(A)	61,3	61,3	65,2	65,2	68,0	68,0	65,1	65,1
ELN KIT	**Cooling capacity (1)**	**kW**	**92,1**	**91,2**	**116,0**	**113,0**	**145,0**	**147,0**	**165,0**	**166,0**
	Unit power input	kW	35,6	35,3	45,5	45,0	60,9	61,0	67,3	67,5
	Total air flow		28000	28000	32200	32200	39060	39060	42000	42000
	EER (1)	kW/kW	2,59	2,58	2,55	2,51	2,38	2,41	2,45	2,46
	Sound power level [Lw] (2)	dB(A)	76,6	76,6	80,3	80,3	82,4	82,4	80,7	80,7
	Average sound pressure level [LPm] (3)	dB(A)	58,0	58,0	61,7	61,7	63,8	63,8	61,4	61,4

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

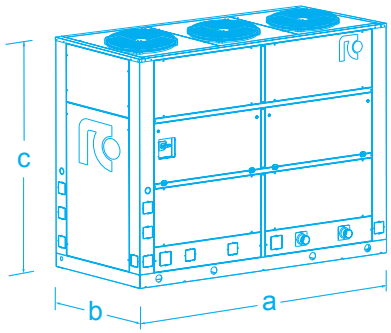
TECHNICAL DATA UNICO

	UNICO		197 P2 S	197 P2 D	230 P3 S	240 P4 D	260 P4 D
	SIZE		C5	C5	C5	C5	C5
STANDARD	**Cooling capacity (1)**	**kW**	**194,0**	**197,0**	**227,0**	**234,0**	**260,0**
	Unit power input	kW	74,0	74,1	89,0	94,7	111,1
	Evaporator water flow rate	m³/h	33,4	33,9	39,0	40,3	44,7
	Evaporator pressure drop	kPa	41	35	41	40	36
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	3	4	4
	Capacity steps	n.	2	2	3	4	4
	Axial fans EC	n.	5	5	5	5	5
	Total air flow	m³/h	66000	66000	69000	69000	69000
	Air circuits	n.	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	49,3	49,6	49,9	60,8	60,6
	Gas circuits	n.	1	2	1	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	178,3	178,3	210,5	208,3	309,1
	Unit starting current (LRA)	A	470,3	470,3	455,1	431,8	601,1
	EER (1)	kW/kW	2,62	2,66	2,55	2,47	2,34
	ESEER		3,74	3,35	3,97	3,82	3,80
	Sound power level [Lw] (2)	dB(A)	90,4	90,4	91,2	92,9	93,0
	Average sound pressure level [LPm] (3)	dB(A)	71,1	71,1	71,9	73,6	73,8
	Net weight	kg	1870	1870	2020	2130	2170
	Hydraulic connections						
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9
OPTIONAL	**Partial heat recovery-Heating Capacity (5)**	**kW**	**71,2**	**72,3**	**83,2**	**85,9**	**95,3**
	Total heat recovery-Heating capacity (6)	**kW**	**268,0**	**273,0**	**316,0**	**331,0**	**379,0**
	Pumping group						
	1 pump - 2 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	2 pump - 2 poles electric motor	kW	5,5	5,5	5,5	5,5	5,5
	1 pump - 4 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	2 pump - 4 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	Water tank - volume	l	720	720	720	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**194,0**	**197,0**	**227,0**	**234,0**	**260,0**
	Unit power input	kW	74,0	74,1	89,0	94,7	111,1
	Total air flow	m³/h	66000	66000	69000	69000	69000
	EER (1)	kW/kW	2,62	2,66	2,55	2,47	2,34
	Sound power level [Lw] (2)	dB(A)	90,0	90,0	90,8	92,5	92,6
	Average sound pressure level [LPm] (3)	dB(A)	70,7	70,7	71,6	73,3	73,3
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**189,0**	**192,0**	**220,0**	**227,0**	**250,0**
	Unit power input	kW	74,4	74,4	89,8	95,0	113,1
	Total air flow	m³/h	56100	56100	58650	58650	58650
	EER (1)	kW/kW	2,54	2,58	2,45	2,39	2,21
	Sound power level [Lw] (2)	dB(A)	86,3	86,3	87,1	88,8	88,9
	Average sound pressure level [LPm] (3)	dB(A)	67,0	67,0	67,9	69,6	69,7
ELN KIT	**Cooling capacity (1)**	**kW**	**181,0**	**184,0**	**210,0**	**216,0**	**235,0**
	Unit power input	kW	76,7	77,0	92,9	98,6	118,7
	Total air flow		46200	46200	48300	48300	48300
	EER (1)	kW/kW	2,36	2,39	2,26	2,19	1,98
	Sound power level [Lw] (2)	dB(A)	82,3	82,3	83,0	84,7	85,0
	Average sound pressure level [LPm] (3)	dB(A)	63,0	63,0	63,7	65,4	65,7

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE C	a	b	c
C1	1250	890	2010
C2	1800	1040	2060
C3	2600	1200	2060
C4	3700	1260	2050
C5	4950	1260	2090



UNICO PF: Packaged air cooled liquid chillers
for indoor installation, equipped with scroll compressors and plug fan
Cooling Capacity: **19,6 ÷ 264 kW**

unico pf

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES

- Air cooled liquid chiller.
- 29 models available, for a wide selection opportunity.
- Average step of 10kW.
- EER up to 2,73.
- ESEER up to 3,84.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- Plug fan EC.
- Single air circuit.
- Suitable for indoor installation.

MAIN BENEFITS

- Units with two scroll compressors for each refrigerant circuit to reach a high efficiency.
- Units with one or two refrigerant circuits.
- High ESEER.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of total or partial heat recovery system.
- Plug fan EC for a high efficiency.
- Easily of maintenance.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

FANS WITH BRUSHLESS TYPE EC MOTOR

The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise

INDOOR INSTALLATION

The machines are designed for indoor installation and ducting for air suction and discharge.
For outdoor installation the use of the dedicated optional kit is mandatory.
The machine must be installed under a cover or anyway protected against atmospherics agent.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
- With single refrigerant circuit for S version machines.
- With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL
- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Sub-cooling circuit to allow a significant increase in cooling capacity.
- Frame in galvanized steel.

FANS SECTION
- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Thermostatic expansion valve.
- Electronic expansion valve for models 220 P2 S and 250 P3 S The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure. The electronic expansion valve exclude the installation of the electromagnetic valve on liquid line.
- Sight glass.
- Electromagnetic valve on liquid line. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:
- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

UNICO PF	22 P1 S	24 P1 S	28 P1 S	32 P1 S	36 P1 S	42 P1 S	53 P1 S	67 P1 S	55 P2 S	55 P2 D	62 P2 S
SIZE	C1	C1	C1	C1	C1	C1	C2	C2	C2	C2	C2
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

UNICO PF	62 P2 D	71 P2 S	71 P2 D	85 P2 S	85 P2 D	107 P2 S	107 P2 D	135 P2 S	135 P2 D	170 P2 S	170 P2 D
SIZE	C2	C2	C2	C3	C3	C3	C3	C4	C4	C4	C4
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	●	●	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	-	-	-	●	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

UNICO PF	195 P2 S	195 P2 D	220 P2 S	220 P2 D	250 P3 S	265 P4 D	290 P4 D
SIZE	C4	C4	C5	C5	C5	C5	C5
739 - Pumping group (1 pump)	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA UNICO PF

	UNICO PF		22 P1	24 P1	28 P1	32 P1	36 P1	42 P1	53 P1	67 P1
			S	S	S	S	S	S	S	S
	SIZE		C1	C1	C1	C1	C1	C1	C2	C2
STANDARD	**Cooling capacity (1)**	**kW**	**19,6**	**22,3**	**26,0**	**29,4**	**32,5**	**37,3**	**48,1**	**60,3**
	Unit power input	kW	7,2	8,4	10,2	11,4	13,0	15,9	19,2	24,9
	Evaporator water flow rate	m³/h	3,4	3,8	4,5	5,1	5,6	6,4	8,3	10,4
	Evaporator pressure drop	kPa	27	35	37	29	36	36	33	29
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1
	Centrifugal fans EC	n.	1	1	1	1	1	1	2	2
	Total air flow	m³/h	6500	7000	8500	10000	11000	12000	16000	21000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,3	5,3	5,3	5,5	5,6	5,6	9,0	9,5
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	20,3	25,3	26,3	29,9	35,9	38,9	48,6	56,9
	Unit starting current (LRA)	A	99,3	115,3	122,3	122,9	144,9	178,9	233,6	280,4
	EER (1)	kW/kW	2,73	2,65	2,56	2,57	2,50	2,35	2,51	2,42
	ESEER		3,34	3,27	3,19	3,23	3,09	2,85	3,09	3,75
	Sound power level [Lw] (2)	dB(A)	87,1	88,7	92,9	92,1	94,2	96	94,8	96,7
	Average sound pressure level [Lpm] (3)	dB(A)	70,6	72,1	76,3	75,6	77,6	79,4	77,6	79,5
	Net weight	kg	370	370	380	390	390	400	630	670
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	Evaporator IN/OUT - OD (4)	Ø mm	--	--	--	--	--	--	--	--
OPTIONAL	**Partial heat recovery-Heating capacity (5)**	**kW**	**7,2**	**8,2**	**9,5**	**10,8**	**11,9**	**13,7**	**17,6**	**22,1**
	Total heat recovery-Heating capacity (6)	**kW**	**26,6**	**30,5**	**35,8**	**40,6**	**45,6**	**53,3**	**66,3**	**84,0**
	Pumping group									
	1 pump - 2 poles electric motor	kW	0,75	0,75	0,75	0,75	0,75	0,75	1,5	1,5
	2 pump - 2 poles electric motor	kW	--	--	--	--	--	--	--	--
	1 pump - 4 poles electric motor	kW	0,37	0,37	0,37	0,37	0,37	0,37	0,55	0,55
	2 pump - 4 poles electric motor	kW	--	--	--	--	--	--	--	--
	Water tank - volume	l	130	130	130	130	130	130	210	210
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**19,6**	**22,3**	**26,0**	**29,4**	**32,5**	**37,3**	**48,1**	**60,3**
	Unit power input	kW	7,2	8,4	10,2	11,4	13,0	15,9	19,2	24,9
	Total air flow	m³/h	6500	7000	8500	10000	11000	12000	16000	21000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,73	2,65	2,56	2,57	2,50	2,35	2,51	2,42
	Sound power level [Lw] (2)	dB(A)	87,1	88,7	92,8	92,1	94,1	96,0	94,6	96,4
	Average sound pressure level [Lpm] (3)	dB(A)	70,5	72,1	76,2	75,5	77,5	79,4	77,4	79,2
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**19,0**	**21,6**	**25,2**	**28,5**	**31,5**	**36,2**	**46,7**	**58,7**
	Unit power input	kW	7,3	8,5	10,1	11,4	12,9	15,6	19,1	25,3
	Total air flow	m³/h	5525	5950	7225	8500	9350	10200	13600	17850
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,62	2,55	2,50	2,50	2,45	2,32	2,45	2,32
	Sound power level [Lw] (2)	dB(A)	83,6	85,2	89,3	88,6	90,6	92,5	91,2	93,0
	Average sound pressure level [Lpm] (3)	dB(A)	67,0	68,6	72,7	72,0	74,0	75,9	74,0	75,8
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**18,3**	**20,7**	**24,1**	**27,3**	**30,1**	**34,5**	**44,9**	**56,4**
	Unit power input	kW	7,5	8,8	10,4	11,8	13,1	15,8	19,6	25,8
	Total air flow		4550	4900	5950	7000	7700	8400	11200	14700
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,43	2,35	2,32	2,32	2,29	2,18	2,29	2,19
	Sound power level [Lw] (2)	dB(A)	80,4	82,0	86,1	85,4	87,4	89,3	88,2	90,1
	Average sound pressure level [Lpm] (3)	dB(A)	63,8	65,4	69,5	68,8	70,8	72,7	71,0	72,9

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA UNICO PF

	UNICO PF		55 P2 S	55 P2 D	62 P2 S	62 P2 D	71 P2 S	71 P2 D	85 P2 S	85 P2 D
	SIZE		C2	C2	C2	C2	C2	C2	C3	C3
STANDARD	**Cooling capacity (1)**	**kW**	**50,7**	**50,8**	**57,0**	**56,9**	**59,1**	**63,4**	**75,6**	**75,2**
	Unit power input	kW	19,7	19,6	22,3	22,1	24,8	25,3	28,9	28,8
	Evaporator water flow rate	m³/h	8,7	8,7	9,8	9,8	10,2	10,9	13,0	12,9
	Evaporator pressure drop	kPa	36	21	35	18	35	20	37	23
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Centrifugal fans EC	n.	2	2	2	2	2	2	3	3
	Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	9,3	9,0	9,3	9,0	9,7	9,3	13,7	13,5
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	53,8	53,8	58,4	58,4	70,4	70,4	82,7	82,7
	Unit starting current (LRA)	A	149,8	149,8	151,4	151,4	179,4	179,4	222,7	222,7
	EER (1)	kW/kW	2,57	2,59	2,56	2,57	2,38	2,51	2,62	2,61
	ESEER		3,36	3,78	3,36	3,00	3,42	3,23	3,70	3,28
	Sound power level [Lw] (2)	dB(A)	93,1	93,1	86,8	86,8	89,2	89,2	93,9	93,9
	Average sound pressure level [Lpm] (3)	dB(A)	75,9	75,9	69,6	69,6	72	72	76	76
	Net weight	kg	630	630	690	700	700	710	890	890
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	--	--	--	--	--	--	76,1	76,1
OPTIONAL	**Partial heat recovery-Heating capacity (5)**	**kW**	**18,6**	**18,6**	**20,9**	**20,9**	**21,7**	**23,3**	**27,7**	**27,6**
	Total heat recovery-Heating capacity (6)	**kW**	**69,3**	**69,8**	**78,4**	**79,4**	**89,0**	**89,4**	**104,0**	**104,0**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,5	1,5	1,5	1,5	1,5	1,5	2,2	2,2
	2 pump - 2 poles electric motor	kW	--	--	--	--	--	--	2,2	2,2
	1 pump - 4 poles electric motor	kW	0,55	0,55	0,55	0,55	0,55	0,55	1,5	1,5
	2 pump - 4 poles electric motor	kW	--	--	--	--	--	--	1,5	1,5
	Water tank - volume	l	210	210	210	210	210	210	360	360
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**50,7**	**50,8**	**57,0**	**56,9**	**59,1**	**63,4**	**75,6**	**75,2**
	Unit power input	kW	19,7	19,6	22,3	22,1	24,8	25,3	28,9	28,8
	Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,57	2,59	2,56	2,57	2,38	2,51	2,62	2,61
	Sound power level [Lw] (2)	dB(A)	93,1	93,1	86,5	86,5	89,0	89,0	93,7	93,7
	Average sound pressure level [Lpm] (3)	dB(A)	75,9	75,9	69,3	69,3	71,8	71,8	75,8	75,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**49,3**	**49,4**	**55,4**	**55,3**	**57,4**	**61,5**	**73,6**	**73,2**
	Unit power input	kW	19,6	19,5	22,3	22,2	24,6	25,0	28,9	28,8
	Total air flow	m³/h	15300	15300	17425	17425	19550	19550	21675	21675
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,51	2,53	2,48	2,49	2,33	2,46	2,55	2,54
	Sound power level [Lw] (2)	dB(A)	89,6	89,6	83,1	83,1	85,5	85,5	90,3	90,3
	Average sound pressure level [Lpm] (3)	dB(A)	72,4	72,4	65,9	65,9	68,3	68,3	72,4	72,4
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**47,3**	**47,3**	**52,9**	**52,9**	**54,9**	**58,9**	**70,5**	**70,3**
	Unit power input	kW	20,3	20,1	22,9	22,9	25,1	25,5	29,5	29,5
	Total air flow		12600	12600	14350	14350	16100	16100	17850	17850
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,33	2,35	2,31	2,31	2,19	2,31	2,39	2,38
	Sound power level [Lw] (2)	dB(A)	86,4	86,4	80,2	80,2	82,5	82,5	87,2	87,2
	Average sound pressure level [Lpm] (3)	dB(A)	69,2	69,2	63,0	63,0	65,3	65,3	69,3	69,3

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA UNICO PF

	UNICO PF		107 P2 S	107 P2 D	135 P2 S	135 P2 D	170 P2 S	170 P2 D	195 P2 S	195 P2 D
	SIZE		C3	C3	C4	C4	C4	C4	C4	C4
STANDARD	**Cooling capacity (1)**	**kW**	**96,8**	**95,7**	**120,0**	**118,0**	**156,0**	**154,0**	**176,0**	**173,0**
	Unit power input	kW	38,6	38,3	46,7	46,6	61,9	61,6	71,8	72,4
	Evaporator water flow rate	m³/h	16,7	16,4	20,6	20,3	26,8	26,4	30,3	29,8
	Evaporator pressure drop	kPa	36	26	37	30	36	33	42	36
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Centrifugal fans EC	n.	3	3	4	4	4	4	4	4
	Total air flow	m³/h	32000	32000	40000	40000	52000	52000	54000	54000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	16,9	17,3	20,1	20,6	24,6	24,6	25,7	26,0
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	94,7	94,7	113,8	113,8	147,6	147,6	164,2	164,2
	Unit starting current (LRA)	A	279,7	279,7	337,3	337,3	392,2	392,2	456,2	456,2
	EER (1)	kW/kW	2,51	2,50	2,57	2,53	2,52	2,50	2,45	2,39
	ESEER		3,47	3,15	3,72	3,22	3,52	3,15	3,50	3,03
	Sound power level [Lw] (2)	dB(A)	98,7	98,7	92,6	92,6	95,9	95,9	96,6	96,6
	Average sound pressure level [Lpm] (3)	dB(A)	80,8	80,8	74	74	77,3	77,3	78	78
	Net weight	kg	1080	1080	1460	1460	1550	1550	1600	1600
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	76,1	76,1	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	**Partial heat recovery-Heating capacity (5)**	**kW**	**35,5**	**35,1**	**43,9**	**43,2**	**57,2**	**56,3**	**64,5**	**63,6**
	Total heat recovery-Heating capacity (6)	**kW**	**132,0**	**132,0**	**166,0**	**165,0**	**214,0**	**212,0**	**243,0**	**247,0**
	Pumping group									
	1 pump - 2 poles electric motor	kW	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2
	2 pump - 2 poles electric motor	kW	2,2	2,2	3,0	3,0	2,2	3,0	3,0	3,0
	1 pump - 4 poles electric motor	kW	1,5	1,5	3,0	3,0	3,0	3,0	3,0	3,0
	2 pump - 4 poles electric motor	kW	1,5	1,5	3,0	3,0	3,0	3,0	3,0	3,0
	Water tank - volume	l	360	360	520	520	520	520	520	520
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**96,8**	**95,7**	**120,0**	**118,0**	**156,0**	**154,0**	**176,0**	**173,0**
	Unit power input	kW	38,6	38,3	46,7	46,6	61,9	61,6	71,8	72,4
	Total air flow	m³/h	32000	32000	40000	40000	52000	52000	54000	54000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,51	2,50	2,57	2,53	2,52	2,50	2,45	2,39
	Sound power level [Lw] (2)	dB(A)	98,5	98,5	90,2	90,2	95,0	95,0	95,7	95,7
	Average sound pressure level [Lpm] (3)	dB(A)	80,6	80,6	71,6	71,6	76,4	76,4	77,1	77,1
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**94,3**	**93,2**	**116,0**	**115,0**	**152,0**	**150,0**	**171,0**	**168,0**
	Unit power input	kW	38,0	37,7	47,0	46,9	61,3	61,0	71,5	71,8
	Total air flow	m³/h	27200	27200	34000	34000	44200	44200	45900	45900
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,48	2,47	2,47	2,45	2,48	2,46	2,39	2,34
	Sound power level [Lw] (2)	dB(A)	95,1	95,1	87,8	87,8	91,9	91,9	92,6	92,6
	Average sound pressure level [Lpm] (3)	dB(A)	77,2	77,2	69,2	69,2	73,3	73,3	74,0	74,0
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**90,6**	**89,7**	**111,0**	**110,0**	**146,0**	**144,0**	**163,0**	**160,0**
	Unit power input	kW	38,7	38,5	48,5	48,5	62,4	62,1	73,4	74,1
	Total air flow		22400	22400	28000	28000	36400	36400	37800	37800
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,34	2,33	2,29	2,27	2,34	2,32	2,22	2,16
	Sound power level [Lw] (2)	dB(A)	92,0	92,0	86,9	86,9	89,7	89,7	90,3	90,3
	Average sound pressure level [Lpm] (3)	dB(A)	74,1	74,1	68,3	68,3	71,1	71,1	71,7	71,7

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

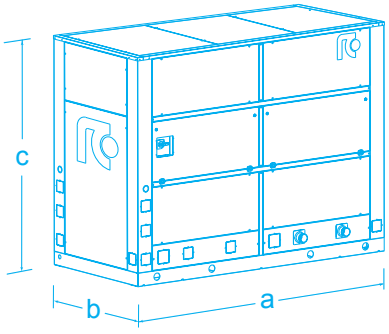
TECHNICAL DATA UNICO PF

	UNICO PF		220 P2 S	220 P2 D	250 P3 S	265 P4 D	290 P4 D
	SIZE		C5	C5	C5	C5	C5
STANDARD	**Cooling capacity (1)**	**kW**	**202,0**	**199,0**	**227,0**	**239,0**	**264,0**
	Unit power input	kW	76,8	76,8	93,8	97,6	113,3
	Evaporator water flow rate	m³/h	34,8	34,2	39,0	41,1	45,4
	Evaporator pressure drop	kPa	43	37	41	41	45
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	3	4	4
	Capacity steps	n.	2	2	3	4	4
	Centrifugal fans EC	n.	5	5	5	5	5
	Total air flow	m³/h	62500	62500	64000	66000	66000
	External static pressure	Pa	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	49,3	49,6	49,9	60,8	60,7
	Gas circuits	n.	1	2	1	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	185	185	217,2	215	315,8
	Unit starting current (LRA)	A	477,0	477,0	461,8	438,5	607,8
	EER (1)	kW/kW	2,63	2,59	2,42	2,45	2,33
	ESEER		3,71	3,26	3,84	3,75	3,74
	Sound power level [Lw] (2)	dB(A)	96,6	96,6	96,9	97,4	97,4
	Average sound pressure level [Lpm] (3)	dB(A)	77,3	77,3	77,7	78,1	78,1
	Net weight	kg	1970	1970	2140	2290	2340
	Hydraulic connections						
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9
OPTIONAL	**Partial heat recovery-Heating capacity (5)**	**kW**	**74,2**	**73,1**	**83,2**	**87,7**	**96,7**
	Total heat recovery-Heating capacity (6)	**kW**	**272,0**	**277,0**	**322,0**	**337,0**	**383,0**
	Pumping group						
	1 pump - 2 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	2 pump - 2 poles electric motor	kW	5,5	5,5	5,5	5,5	5,5
	1 pump - 4 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	2 pump - 4 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0
	Water tank - volume	l	720	720	720	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**202,0**	**199,0**	**227,0**	**239,0**	**264,0**
	Unit power input	kW	76,8	76,8	93,8	97,6	113,3
	Total air flow	m³/h	62500	62500	64000	66000	66000
	External static pressure	Pa	50	50	50	50	50
	EER (1)	kW/kW	2,63	2,59	2,42	2,45	2,33
	Sound power level [Lw] (2)	dB(A)	95,3	95,3	95,8	96,4	96,4
	Average sound pressure level [Lpm] (3)	dB(A)	76,1	76,1	76,5	77,1	77,1
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**197,0**	**194,0**	**219,0**	**231,0**	**254,0**
	Unit power input	kW	76,4	76,7	94,4	97,5	115,5
	Total air flow	m³/h	53125	53125	54400	56100	56100
	External static pressure	Pa	36	36	36	36	36
	EER (1)	kW/kW	2,58	2,53	2,32	2,37	2,20
	Sound power level [Lw] (2)	dB(A)	92,4	92,4	92,8	93,3	93,3
	Average sound pressure level [Lpm] (3)	dB(A)	73,1	73,1	73,5	74,0	74,0
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**189,0**	**186,0**	**208,0**	**220,0**	**239,0**
	Unit power input	kW	78,8	78,8	98,1	100,9	120,7
	Total air flow		43750	43750	44800	46200	46200
	External static pressure	Pa	25	25	25	25	25
	EER (1)	kW/kW	2,40	2,36	2,12	2,18	1,98
	Sound power level [Lw] (2)	dB(A)	90,5	90,5	90,8	91,2	91,2
	Average sound pressure level [Lpm] (3)	dB(A)	71,2	71,2	71,5	71,9	71,9

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE C	a	b	c
C1	1250	890	1950
C2	1800	1040	2000
C3	2600	1200	2000
C4	3700	1260	2000
C5	4950	1260	2040



PYXIS U: Packaged air cooled liquid chillers for outdoor installation equipped with scroll compressors and microchannel condensing coils
Cooling capacity: **44,9 ÷ 200,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

NEW
RC Hi-Tech

pyxis U

rcgroupairconditioning

R410A PLATE

MAIN FEATURES

- Air cooled liquid chiller.
- 22 models available, for a wide selection opportunity.
- Average step of 15kW.
- EER up to 2,93.
- ESEER up to 4,17.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- AC Axial fans.
- Microchannel condensing coils.
- Electronic expansion valve.
- Single air circuit.
- Suitable for outdoor installation.

MAIN BENEFITS

- Units equipped with two scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Microchannel condensing coils in aluminium.
- Low refrigerant charge.
- High ESEER.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of hydronic group with medium discharge head.
- Availability of pumping groups with low, medium, high discharge head (size U4).
- Availability of total or partial heat recovery system.
- Availability of EC fans.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

MICROCHANNEL CONDENSING COILS

The use of aluminium for the micro-channel condensers manufacture is able to offer the possibility for very light machinery: the coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity.
The reduced air resistance of the micro-channel coils allows to drastically reduce the fans motors electric energy consumption. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002.

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines (option).
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control factory assembled.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater for machine size.

CONDENSING COIL
- Microchannel condensing coil in aluminium and they are perfectly suitable for the civil and industrial applications cooling, while the protection function of the oxide layer allows an optimum resistance to corrosion also in case of aggressive ambient conditions.
- Extremely light construction. The coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity.
- Low air side pressure drop and consequentially drastic reduction of the fans motors electric energy consumption.
- High heat exchange efficiency.
- Reduced internal volume capable of reducing the total refrigerant charge. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.
- Frame in painted galvanized steel.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Thermostatic expansion valve.
- Electromagnetic valve on liquid line.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety.
- Fuses for compressors.
- Magnetothermic switch for each fan and water pump (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50+N

CONTROL SYSTEM
- MP.COM microprocessor system with graphic symbol for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

PYXIS U	46 P2 S	46 P2 D	54 P2 S	54 P2 D	58 P2 S	58 P2 D	66 P2 S	66 P2 D	80 P2 S	80 P2 D	102 P2 S
SIZE	U1	U1	U1	U1	U1	U1	U2	U2	U2	U2	U3
752 - Hydronic group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
753 - Hydronic group (2 pumps)	●	●	●	●	●	●	●	●	●	●	●
722 - Low discharge head single pump	-	-	-	-	-	-	-	-	-	-	-
723 - Low discharge head twin pump	-	-	-	-	-	-	-	-	-	-	-
720 - Medium discharge head single pump	-	-	-	-	-	-	-	-	-	-	-
721 - Medium discharge head twin pump	-	-	-	-	-	-	-	-	-	-	-
720 - High discharge head single pump	-	-	-	-	-	-	-	-	-	-	-
721 - High discharge head twin pump	-	-	-	-	-	-	-	-	-	-	-
727 - Water tank+ 1 pump with low discharge head	-	-	-	-	-	-	-	-	-	-	-
728 - Water tank+2 pumps with low discharge head	-	-	-	-	-	-	-	-	-	-	-
725 - Water tank+1 pump with medium discharge head	-	-	-	-	-	-	-	-	-	-	-
726 - Water tank+2 pumps medium discharge head	-	-	-	-	-	-	-	-	-	-	-
729 - Water tank+1 pump with high discharge head	-	-	-	-	-	-	-	-	-	-	-
730 - Water tank+2 pumps with high discharge head	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	-	-	-	-	-	-	-	-	-	-	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	-	-	-	-	-	-	-	-	-	-	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	●
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	●
450 - Desuperheater	●	-	●	-	●	-	●	-	●	-	●
449 - Voltage free contact for partial heat recovery water pump activation	●	-	●	-	●	-	●	-	●	-	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	●
459 - Shell and tube evaporator	-	-	-	-	-	-	-	-	-	-	●
460 - Shell and tube evaporator for low temperature	-	-	-	-	-	-	-	-	-	-	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	-
1002 - Soft Starter	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	-	-	-	-	-	-	-	-	-	-	-
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic Expansion	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

PYXIS U	102 P2	128 P2	128 P2	146 P2	146 P2	164 P2	164 P2	186 P2	186 P2	204 P2	204 P2
	D	S	D	S	D	S	D	S	D	S	D
SIZE	U3	U3	U3	U3	U3	U4	U4	U4	U4	U4	U4
752 - Hydronic group (1 pump)	●	●	●	●	●	-	-	-	-	-	-
753 - Hydronic group (2 pumps)	●	●	●	●	●	-	-	-	-	-	-
722 - Low discharge head single pump	-	-	-	-	-	●	●	●	●	●	●
723 - Low discharge head twin pump	-	-	-	-	-	●	●	●	●	●	●
720 - Medium discharge head single pump	-	-	-	-	-	●	●	●	●	●	●
721 - Medium discharge head twin pump	-	-	-	-	-	●	●	●	●	●	●
720 - High discharge head single pump	-	-	-	-	-	●	●	●	●	●	●
721 - High discharge head twin pump	-	-	-	-	-	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	-	-	-	-	-	●	●	●	●	●	●
728 - Water tank+2 pumps with low discharge head	-	-	-	-	-	●	●	●	●	●	●
725 - Water tank+1 pump with medium discharge head	-	-	-	-	-	●	●	●	●	●	●
726 - Water tank+2 pumps medium discharge head	-	-	-	-	-	●	●	●	●	●	●
729 - Water tank+1 pump with high discharge head	-	-	-	-	-	●	●	●	●	●	●
730 - Water tank+2 pumps with high discharge head	-	-	-	-	-	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	-	●	-	●	-	●	-	●	-	●	-
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	●	●	●	●	●	●	●	●	●	●	●
460 - Shell and tube evaporator for low temperature	●	●	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	-	-	-	-	-	-	-	●	-	●	-
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic Expansion	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA PYXIS U

	PYXIS U		46 P2 S	46 P2 D	54 P2 S	54 P2 D	58 P2 S	58 P2 D	66 P2 S	66 P2 D
	SIZE		U1	U1	U1	U1	U1	U1	U2	U2
STANDARD	**Cooling capacity (1)**	kW	**44,9**	**44,9**	**51,1**	**51,2**	**58,4**	**58,4**	**65,7**	**65,7**
	Unit power input	kW	15,3	15,3	18,4	18,5	21,0	20,9	23,3	23,5
	Evaporator water flow rate	m³/h	7,7	7,7	8,8	8,8	10,0	10,0	11,3	11,3
	Evaporator pressure drop	kPa	49	52	50	51	55	53	48	57
	Compressors		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Axial fans	n.	4	4	4	4	4	4	4	4
	Total air flow	m³/h	15200	15200	15200	15200	19000	19000	19500	19500
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,1	4,9	5,3	5,1	5,5	5,3	7,3	7,9
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	44,5	44,5	46,5	46,5	54,7	54,7	66,7	66,7
	Unit starting current (LRA)	A	134,5	134,5	142,5	142,5	147,7	147,7	175,7	175,7
	EER (1)	kW/kW	2,93	2,93	2,77	2,77	2,78	2,79	2,82	2,80
	ESEER		4,15	3,64	4,17	3,55	4,07	3,55	4,09	3,53
	Sound power level [Lw] (2)	dB(A)	84,0	84,0	84,0	84,0	84,3	84,3	85,1	85,1
	Average sound pressure level [LPm] (3)	dB(A)	67,0	67,0	67,0	67,0	67,3	67,3	67,7	67,7
	Net weight	kg	530	530	530	530	539	539	642	642
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	2"	2"
	Evaporator IN/OUT - OD (4)	Ø mm	-	-	-	-	-	-	-	-
OPTIONAL	**Partial heat recovery - Heating capacity (5)**	kW	**16,5**	**-**	**18,8**	**-**	**21,4**	**-**	**24,1**	**-**
	Total heat recovery - Heating capacity (6)	kW	**58,4**	**59,1**	**68,3**	**69,3**	**77,0**	**78,1**	**86,6**	**88,1**
	EC axial fans-Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Pumping group									
	Low discharge head - Power input	kW	-	-	-	-	-	-	-	-
	Medium discharge head - Power input	kW	0,75	0,75	0,75	0,75	0,75	0,75	1,5	1,5
	High discharge head - Power input	kW	-	-	-	-	-	-	-	-
	Water tank - volume	l	150	150	150	150	150	150	240	240
LNO KIT 100%	**Cooling capacity (1)**	kW	**44,9**	**44,9**	**51,1**	**51,2**	**58,4**	**58,4**	**65,7**	**65,7**
	Unit power input	kW	15,3	15,3	18,4	18,5	20,9	20,9	23,2	23,5
	Total air flow	m³/h	15200	15200	15200	15200	19000	19000	19500	19500
	EER (1)	kW/kW	2,93	2,93	2,77	2,77	2,79	2,79	2,83	2,80
	Sound power level [Lw] (2)	dB(A)	78,6	78,6	78,6	78,6	79,0	79,0	79,8	79,8
	Average sound pressure level [LPm] (3)	dB(A)	61,6	61,6	61,6	61,6	62,0	62,0	62,4	62,4
LNO KIT 85%	**Cooling capacity (1)**	kW	**43,8**	**43,8**	**49,5**	**49,5**	**56,8**	**56,7**	**63,6**	**63,7**
	Unit power input	kW	15,8	15,8	19,3	19,3	21,7	21,6	24,2	24,2
	Total air flow	m³/h	12920	12920	12920	12920	16150	16150	16575	16575
	EER (1)	kW/kW	2,77	2,77	2,57	2,57	2,62	2,62	2,63	2,63
	Sound power level [Lw] (2)	dB(A)	75,6	75,6	75,6	75,6	75,8	75,8	76,7	76,7
	Average sound pressure level [LPm] (3)	dB(A)	58,6	58,6	58,6	58,6	58,8	58,8	59,2	59,2
LNO KIT 70%	**Cooling capacity (1)**	kW	**42,2**	**42,2**	**47,2**	**47,2**	**54,4**	**54,3**	**60,7**	**60,6**
	Unit power input	kW	16,6	16,6	20,4	20,4	22,9	22,9	25,5	25,6
	Total air flow		10640	10640	10640	10640	13300	13300	13650	13650
	EER (1)	kW/kW	2,54	2,54	2,31	2,31	2,38	2,37	2,38	2,37
	Sound power level [Lw] (2)	dB(A)	73,0	73,0	73,0	73,0	72,7	72,7	73,8	73,8
	Average sound pressure level [LPm] (3)	dB(A)	56,1	56,1	56,1	56,1	55,7	55,7	56,4	56,4
ELN KIT	**Cooling capacity (1)**	kW	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Unit power input	kW	-	-	-	-	-	-	-	-
	Total air flow		-	-	-	-	-	-	-	-
	EER (1)	kW/kW	-	-	-	-	-	-	-	-
	Sound power level [Lw] (2)	dB(A)	-	-	-	-	-	-	-	-
	Average sound pressure level [LPm] (3)	dB(A)	-	-	-	-	-	-	-	-

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS U

	PYXIS U		80 P2 S	80 P2 D	102 P2 S	102 P2 D	128 P2 S	128 P2 D	146 P2 S	146 P2 D
	SIZE		U2	U2	U3	U3	U3	U3	U3	U3
STANDARD	**Cooling capacity (1)**	kW	**76,3**	**76,2**	**104,0**	**102,0**	**123,0**	**125,0**	**138,0**	**138,0**
	Unit power input	kW	27,4	27,3	35,9	35,7	44,7	44,8	52,3	52,3
	Evaporator water flow rate	m³/h	13,1	13,1	17,9	17,3	21,2	21,5	23,7	23,8
	Evaporator pressure drop	kPa	51	37	47	47	49	46	50	56
	Compressors		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Axial fans	n.	6	6	2	2	2	2	2	2
	Total air flow	m³/h	22800	22800	34000	34000	42360	42360	42360	42360
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	7,7	8,4	10,5	11,5	12,3	12,3	12,3	12,5
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	71,7	71,7	87,0	84,5	104,8	104,8	121,7	121,7
	Unit starting current (LRA)	A	211,7	211,7	310,5	269,5	328,3	328,3	366,3	366,3
	EER (1)	kW/kW	2,78	2,79	2,90	2,86	2,75	2,79	2,64	2,64
	ESEER		4,03	3,51	4,03	3,56	3,83	3,48	3,80	3,32
	Sound power level [Lw] (2)	dB(A)	86,1	86,1	88,2	88,2	92,2	92,2	92,2	92,2
	Average sound pressure level [L_{Pm}] (3)	dB(A)	68,8	68,8	70,3	70,3	74,0	74,0	74,0	74,0
	Net weight	kg	660	660	870	870	910	910	930	930
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	2"	-	-	-	-	-	-
	Evaporator IN/OUT - OD (4)	Ø mm	-	-	73,1	73,1	73,1	73,1	73,1	73,1
OPTIONAL	**Partial heat recovery - Heating capacity (5)**	kW	**28,0**	**-**	**38,3**	**-**	**45,3**	**-**	**50,6**	**-**
	Total heat recovery - Heating capacity (6)	kW	**102,0**	**103,0**	**135,0**	**134,0**	**159,0**	**160,0**	**182,0**	**182,0**
	EC axial fans-Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Pumping group									
	Low discharge head - Power input	kW	-	-	-	-	-	-	-	-
	Medium discharge head - Power input	kW	1,5	1,5	2,0	2,0	2,0	2,0	2,0	2,0
	High discharge head - Power input	kW	-	-	-	-	-	-	-	-
	Water tank - volume	l	240	240	360	360	360	360	360	360
LNO KIT 100%	**Cooling capacity (1)**	kW	**76,3**	**76,2**	**104,0**	**102,0**	**123,0**	**125,0**	**138,0**	**138,0**
	Unit power input	kW	27,4	27,3	35,9	35,7	44,7	44,8	52,3	52,3
	Total air flow	m³/h	22800	22800	34000	34000	42360	42360	42360	42360
	EER (1)	kW/kW	2,78	2,79	2,90	2,86	2,75	2,79	2,64	2,64
	Sound power level [Lw] (2)	dB(A)	80,6	80,6	82,5	82,5	86,1	86,1	86,1	86,1
	Average sound pressure level [L_{Pm}] (3)	dB(A)	63,2	63,2	64,4	64,4	67,9	67,9	67,9	67,9
LNO KIT 85%	**Cooling capacity (1)**	kW	**74,1**	**74,0**	**102,0**	**99,1**	**121,0**	**122,0**	**134,0**	**134,0**
	Unit power input	kW	28,4	28,2	36,7	36,4	45,8	45,9	53,8	53,8
	Total air flow	m³/h	19380	19380	28900	28900	36000	36000	36000	36000
	EER (1)	kW/kW	2,61	2,62	2,78	2,72	2,64	2,66	2,49	2,49
	Sound power level [Lw] (2)	dB(A)	77,9	77,9	80,6	80,6	84,6	84,6	84,6	84,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	60,5	60,5	62,5	62,5	66,4	66,4	66,4	66,4
LNO KIT 70%	**Cooling capacity (1)**	kW	**70,9**	**70,8**	**98,0**	**95,6**	**116,0**	**118,0**	**129,0**	**129,0**
	Unit power input	kW	29,8	29,6	38,3	37,9	47,5	47,6	56,3	56,6
	Total air flow		15960	15960	23800	23800	29652	29652	29652	29652
	EER (1)	kW/kW	2,38	2,39	2,56	2,52	2,44	2,48	2,29	2,28
	Sound power level [Lw] (2)	dB(A)	75,8	75,8	79,3	79,3	83,6	83,6	83,6	83,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	58,4	58,4	61,2	61,2	65,5	65,5	65,5	65,5
ELN KIT	**Cooling capacity (1)**	kW	**-**	**-**	**98,0**	**95,6**	**116,0**	**118,0**	**129,0**	**129,0**
	Unit power input	kW	-	-	38,3	37,9	47,5	47,6	56,3	56,6
	Total air flow		-	-	23800	23800	29652	29652	29652	29652
	EER (1)	kW/kW	-	-	2,56	2,52	2,44	2,48	2,29	2,28
	Sound power level [Lw] (2)	dB(A)	-	-	77,3	77,3	81,6	81,6	81,6	81,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	-	-	59,2	59,2	63,5	63,5	63,5	63,5

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

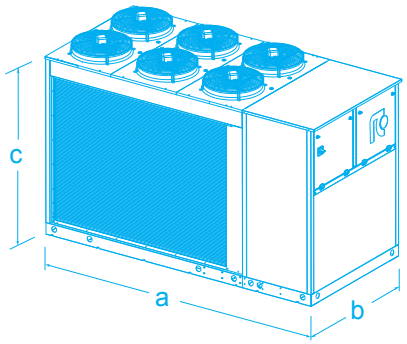
TECHNICAL DATA PYXIS U

	PYXIS U		164 P2 S	164 P2 D	186 P2 S	186 P2 D	204 P2 S	204 P2 D
	SIZE		U4	U4	U4	U4	U4	U4
STANDARD	**Cooling capacity (1)**	kW	**163,0**	**163,0**	**181,0**	**182,0**	**199,0**	**200,0**
	Unit power input	kW	55,8	55,8	65,1	65,0	74,5	74,3
	Evaporator water flow rate	m³/h	28,0	28,0	31,2	31,2	34,3	34,3
	Evaporator pressure drop	kPa	51	55	52	51	50	48
	Compressors		Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
	Quantity	n.	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2
	Axial fans	n.	3	3	3	3	3	3
	Total air flow	m³/h	63540	63540	63540	63540	63540	63540
	Max external static pressure	Pa	0	0	0	0	0	0
	Air circuits	n.	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	12,0	13,7	20,9	23,5	21,4	24,3
	Gas circuits	n.	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	142,5	142,5	159,7	159,7	176,9	176,9
	Unit starting current (LRA)	A	332,2	332,2	485,1	485,1	502,3	502,3
	EER - Eurovent standard (1)	kW/kW	2,92	2,92	2,78	2,80	2,67	2,69
	ESEER		3,96	3,61	3,88	3,50	3,82	3,39
	Sound power level [Lw] (2)	dB(A)	93,2	93,2	95,2	95,2	96,2	96,2
	Average sound pressure level [LPm] (3)	dB(A)	74,4	74,4	76,5	76,5	77,4	77,4
	Net weight	kg	990	1020	1030	1040	1060	1070
	Hydraulic connections							
	Evaporator IN/OUT - ISO 7/1 – R	Ø	-	-	-	-	-	-
	Evaporator IN/OUT - OD (4)	Ø mm	73,1	73,1	73,1	73,1	73,1	73,1
OPTIONAL	**Partial heat recovery - Heating capacity (5)**	kW	**59,8**	**-**	**66,5**	**-**	**73,1**	**-**
	Total heat recovery - Heating capacity (6)	kW	**211,0**	**211,0**	**239,0**	**240,0**	**268,0**	**269,0**
	EC axial fans-Max external static pressure	Pa	0	0	0	0	0	0
	Pumping group							
	Low discharge head - Power input	kW	1,5	1,5	1,5	1,5	1,5	1,5
	Medium discharge head - Power input	kW	2,2	2,2	2,2	2,2	2,2	2,2
	High discharge head - Power input	kW	3,0	3,0	3,0	3,0	3,0	3,0
	Water tank - volume	l	200	200	200	200	200	200
LNO KIT 100%	**Cooling capacity (1)**	kW	**163,0**	**163,0**	**181,0**	**182,0**	**199,0**	**200,0**
	Unit power input	kW	55,8	55,8	65,1	65,0	74,5	74,3
	Total air flow	m³/h	63540	63540	63540	63540	63540	63540
	EER - Eurovent standard (1)	kW/kW	2,92	2,92	2,78	2,80	2,67	2,69
	Sound power level [Lw] (2)	dB(A)	87,2	87,2	89,0	89,0	89,7	89,7
	Average sound pressure level [LPm] (3)	dB(A)	68,4	68,4	70,2	70,2	71,0	71,0
LNO KIT 85%	**Cooling capacity (1)**	kW	**160,0**	**160,0**	**177,0**	**178,0**	**194,0**	**194,0**
	Unit power input	kW	56,7	56,7	66,3	66,4	76,4	76,4
	Total air flow	m³/h	54000	54000	54000	54000	54000	54000
	EER - Eurovent standard (1)	kW/kW	2,82	2,82	2,67	2,68	2,54	2,54
	Sound power level [Lw] (2)	dB(A)	85,5	85,5	87,7	87,7	88,8	88,8
	Average sound pressure level [LPm] (3)	dB(A)	66,7	66,7	69,0	69,0	70,0	70,0
LNO KIT 70%	**Cooling capacity (1)**	kW	**155,0**	**156,0**	**171,0**	**172,0**	**186,0**	**187,0**
	Unit power input	kW	58,5	58,4	68,7	68,8	79,5	79,6
	Total air flow		44478	44478	44478	44478	44478	44478
	EER - Eurovent standard (1)	kW/kW	2,65	2,67	2,49	2,50	2,34	2,35
	Sound power level [Lw] (2)	dB(A)	84,4	84,4	87,0	87,0	88,3	88,3
	Average sound pressure level [LPm] (3)	dB(A)	65,6	65,6	68,3	68,3	69,5	69,5
ELN KIT	**Cooling capacity (1)**	kW	**155,0**	**156,0**	**171,0**	**172,0**	**186,0**	**187,0**
	Unit power input	kW	58,5	58,4	68,7	68,8	79,5	79,6
	Total air flow		44478	44478	44478	44478	44478	44478
	EER - Eurovent standard (1)	kW/kW	2,65	2,67	2,49	2,50	2,34	2,35
	Sound power level [Lw] (2)	dB(A)	82,4	82,4	85,0	85,0	86,3	86,3
	Average sound pressure level [LPm] (3)	dB(A)	63,6	63,6	66,3	66,3	67,5	67,5

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard.
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE U	a	b	c
U1	1930	1200	1630
U2	2510	1200	1630
U3	2960	1200	1950
U4	4000	1200	1970



PYXIS: Packaged air cooled liquid chillers for outdoor installation equipped with scroll compressors and microchannel condensing coils
Cooling capacity: **119,0 ÷ 808,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

NEW
RC Hi-Tech

pyxis

rcgroupairconditioning

R410A PLATE SHELL A C

MAIN FEATURES

- Air cooled liquid chiller.
- 25 models available, for a wide selection opportunity.
- Average step of 25kW.
- EER up to 3,06.
- ESEER up to 4,45.
- Scroll compressors.
- R410A Refrigerant charge.
- Units with two, three or four refrigerant circuits.
- Plate type or shell and tube heat exchangers.
- AC Axial fans.
- Microchannel condensing coils.
- Units with two, three or four air circuits.
- Modular construction.
- Suitable for outdoor installation.

MAIN BENEFITS

- Two scroll compressors for each refrigerant circuit to reach a high efficiency.
- Units with two, three or four refrigerant circuits.
- Microchannel condensing coils in aluminium.
- Low refrigerant charge.
- High ESEER.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups with low, medium, high discharge head.
- Availability of total or partial heat recovery system.
- Availability of EC fans with available external static pressure.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

MICROCHANNEL CONDENSING COILS

The use of aluminium for the micro-channel condensers manufacture is able to offer the possibility for very light machinery: the coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity.
The reduced air resistance of the micro-channel coils allows to drastically reduce the fans motors electric energy consumption. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002.

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR
Up to model 410 P4 D VT3 included:
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel with double refrigerant circuit (D version)
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control, factory assembled, for machines size “W”.
- Water flow switch for water flow control, not istalled but supplied in kit, for machine size “VT”.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater for machine size.

From model 430 P6 T VT3 included:
- Shell and tube evaporator optimized for R410A refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Refrigerant/Hydraulic circuit:
  - o Water side:
    - Single circuit
  - o Refrigerant side:
    - Three circuits from 430 P6 T VT3 model up to 630 P6 T VT5 model, both included (T version)
    - Four circuits for the remaining models (Q version)
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow switch for water flow control, not installed but supplied in kit.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater.

CONDENSING COIL
- Microchannel condensing coil in aluminium and they are perfectly suitable for the civil and industrial applications cooling, while the protection function of the oxide layer allows an optimum resistance to corrosion also in case of aggressive ambient conditions.
- Extremely light construction. The coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity.
- Low air side pressure drop and consequentially drastic reduction of the fans motors electric energy consumption.
- High heat exchange efficiency.
- Reduced internal volume capable of reducing the total refrigerant charge. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.
- Frame in painted galvanized steel.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT
Components for each refrigerant circuit:
- Electronic expansion valve. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge

ELECTRICAL PANEL
In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety.
- Fuses for compressors.
- Magnetothermic switch for each fan and water pump (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply:
  - 400/3/50+N for machine size “WL e WH”;
  - 400/3/50 for machine size “VT”.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic symbol for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

PYXIS	120 P4 D	140 P4 D	160 P4 D	180 P4 D	203 P4 D	215 P4 D	235 P4 D	255 P4 D	285 P4 D	305 P4 D	340 P4 D	380 P4 D	410 P4 D
SIZE	WL	WL	WL	WH	WH	VT2	VT2	VT2	VT2	VT3	VT3	VT3	VT3
722 - Low discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●	●
723 - Low discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●	●
720 - Medium discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●	●
721 - Medium discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●	●
719 - High discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●	●
724 - High discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	●	●	●	●	●	●	●	●	●	●	●	●	●
728 - Water tank+2 pumps low discharge head	●	●	●	●	●	●	●	●	●	●	●	●	●
725 - Water tank+1 pump with medium discharge head	●	●	●	●	●	●	●	●	●	●	●	●	●
726 - Water tank+2 pumps medium press	●	●	●	●	●	●	●	●	●	●	●	●	●
729 -Tank + Pumping group, 1 pump high pressure	●	●	●	●	●	●	●	●	●	●	●	●	●
730 -Tank + Pumping group, 2 pumps high pressure	●	●	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	-	-	-	-	-	●	●	●	●	●	●	●	●
460 - Shell and tube evaporator for low temperature	-	-	-	-	-	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●	●	●
252 - Metal protection grill	-	-	-	-	-	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	-	-	-	-	-	●	●	●	●	●	●	●	●
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

PYXIS	430 P6 T	470 P6 T	500 P6 T	540 P6 T	560 P6 T	610 P6 T	630 P6 T	680 P8 Q	720 P8 Q	750 P8 Q	800 P8 Q	830 P8 Q
SIZE	VT3	VT4	VT4	VT4	VT5	VT5	VT5	VT6	VT6	VT6	VT6	VT6
722 - Low discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●
723 - Low discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●
720 - Medium discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●
721 - Medium discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●
719 - High discharge head single pump	●	●	●	●	●	●	●	●	●	●	●	●
724 - High discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	-	-	-	-	-	-	-	-	-	-	-	-
728 - Water tank+2 pumps low discharge head	-	-	-	-	-	-	-	-	-	-	-	-
725 - Water tank+1 pump with medium discharge head	-	-	-	-	-	-	-	-	-	-	-	-
726 - Water tank+2 pumps medium press	-	-	-	-	-	-	-	-	-	-	-	-
729 -Tank + Pumping group, 1 pump high pressure	-	-	-	-	-	-	-	-	-	-	-	-
730 -Tank + Pumping group, 2 pumps high pressure	-	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	-	-	-	-	-	-	-	-	-	-	-	-
454 - Voltage free contact for total heat recovery water pump activation	-	-	-	-	-	-	-	-	-	-	-	-
Selection switch for operation mode for total heat recovery	-	-	-	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-	-
459 - Shell and tube evaporator	-	-	-	-	-	-	-	-	-	-	-	-
460 - Shell and tube evaporator for low temperature	●	●	●	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●	●
252 - Metal protection grill	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	-	-	-	-	-	-	-	-	-	-	-	-
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	●	●	●	●	●	●	●	●	●	●	●	●
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA PYXIS

	PYXIS		120 P4	140 P4	160 P4	180 P4	203 P4	215 P4	235 P4	255 P4
			D	D	D	D	D	D	D	D
	SIZE		WL	WL	WL	WH	WH	VT2	VT2	VT2
STANDARD	**Cooling capacity (1)**	kW	**119**	**136**	**156**	**179**	**198**	**210**	**229**	**250**
	Unit power input	kW	40,8	44,4	54,4	61,1	71,7	70,5	79,0	89,3
	Evaporator water flow rate	m³/h	20,4	23,3	26,8	30,7	34,0	36,0	39,3	43,0
	Evaporator pressure drop	kPa	42	52	51	53	48	54	54	54
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	4	4	4	4	4	4
	Capacity steps	n.	4	4	4	4	4	4	4	4
	Axial fans	n.	4	6	6	6	6	4	4	4
	Total air flow	m³/h	38940	53340	53340	59300	59300	84720	84720	84720
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	12,0	12,1	13,5	23,1	24,6	19,3	19,6	19,9
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	107,9	131,9	143,9	155,9	172,9	180,6	192,6	209,6
	Unit starting current (LRA)	A	200,9	240,9	283,9	340,9	396,9	404,6	416,6	433,6
	EER (1)	kW/kW	2,92	3,06	2,87	2,93	2,76	2,98	2,90	2,80
	ESEER		4,37	4,45	4,29	4,37	4,26	4,24	4,22	4,14
	Sound power level [Lw] (2)	dB(A)	85,0	85,0	86,0	86,0	87,0	95,0	94,5	96,7
	Average sound pressure level [Lpm] (3)	dB(A)	66,8	66,8	67,8	67,4	68,4	76,2	75,7	77,9
	Net weight	kg	1250	1320	1330	1370	1400	1730	1920	1970
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	73,1	73,1	73,1	73,1	73,1	88,9	88,9	88,9
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**43,7**	**49,8**	**57,3**	**65,6**	**72,6**	**77,0**	**84,0**	**91,8**
	Total heat recovery - Heating capacity (6)	kW	**156**	**174**	**205**	**234**	**266**	**269**	**298**	**332**
	EC axial fans-Max external static pressure	Pa	0	0	0	0	0	80	80	80
	Pumping group									
	Low discharge head - Power input	kW	1,5	1,5	1,5	1,5	1,5	3,0	3,0	3,0
	Medium discharge head - Power input	kW	2,2	2,2	2,2	2,2	2,2	4,0	4,0	4,0
	High discharge head - Power input	kW	3	3	3	3	3	5,5	5,5	5,5
	Water tank - volume	l	200	200	200	200	200	130	130	130
LNO KIT 100%	**Cooling capacity (1)**	kW	**119**	**136**	**156**	**179**	**198**	**210**	**229**	**250**
	Unit power input	kW	40,8	44,4	54,4	61,1	71,7	70,5	79,0	89,3
	Total air flow	m³/h	38940	53340	53340	59300	59300	84720	84720	84720
	EER (1)	kW/kW	2,92	3,06	2,87	2,93	2,76	2,98	2,90	2,80
	Sound power level [Lw] (2)	dB(A)	79,2	79,3	80,2	79,8	80,6	80,9	79,9	81,6
	Average sound pressure level [Lpm] (3)	dB(A)	61,1	61,1	62,0	61,2	62,0	62,1	61,1	62,8
LNO KIT 85%	**Cooling capacity (1)**	kW	**116**	**133**	**152**	**174**	**192**	**206**	**224**	**244**
	Unit power input	kW	42,0	45,2	55,7	62,8	74,1	71,3	80,3	91,4
	Total air flow	m³/h	33099	45339	45339	50405	50405	72012	72012	72012
	EER (1)	kW/kW	2,76	2,94	2,73	2,77	2,59	2,89	2,79	2,67
	Sound power level [Lw] (2)	dB(A)	77,0	77,0	78,1	78,4	79,6	79,3	78,6	80,5
	Average sound pressure level [Lpm] (3)	dB(A)	58,8	58,8	59,9	59,8	61,1	60,5	59,7	61,7
LNO KIT 70%	**Cooling capacity (1)**	kW	**111**	**129**	**147**	**168**	**184**	**200**	**217**	**235**
	Unit power input	kW	44,2	46,7	57,6	65,6	78,0	73,3	82,8	94,8
	Total air flow		27258	37338	37338	41510	41510	59304	59304	59304
	EER (1)	kW/kW	2,51	2,76	2,55	2,56	2,36	2,73	2,62	2,48
	Sound power level [Lw] (2)	dB(A)	75,3	75,3	76,7	77,6	79,1	78,4	77,8	79,9
	Average sound pressure level [Lpm] (3)	dB(A)	57,2	57,1	58,5	59,0	60,5	59,6	59,0	61,1
ELN KIT	**Cooling capacity (1)**	kW	**111**	**129**	**147**	**168**	**184**	**200**	**217**	**235**
	Unit power input	kW	44,2	46,7	57,6	65,6	78,0	73,3	82,8	94,8
	Total air flow		27258	37338	37338	41510	41510	59304	59304	59304
	EER (1)	kW/kW	2,51	2,76	2,55	2,56	2,36	2,73	2,62	2,48
	Sound power level [Lw] (2)	dB(A)	73,3	73,3	74,7	75,6	77,1	76,4	75,8	77,9
	Average sound pressure level [Lpm] (3)	dB(A)	55,2	55,1	56,5	57,0	58,5	57,6	57,0	59,1

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS

	PYXIS		285 P4	305 P4	340 P4	380 P4	410 P4	430 P6 T	470 P6	500 P6
			D	D	D	D	D	T	T	T
	SIZE		VT2	VT3	VT3	VT3	VT3	VT3	VT4	VT4
STANDARD	**Cooling capacity (1)**	kW	**282**	**302**	**333**	**370**	**405**	**423**	**456**	**497**
	Unit power input	kW	104,8	98,7	112,5	130,7	150,0	156,1	155,6	175,0
	Evaporator water flow rate	m³/h	48,4	51,9	57,2	63,6	69,5	72,7	78,4	85,4
	Evaporator pressure drop	kPa	53	52	53	51	52	31	36	43
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	4	4	4	6	6	6
	Capacity steps	n.	4	4	4	4	4	6	6	6
	Axial fans	n.	4	6	6	6	6	6	8	8
	Total air flow	m³/h	84720	127080	127080	127080	127080	127080	169440	169440
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	2	2	2	2	2	3	3	3
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	19,9	27,6	28,1	28,3	28,3	29,9	38,6	38,6
	Gas circuits	n.	2	2	2	2	2	3	3	3
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	243,6	251,4	285,4	319,4	353,4	365,4	390,2	424,2
	Unit starting current (LRA)	A	487,6	495,4	529,4	644,4	679,4	609,4	634,2	749,2
	EER (1)	kW/kW	2,69	3,06	2,96	2,83	2,70	2,71	2,93	2,84
	ESEER		4,16	4,30	4,26	4,21	4,13	4,33	4,41	4,35
	Sound power level [Lw] (2)	dB(A)	97,8	99,7	99,7	99,7	101,6	102,6	103,4	104,1
	Average sound pressure level [Lpm] (3)	dB(A)	79,0	80,3	80,2	80,3	82,1	83,1	83,3	84,1
	Net weight	kg	2010	2280	2310	2360	2410	2980	3270	3330
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9	168,3	168,3	168,3
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**103,0**	**111,0**	**122,0**	**136,0**	**148,0**	**155,0**	**167,0**	**182,0**
	Total heat recovery - Heating capacity (6)	kW	**383**	**385**	**431**	**489**	**547**	**--**	**--**	**--**
	EC axial fans-Max external static pressure	Pa	80	80	80	80	80	80	80	80
	Pumping group									
	Low discharge head - Power input	kW	3,0	3,0	3,0	4,0	4,0	4,0	4,0	4,0
	Medium discharge head - Power input	kW	4,0	4,0	4,0	5,5	5,5	5,5	5,5	5,5
	High discharge head - Power input	kW	5,5	5,5	5,5	7,5	7,5	7,5	7,5	7,5
	Water tank - volume	l	130	190	190	190	190	--	--	--
LNO KIT 100%	**Cooling capacity (1)**	kW	**282**	**302**	**333**	**370**	**405**	**423**	**456**	**497**
	Unit power input	kW	104,8	98,7	112,5	130,7	150,0	156,1	155,6	175,0
	Total air flow	m³/h	84720	127080	127080	127080	127080	127080	169440	169440
	EER (1)	kW/kW	2,69	3,06	2,96	2,83	2,70	2,71	2,93	2,84
	Sound power level [Lw] (2)	dB(A)	82,7	84,7	85,0	84,2	85,7	87,3	88,2	88,5
	Average sound pressure level [Lpm] (3)	dB(A)	63,9	65,2	65,6	64,8	66,2	67,8	68,2	68,5
LNO KIT 85%	**Cooling capacity (1)**	kW	**274**	**297**	**326**	**361**	**393**	**411**	**447**	**485**
	Unit power input	kW	107,9	99,7	114,0	133,2	152,9	160,5	158,5	179,0
	Total air flow	m³/h	72012	108018	108018	108018	108018	108018	144024	144024
	EER (1)	kW/kW	2,54	2,98	2,86	2,71	2,57	2,56	2,82	2,71
	Sound power level [Lw] (2)	dB(A)	81,6	83,6	83,7	83,4	85,0	86,3	87,1	87,7
	Average sound pressure level [Lpm] (3)	dB(A)	62,8	64,1	64,2	63,9	65,5	66,8	67,1	67,7
LNO KIT 70%	**Cooling capacity (1)**	kW	**262**	**289**	**317**	**348**	**378**	**394**	**434**	**469**
	Unit power input	kW	112,9	102,1	117,4	137,5	159,5	169,1	163,2	184,6
	Total air flow		59304	88956	88956	88956	88956	88956	118608	118608
	EER (1)	kW/kW	2,32	2,83	2,70	2,53	2,37	2,33	2,66	2,54
	Sound power level [Lw] (2)	dB(A)	81,0	82,9	82,9	82,9	84,7	85,7	86,5	87,2
	Average sound pressure level [Lpm] (3)	dB(A)	62,2	63,5	63,5	63,4	65,2	66,3	66,5	67,2
ELN KIT	**Cooling capacity (1)**	kW	**262**	**289**	**317**	**348**	**378**	**394**	**434**	**469**
	Unit power input	kW	112,9	102,1	117,4	137,5	159,5	169,1	163,2	184,6
	Total air flow		59304	88956	88956	88956	88956	88956	118608	118608
	EER (1)	kW/kW	2,32	2,83	2,70	2,53	2,37	2,33	2,66	2,54
	Sound power level [Lw] (2)	dB(A)	79,0	80,9	80,9	80,9	82,7	83,7	84,5	85,2
	Average sound pressure level [Lpm] (3)	dB(A)	60,2	61,5	61,5	61,4	63,2	64,3	64,5	65,2

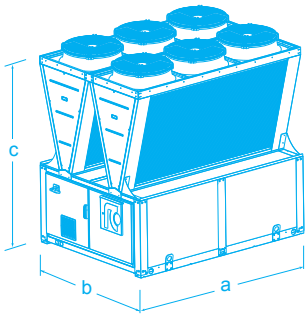
1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS

	PYXIS		540 P6 T	560 P6 T	610 P6 T	630 P6 T	680 P8 Q	720 P8 Q	750 P8 Q	800 P8 Q	830 P8 Q
	SIZE		VT4	VT5	VT5	VT5	VT6	VT6	VT6	VT6	VT6
STANDARD	**Cooling capacity (1)**	kW	**526**	**547**	**602**	**615**	**666**	**701**	**729**	**775**	**808**
	Unit power input	kW	193,4	194,0	224,6	221,2	224,2	244,3	262,2	281,8	299,3
	Evaporator water flow rate	m³/h	90,5	94,1	104,0	106,0	114,0	120,0	125,0	133,0	139,0
	Evaporator pressure drop	kPa	48	51	58	60	67	74	81	87	55
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	6	6	6	6	8	8	8	8	8
	Capacity steps	n.	6	6	6	6	8	8	8	8	8
	Axial fans	n.	8	9	9	10	12	12	12	12	12
	Total air flow	m³/h	169440	190620	190620	211800	254160	254160	254160	254160	254160
	Max external static pressure	Pa	0	0	0	0	0	0	0	0	0
	Air circuits	n.	3	3	3	3	4	4	4	4	4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	38,6	42,4	42,6	46,4	56,3	56,6	56,6	56,6	56,7
	Gas circuits	n.	3	3	3	3	4	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	458,2	479,1	531,1	535,0	569,8	604,8	638,8	672,8	707,8
	Unit starting current (LRA)	A	784,2	804,1	856,1	860	912,8	929,8	963,8	998,8	1032,8
	EER (1)	kW/kW	2,72	2,82	2,68	2,78	2,97	2,87	2,78	2,75	2,70
	ESEER		4,24	4,29	4,18	4,22	4,35	4,27	4,17	4,19	4,23
	Sound power level [Lw] (2)	dB(A)	102,5	102,5	103,4	103,4	104,2	105,2	106,0	106,4	107,1
	Average sound pressure level [Lpm] (3)	dB(A)	82,5	82,0	82,9	82,9	83,3	84,2	85,1	85,5	86,2
	Net weight	kg	3360	3700	3940	3940	4530	4600	4630	4670	4750
	Hydraulic connections										
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	219,1	219,1	219,1	219,1	219,1	219,1	219,1
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**193,0**	**201,0**	**221,0**	**226,0**	**244,0**	**257,0**	**267,0**	**284,0**	**296,0**
	Total heat recovery - Heating capacity (6)	kW	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	EC axial fans-Max external static pressure	Pa	80	80	80	80	80	80	80	80	80
	Pumping group										
	Low discharge head - Power input	kW	4,0	4,0	4,0	5,5	5,5	5,5	5,5	5,5	5,5
	Medium discharge head - Power input	kW	5,5	5,5	5,5	11,0	11,0	11,0	11,0	11,0	11,0
	High discharge head - Power input	kW	7,5	7,5	7,5	15,0	15,0	15,0	15,0	15,0	15,0
	Water tank - volume	l	--	--	--	--	--	--	--	--	--
LNO KIT 100%	**Cooling capacity (1)**	kW	**526**	**547**	**602**	**615**	**666**	**701**	**729**	**775**	**808**
	Unit power input	kW	193,4	194,0	224,6	221,2	224,2	244,3	262,2	281,8	299,3
	Total air flow	m³/h	169440	190620	190620	211800	254160	254160	254160	254160	254160
	EER (1)	kW/kW	2,72	2,82	2,68	2,78	2,97	2,87	2,78	2,75	2,70
	Sound power level [Lw] (2)	dB(A)	86,5	86,8	87,3	87,3	88,9	89,4	90,0	90,3	90,9
	Average sound pressure level [Lpm] (3)	dB(A)	66,5	66,3	66,8	66,8	67,9	68,5	69,1	69,3	69,9
LNO KIT 85%	**Cooling capacity (1)**	kW	**513**	**535**	**586**	**601**	**653**	**686**	**712**	**756**	**789**
	Unit power input	kW	198,1	198,9	230,7	225,9	228,3	248,6	268,7	287,5	307,0
	Total air flow	m³/h	144024	162027	162027	180030	216036	216036	216036	216036	216036
	EER (1)	kW/kW	2,59	2,69	2,54	2,66	2,86	2,76	2,65	2,63	2,57
	Sound power level [Lw] (2)	dB(A)	85,9	86,0	86,7	86,7	87,9	88,7	89,4	89,8	90,4
	Average sound pressure level [Lpm] (3)	dB(A)	65,9	65,5	66,2	66,2	66,9	67,7	68,5	68,8	69,5
LNO KIT 70%	**Cooling capacity (1)**	kW	**494**	**518**	**565**	**581**	**635**	**667**	**688**	**728**	**760**
	Unit power input	kW	205,8	205,6	241,5	233,3	235,2	256,5	277,4	298,4	320,7
	Total air flow		118608	133434	133434	148260	177912	177912	177912	177912	177912
	EER (1)	kW/kW	2,40	2,52	2,34	2,49	2,70	2,60	2,48	2,44	2,37
	Sound power level [Lw] (2)	dB(A)	85,6	85,7	86,5	86,5	87,4	88,3	89,1	89,5	90,2
	Average sound pressure level [Lpm] (3)	dB(A)	65,6	65,1	65,9	65,9	66,4	67,3	68,1	68,6	69,3
ELN KIT	**Cooling capacity (1)**	kW	**494**	**518**	**565**	**581**	**635**	**667**	**688**	**728**	**760**
	Unit power input	kW	205,8	205,6	241,5	233,3	235,2	256,5	277,4	298,4	320,7
	Total air flow		118608	133434	133434	148260	177912	177912	177912	177912	177912
	EER (1)	kW/kW	2,40	2,52	2,34	2,49	2,70	2,60	2,48	2,44	2,37
	Sound power level [Lw] (2)	dB(A)	83,6	83,7	84,5	84,5	85,4	86,3	87,1	87,5	88,2
	Average sound pressure level [Lpm] (3)	dB(A)	63,6	63,1	63,9	63,9	64,4	65,3	66,1	66,6	67,3

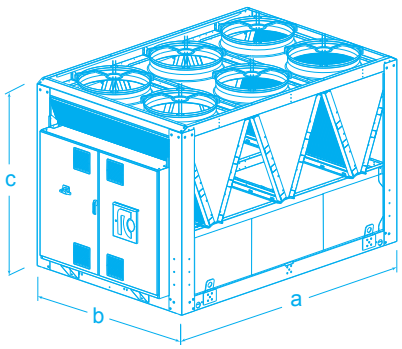
1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)



SIZE W

	a	b	c
WL	2445	1750	2110
WH	2445	1750	2410



SIZE VT

	a	b	c
VT2	2410	2260	2304
VT3	3530	2260	2304
VT4	4650	2260	2304
VT5	5770	2260	2304
VT6	6890	2260	2304

PYXIS CLA: Packaged air cooled liquid chillers in A class energy efficiency for outdoor installation, equipped with scroll compressor and microchannel condensing coils
Cooling Capacity: **108 ÷ 876 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

A-CLASS
RC Hi-Tech

NEW
RC Hi-Tech

pyxis cla

rcgroupairconditioning

R410A PLATE SHELL A/C

MAIN FEATURES

- Air cooled liquid chiller in A class energy efficiency.
- 31 models available, for a wide selection opportunity.
- Average step of 25kW.
- EER up to 3,21.
- ESEER up to 4,69.
- Latest generation scroll compressors.
- R410A Refrigerant charge.
- Units with one, two, three or four refrigerant circuits.
- Plate type or shell and tube heat exchangers.
- AC Axial fans.
- Electronic expansion valve.
- Units with one, two, three or four air circuits.
- Modular construction
- Suitable for outdoor installation.

MAIN BENEFITS

- Two compressors for each refrigerant circuit to reach high efficiency.
- Units with one, two, three or four refrigerant circuits.
- Microchannel condensing coils in aluminium.
- Low refrigerant charge.
- High EER and ESEER. A Class energy efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups with low, medium, high discharge head.
- Availability of total or partial heat recovery system.
- Availability of EC fans with available external static pressure.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

MICROCHANNEL CONDENSING COILS

The coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity. The reduced air resistance of the micro-channel coils allows to drastically reduce the fans motors electric energy consumption. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.

ELECTRONIC EXPANSION VALVE

The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

A CLASS ENERGY EFFICIENCY

The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002.

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

Up to model 430 P4 D VT4 included:

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control, factory assembled, for machines size “W”.
- Water flow switch for water flow control, not installed but supplied in kit, for machine size “VT”.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater for machine size.

From model 455 P6 T VT5 included:

- Shell and tube evaporator optimized for R410A refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Refrigerant/Hydraulic circuit:
  - o Water side:
    - Single circuit
  - o Refrigerant side
    - Three circuits from 455 P6 T VT5 model to 646 P6 T VT6 model, both included (T version)
    - Four circuits for the remaining models (Q version)
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow switch for water flow control, not installed but supplied in kit.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater.

CONDENSING COIL

- Microchannel condensing coil in aluminium and they are perfectly suitable for the civil and industrial applications cooling, while the protection function of the oxide layer allows an optimum resistance to corrosion also in case of aggressive ambient conditions.
- Extremely light construction. The coil weight is only 50% compared to traditional copper pipes and aluminium fins of the same capacity.
- Low air side pressure drop and consequentially drastic reduction of the fans motors electric energy consumption.
- High heat exchange efficiency.
- Reduced internal volume capable of reducing the total refrigerant charge. At the same performances conditions, the micro-channels condensers require up-to less than 75% refrigerant when compared to the traditional heat exchangers.
- Frame in painted galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Electronic expansion valve. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for compressors.
- Magnetothermic switch for each fan and water pump (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply:
  - 400/3/50+N for machine size “WL e WH”;
  - 400/3/50 for machine size “VT”.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic symbol for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

PYXIS CLA SIZE	106 P2 S WL	128 P4 D WL	132 P2 S WL	140 P4 D WL	153 P4 D WH	164 P4 D WH	168 P2 S WH	168 P2 D WH	184 P4 D WH	190 P4 D VT2	214 P4 D VT2
722 - Low discharge head single pump	●	●	●	●	●	●	●	●	●	●	●
723 - Low discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●
720 - Medium discharge head single pump	●	●	●	●	●	●	●	●	●	●	●
721 - Medium discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●
719 - Pumping group, 1 pump high pressure	●	●	●	●	●	●	●	●	●	●	●
724 - Pumping group, 2 pumps high pressure	●	●	●	●	●	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	●	●	●	●	●	●	●	●	●	●	●
728 - Water tank+2 pumps with low discharge head	●	●	●	●	●	●	●	●	●	●	●
725 - Water tank+1 pump with medium discharge head	●	●	●	●	●	●	●	●	●	●	●
726 - Water tank+2 pumps with medium discharge head	●	●	●	●	●	●	●	●	●	●	●
729 - Water tank+1 pump with high discharge head	●	●	●	●	●	●	●	●	●	●	●
730 - Water tank+2 pumps with medium discharge head	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	-	-	-	-	-	-	-	-	-	●	●
460 - Shell and tube evaporator for low temperature	-	-	-	-	-	-	-	-	-	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●
252 - Metal protection grill	-	-	-	-	-	-	-	-	-	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	-	-	-	-	-	-	-	-	-	●	●
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

PYXIS CLA	236 P4 D	270 P4 D	304 P4 D	340 P4 D	374 P4 D	390 P4 D	410 P4 D	430 P4 D	455 P6 T	504 P6 D	530 P6 T
SIZE	VT2	VT3	VT3	VT3	VT4	VT4	VT4	VT4	VT5	VT5	VT5
722 - Low discharge head single pump	●	●	●	●	●	●	●	●	●	●	●
723 - Low discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●
720 - Medium discharge head single pump	●	●	●	●	●	●	●	●	●	●	●
721 - Medium discharge head twin pump	●	●	●	●	●	●	●	●	●	●	●
719 - Pumping group, 1 pump high pressure	●	●	●	●	●	●	●	●	●	●	●
724 - Pumping group, 2 pumps high pressure	●	●	●	●	●	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	●	●	●	●	●	●	●	●	-	-	-
728 - Water tank+2 pumps with low discharge head	●	●	●	●	●	●	●	●	-	-	-
725 - Water tank+1 pump with medium discharge head	●	●	●	●	●	●	●	●	-	-	-
726 - Water tank+2 pumps with medium discharge head	●	●	●	●	●	●	●	●	-	-	-
729 - Water tank+1 pump with high discharge head	●	●	●	●	●	●	●	●	-	-	-
730 - Water tank+2 pumps with medium discharge head	●	●	●	●	●	●	●	●	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	-	-	-
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	-	-	-
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	-	-	-
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	-	-	-
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	-	-	-
459 - Shell and tube evaporator	●	●	●	●	●	●	●	●	-	-	-
460 - Shell and tube evaporator for low temperature	●	●	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●
252 - Metal protection grill	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	●	●	●	-	-	-
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
217 - Double safety valve	●	●	●	●	●	●	●	●	●	●	●
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

PYXIS CLA	550 P6 T	584 P6 T	604 P6 T	646 P6 T	670 P8 Q	726 P8 Q	780 P8 Q	820 P8 Q	860 P8 Q
SIZE	VT5	VT6	VT6	VT6	VT6	VT7	VT7	VT8	VT8
722 - Low discharge head single pump	●	●	●	●	●	●	●	●	●
723 - Low discharge head twin pump	●	●	●	●	●	●	●	●	●
720 - Medium discharge head single pump	●	●	●	●	●	●	●	●	●
721 - Medium discharge head twin pump	●	●	●	●	●	●	●	●	●
719 - Pumping group, 1 pump high pressure	●	●	●	●	●	●	●	●	●
724 - Pumping group, 2 pumps high pressure	●	●	●	●	●	●	●	●	●
727 - Water tank+ 1 pump with low discharge head	-	-	-	-	-	-	-	-	-
728 - Water tank+2 pumps with low discharge head	-	-	-	-	-	-	-	-	-
725 - Water tank+1 pump with medium discharge head	-	-	-	-	-	-	-	-	-
726 - Water tank+2 pumps with medium discharge head	-	-	-	-	-	-	-	-	-
729 - Water tank+1 pump with high discharge head	-	-	-	-	-	-	-	-	-
730 - Water tank+2 pumps with medium discharge head	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	-	-	-	-	-	-	-	-	-
454 - Voltage free contact for total heat recovery water pump activation	-	-	-	-	-	-	-	-	-
Selection switch for operation mode for total heat recovery	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-
459 - Shell and tube evaporator	-	-	-	-	-	-	-	-	-
460 - Shell and tube evaporator for low temperature	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●
350 -Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●
252 - Metal protection grill	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	-	-	-	-	-	-	-	-	-
Supply network control relay	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●
Magnetothermic switch for each compressor	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●
Service valve on compressor group discharge	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●
217 - Double safety valve	●	●	●	●	●	●	●	●	●
Pressure gauge on high and low pressure	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA PYXIS CLA

	PYXIS CLA		106 P2 S	128 P4 D	132 P2 S	140 P4 D	153 P4 D	164 P4 D	168 P2 S	168 P2 D
	SIZE		WL	WL	WL	WL	WH	WH	WH	WH
STANDARD	**Cooling capacity (1)**	kW	**108**	**124**	**134**	**139**	**152**	**164**	**170**	**171**
	Unit power input	kW	34,6	39,2	42,8	44,4	47,8	52,6	54,5	54,8
	Evaporator water flow rate	m³/h	18,6	21,4	23,0	23,9	26,1	28,2	29,2	29,4
	Evaporator pressure drop	kPa	33	46	34	39	46	42	25	34
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	4	2	4	4	4	2	2
	Capacity steps	n.	2	4	2	4	4	4	2	2
	Axial fans	n.	4	6	6	6	6	6	6	6
	Total air flow	m³/h	38940	53340	53340	53340	59300	59300	59300	59300
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	1	2	1	2	2	2	1	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	12,0	12,0	12,4	12,1	23,3	24,1	21,3	24,3
	Gas circuits	n.	1	2	1	2	2	2	1	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	90,9	107,9	104,9	131,9	137,9	143,9	138,9	138,9
	Unit starting current (LRA)	A	313,9	200,9	328,9	240,9	277,9	283,9	382,9	382,9
	EER - Eurovent standard (1)	kW/kW	3,12	3,16	3,13	3,13	3,18	3,12	3,12	3,12
	ESEER		4,27	4,59	4,23	4,57	4,55	4,55	4,35	4,68
	Sound power level [Lw] (2)	dB(A)	84,5	82,7	86,5	83,1	83,7	83,9	86,9	86,9
	Average sound pressure level [L_{Pm}] (3)	dB(A)	66,3	64,5	68,4	64,9	65,1	65,3	68,4	68,4
	Net weight	kg	1250	1310	1390	1330	1300	1440	1540	1530
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	73,1	73,1	73,1	73,1	73,1	73,1	73,1	73,1
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**39,7**	**45,7**	**49,1**	**51,1**	**55,7**	**60,4**	**62,3**	**62,7**
	Total heat recovery-Heating capacity(6)	kW	**138**	**157**	**170**	**178**	**193**	**211**	**218**	**218**
	EC axial fans-Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Pumping group									
	Low discharge head - Power input	kW	1,5	1,5	1,5	1,5	1,5	1,5	1,5	1,5
	Medium discharge head - Power input	kW	2,2	2,2	2,2	2,2	2,2	2,2	2,2	2,2
	High discharge head - Power input	kW	3,3	3,3	3,3	3,3	3,3	3,3	3,3	3,3
	Water tank - volume	l	200	200	200	200	200	200	200	200
LNO KIT 100%	**Cooling capacity (1)**	kW	**108**	**124**	**134**	**139**	**152**	**164**	**170**	**171**
	Unit power input	kW	34,6	39,2	42,8	44,4	47,8	52,6	54,5	54,6
	Total air flow	m³/h	38940	53340	53340	53340	59300	59300	59300	59300
	EER - Eurovent standard (1)	kW/kW	3,12	3,16	3,13	3,13	3,18	3,12	3,12	3,13
	Sound power level [Lw] (2)	dB(A)	78,2	77,1	80,1	77,4	77,9	78,1	80,6	80,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	60,1	58,9	62,0	59,2	59,4	59,5	62,0	62,0
LNO KIT 85%	**Cooling capacity (1)**	kW	**106**	**122**	**131**	**136**	**149**	**161**	**166**	**167**
	Unit power input	kW	35,5	39,9	43,5	45,3	48,7	53,7	55,7	56,0
	Total air flow	m³/h	33099	45339	45339	45339	50405	50405	50405	50405
	EER - Eurovent standard (1)	kW/kW	2,99	3,06	3,01	3,00	3,06	3,00	2,98	2,98
	Sound power level [Lw] (2)	dB(A)	77,0	74,6	79,1	75,1	75,8	76,0	79,5	79,5
	Average sound pressure level [L_{Pm}] (3)	dB(A)	58,8	56,4	60,9	56,9	57,2	57,4	60,9	60,9
LNO KIT 70%	**Cooling capacity (1)**	kW	**102**	**119**	**128**	**132**	**145**	**156**	**161**	**162**
	Unit power input	kW	36,6	41,2	44,6	47,0	50,2	55,5	58,1	58,3
	Total air flow		27258	37338	37338	37338	41510	41510	41510	41510
	EER - Eurovent standard (1)	kW/kW	2,79	2,89	2,87	2,81	2,89	2,81	2,77	2,78
	Sound power level [Lw] (2)	dB(A)	76,2	72,7	78,5	73,4	74,2	74,6	78,9	78,9
	Average sound pressure level [L_{Pm}] (3)	dB(A)	58,1	54,5	60,3	55,2	55,6	56,0	60,3	60,3
ELN KIT	**Cooling capacity (1)**	kW	**102**	**119**	**128**	**132**	**145**	**156**	**161**	**162**
	Unit power input	kW	36,6	41,2	44,6	47,0	50,2	55,5	58,1	58,3
	Total air flow		27258	37338	37338	37338	41510	41510	41510	41510
	EER - Eurovent standard (1)	kW/kW	2,79	2,89	2,87	2,81	2,89	2,81	2,77	2,78
	Sound power level [Lw] (2)	dB(A)	74,2	70,7	76,5	71,4	72,2	72,6	76,9	76,9
	Average sound pressure level [L_{Pm}] (3)	dB(A)	56,1	52,5	58,3	53,2	53,6	54,0	58,3	58,3

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS CLA

	PYXIS CLA		184 P4 D	190 P4 D	214 P4 D	236 P4 D	270 P4 D	304 P4 D	340 P4 D	374 P4 D
	SIZE		WH	VT2	VT2	VT2	VT3	VT3	VT3	VT4
STANDARD	**Cooling capacity (1)**	kW	**185**	**189**	**218**	**235**	**271**	**308**	**344**	**372**
	Unit power input	kW	59,5	60,6	70,8	74,4	86,9	98,7	109,9	118,5
	Evaporator water flow rate	m³/h	31,8	32,4	37,5	40,3	46,6	52,9	59,0	63,9
	Evaporator pressure drop	kPa	35	43	38	38	33	43	35	41
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	4	4	4	4	4	4
	Capacity steps	n.	4	4	4	4	4	4	4	4
	Axial fans	n.	6	4	4	4	6	6	6	8
	Total air flow	m³/h	59300	84720	84720	84720	127080	127080	127080	169440
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	25,0	19,0	19,4	20,2	27,8	27,8	28,3	36,2
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	155,9	163,6	180,6	192,6	217,4	251,4	285,4	310,2
	Unit starting current (LRA)	A	266,9	348,6	404,6	416,6	441,4	495,4	529,4	635,2
	EER - Eurovent standard (1)	kW/kW	3,11	3,12	3,08	3,16	3,12	3,12	3,13	3,14
	ESEER		4,32	4,45	4,49	4,37	4,41	4,53	4,53	4,37
	Sound power level [Lw] (2)	dB(A)	85,7	94,5	96,7	97,8	99,7	99,7	99,7	101,6
	Average sound pressure level [LPm] (3)	dB(A)	67,1	75,7	77,9	79,0	80,2	80,2	80,2	81,6
	Net weight	kg	1390	1700	1740	1930	2250	2300	2340	2640
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	73,1	88,9	88,9	88,9	88,9	88,9	88,9	114,3
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**68,0**	**69,2**	**80,0**	**86,1**	**99,6**	**113,0**	**126,0**	**137,0**
	Total heat recovery-Heating capacity(6)	kW	**241**	**238**	**278**	**303**	**341**	**391**	**441**	**468**
	EC axial fans-Max external static pressure	Pa	0	80	80	80	80	80	80	80
	Pumping group									
	Low discharge head - Power input	kW	1,5	3,0	3,0	3,0	3,0	3,0	3,0	4,0
	Medium discharge head - Power input	kW	2,2	4,0	4,0	4,0	4,0	4,0	4,0	5,5
	High discharge head - Power input	kW	3,3	5,5	5,5	5,5	5,5	5,5	5,5	7,5
	Water tank - volume	l	200	130	130	130	190	190	190	330
LNO KIT 100%	**Cooling capacity (1)**	kW	**185**	**189**	**218**	**235**	**271**	**308**	**344**	**372**
	Unit power input	kW	59,3	60,6	69,9	76,3	85,8	98,7	109,9	118,1
	Total air flow	m³/h	59300	84720	84720	84720	127080	127080	127080	169440
	EER - Eurovent standard (1)	kW/kW	3,12	3,12	3,12	3,08	3,16	3,12	3,13	3,15
	Sound power level [Lw] (2)	dB(A)	79,5	81,6	82,6	83,2	85,0	85,0	85,0	86,5
	Average sound pressure level [LPm] (3)	dB(A)	60,9	62,8	63,8	64,4	65,5	65,5	65,5	66,5
LNO KIT 85%	**Cooling capacity (1)**	kW	**181**	**186**	**214**	**230**	**267**	**302**	**337**	**366**
	Unit power input	kW	60,9	61,2	70,9	77,7	86,4	99,7	112,3	118,1
	Total air flow	m³/h	50405	72012	72012	72012	108018	108018	108018	144024
	EER - Eurovent standard (1)	kW/kW	2,97	3,04	3,02	2,96	3,09	3,03	3,00	3,10
	Sound power level [Lw] (2)	dB(A)	78,1	79,5	81,0	81,8	83,6	83,6	83,6	85,4
	Average sound pressure level [LPm] (3)	dB(A)	59,5	60,6	62,2	63,0	64,2	64,2	64,2	65,4
LNO KIT 70%	**Cooling capacity (1)**	kW	**174**	**181**	**208**	**222**	**261**	**295**	**326**	**358**
	Unit power input	kW	63,7	62,4	72,7	80,1	87,9	102,1	114,8	120,1
	Total air flow		41510	59304	59304	59304	88956	88956	88956	118608
	EER - Eurovent standard (1)	kW/kW	2,73	2,90	2,86	2,77	2,97	2,89	2,84	2,98
	Sound power level [Lw] (2)	dB(A)	77,3	78,0	80,0	81,0	82,9	82,9	82,9	84,8
	Average sound pressure level [LPm] (3)	dB(A)	58,7	59,2	61,2	62,2	63,4	63,4	63,4	64,7
ELN KIT	**Cooling capacity (1)**	kW	**174**	**181**	**208**	**222**	**261**	**295**	**326**	**358**
	Unit power input	kW	63,7	62,4	72,7	80,1	87,9	102,1	114,8	120,1
	Total air flow		41510	59304	59304	59304	88956	88956	88956	118608
	EER - Eurovent standard (1)	kW/kW	2,73	2,90	2,86	2,77	2,97	2,89	2,84	2,98
	Sound power level [Lw] (2)	dB(A)	75,3	76,0	78,0	79,0	80,9	80,9	80,9	82,8
	Average sound pressure level [LPm] (3)	dB(A)	56,7	57,2	59,2	60,2	61,4	61,4	61,4	62,7

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS CLA

	PYXIS CLA		390 P4 D	410 P4 D	430 P4 D	455 P6 T	504 P6 T	530 P6 T	550 P6 T	584 P6 T
	SIZE		VT4	VT4	VT4	VT5	VT5	VT5	VT5	VT6
STANDARD	**Cooling capacity (1)**	kW	**394**	**413**	**438**	**471**	**523**	**539**	**563**	**593**
	Unit power input	kW	126,3	132,4	140,4	147,6	162,9	173,9	181,0	190,7
	Evaporator water flow rate	m³/h	67,6	70,9	75,2	80,9	89,8	92,6	96,7	102,0
	Evaporator pressure drop	kPa	35	39	38	38	36	38	41	44
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	4	6	6	6	6	6
	Capacity steps	n.	4	4	4	6	6	6	6	6
	Axial fans	n.	8	8	8	10	10	10	10	12
	Total air flow	m³/h	169440	169440	169440	211800	211800	211800	211800	254160
	Max external static pressure	Pa	0	0	0	0	0	0	0	0
	Air circuits	n.	2	2	2	3	3	3	3	3
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	36,2	36,3	36,3	41,7	42,4	46,6	46,6	54,4
	Gas circuits	n.	2	2	2	3	3	3	3	3
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	327,2	344,2	361,2	381,0	431,0	449,0	466,0	490,8
	Unit starting current (LRA)	A	652,2	670,2	687,2	625,0	676,0	774,0	791,0	815,8
	EER - Eurovent standard (1)	kW/kW	3,12	3,12	3,12	3,19	3,21	3,10	3,11	3,11
	ESEER		4,40	4,43	4,48	4,55	4,69	4,56	4,60	4,48
	Sound power level [Lw] (2)	dB(A)	102,6	103,4	104,1	102,5	102,5	103,4	104,2	105,3
	Average sound pressure level [L_{Pm}] (3)	dB(A)	82,6	83,4	84,1	82,0	82,0	82,9	83,7	84,3
	Net weight	kg	2690	2710	2730	3620	3820	3840	3860	4180
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	114,3	114,3	114,3	168,3	219,1	219,1	219,1	219,1
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**145,0**	**152,0**	**161,0**	**173,0**	**192,0**	**198,0**	**207,0**	**218,0**
	Total heat recovery-Heating capacity(6)	kW	**499**	**525**	**559**	**--**	**--**	**--**	**--**	**--**
	EC axial fans-Max external static pressure	Pa	80	80	80	80	80	80	80	80
	Pumping group									
	Low discharge head - Power input	kW	4,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
	Medium discharge head - Power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
	High discharge head - Power input	kW	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
	Water tank - volume	l	330	330	330	--	--	--	--	--
LNO KIT 100%	**Cooling capacity (1)**	kW	**394**	**413**	**438**	**471**	**523**	**539**	**563**	**593**
	Unit power input	kW	125,9	132,4	140,4	147,6	162,9	173,9	181,0	190,7
	Total air flow	m³/h	169440	169440	169440	211800	211800	211800	211800	254160
	EER - Eurovent standard (1)	kW/kW	3,13	3,12	3,12	3,19	3,21	3,10	3,11	3,11
	Sound power level [Lw] (2)	dB(A)	87,2	87,8	88,3	87,4	87,4	88,0	88,6	89,5
	Average sound pressure level [L_{Pm}] (3)	dB(A)	67,2	67,8	68,3	66,9	66,9	67,5	68,1	68,6
LNO KIT 85%	**Cooling capacity (1)**	kW	**387**	**405**	**429**	**464**	**513**	**529**	**552**	**582**
	Unit power input	kW	127,3	134,1	141,6	148,2	165,0	175,2	183,4	191,4
	Total air flow	m³/h	144024	144024	144024	180030	180030	180030	180030	216036
	EER - Eurovent standard (1)	kW/kW	3,04	3,02	3,03	3,13	3,11	3,02	3,01	3,04
	Sound power level [Lw] (2)	dB(A)	86,2	87,0	87,6	86,3	86,3	87,1	87,7	88,8
	Average sound pressure level [L_{Pm}] (3)	dB(A)	66,2	66,9	67,6	65,7	65,7	66,5	67,2	67,8
LNO KIT 70%	**Cooling capacity (1)**	kW	**377**	**394**	**416**	**453**	**499**	**514**	**535**	**568**
	Unit power input	kW	130,0	137,3	145,5	151,0	169,7	181,0	189,0	195,9
	Total air flow		118608	118608	118608	148260	148260	148260	148260	177912
	EER - Eurovent standard (1)	kW/kW	2,90	2,87	2,86	3,00	2,94	2,84	2,83	2,90
	Sound power level [Lw] (2)	dB(A)	85,7	86,5	87,2	85,6	85,6	86,5	87,3	88,4
	Average sound pressure level [L_{Pm}] (3)	dB(A)	65,7	66,5	67,2	65,1	65,1	66,0	66,8	67,4
ELN KIT	**Cooling capacity (1)**	kW	**377**	**394**	**416**	**453**	**499**	**514**	**535**	**568**
	Unit power input	kW	130,0	137,3	145,5	151,0	169,7	181,0	189,0	195,9
	Total air flow		118608	118608	118608	148260	148260	148260	148260	177912
	EER - Eurovent standard (1)	kW/kW	2,90	2,87	2,86	3,00	2,94	2,84	2,83	2,90
	Sound power level [Lw] (2)	dB(A)	83,7	84,5	85,2	83,6	83,6	84,5	85,3	86,4
	Average sound pressure level [L_{Pm}] (3)	dB(A)	63,7	64,5	65,2	63,1	63,1	64,0	64,8	65,4

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA PYXIS CLA

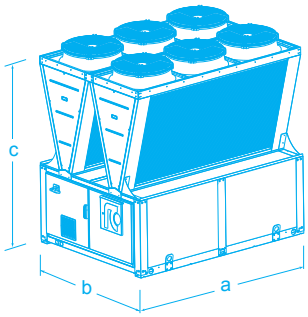
	PYXIS CLA		604 P6 T	646 P6 T	670 P8 Q	726 P8 Q	780 P8 Q	820 P8 Q	860 P8 Q
	SIZE		VT6	VT6	VT6	VT7	VT7	VT8	VT8
STANDARD	**Cooling capacity (1)**	kW	**614**	**655**	**691**	**743**	**769**	**832**	**876**
	Unit power input	kW	196,8	210,6	221,5	238,1	249,7	265,8	280,8
	Evaporator water flow rate	m³/h	105,0	112,0	119,0	128,0	132,0	143,0	150,0
	Evaporator pressure drop	kPa	47	52	32	40	42	37	39
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	6	6	8	8	8	8	8
	Capacity steps	n.	6	6	8	8	8	8	8
	Axial fans	n.	12	12	12	14	14	16	16
	Total air flow	m³/h	254160	254160	254160	296520	296520	338880	338880
	Max external static pressure	Pa	0	0	0	0	0	0	0
	Air circuits	n.	3	3	4	4	4	4	4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	54,4	54,4	56,6	64,6	64,7	72,5	72,6
	Gas circuits	n.	3	3	4	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	507,8	542,8	569,8	612,6	646,6	688,4	723,4
	Unit starting current (LRA)	A	833,8	867,8	814,8	937,6	971,6	1014,4	1048,4
	EER - Eurovent standard (1)	kW/kW	3,12	3,11	3,12	3,12	3,08	3,13	3,12
	ESEER		4,51	4,55	4,66	4,57	4,56	4,58	4,61
	Sound power level [Lw] (2)	dB(A)	105,9	106,8	104,5	107,8	106,9	108,1	108,8
	Average sound pressure level [LPm] (3)	dB(A)	84,9	85,9	83,2	86,4	85,6	86,4	87,1
	Net weight	kg	4200	4240	4860	4900	4940	5300	5340
	Hydraulic connections								
	Evaporator IN/OUT - OD (4)	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1	219,1
OPTIONAL	**Partial heat recovery-Heating capacity(5)**	kW	**225,0**	**240,0**	**253,0**	**273,0**	**282,0**	**305,0**	**321,0**
	Total heat recovery-Heating capacity(6)	kW	**--**	**--**	**--**	**--**	**--**	**--**	**--**
	EC axial fans-Max external static pressure	Pa	80	80	80	80	80	80	80
	Pumping group								
	Low discharge head - Power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5
	Medium discharge head - Power input	kW	11,0	11,0	11,0	11,0	11,0	11,0	11,0
	High discharge head - Power input	kW	15,0	15,0	15,0	15,0	15,0	15,0	15,0
	Water tank - volume	l	--	--	--	--	--	--	--
LNO KIT 100%	**Cooling capacity (1)**	kW	**614**	**655**	**691**	**743**	**769**	**832**	**876**
	Unit power input	kW	196,8	209,9	221,5	238,1	248,9	265,0	280,8
	Total air flow	m³/h	254160	254160	254160	296520	296520	338880	338880
	EER - Eurovent standard (1)	kW/kW	3,12	3,12	3,12	3,12	3,09	3,14	3,12
	Sound power level [Lw] (2)	dB(A)	90,0	90,7	89,2	91,6	90,9	92,0	92,6
	Average sound pressure level [LPm] (3)	dB(A)	69,0	69,8	67,8	70,2	69,6	70,3	70,8
LNO KIT 85%	**Cooling capacity (1)**	kW	**603**	**642**	**676**	**729**	**754**	**816**	**858**
	Unit power input	kW	199,0	211,9	225,3	240,6	253,0	268,4	283,2
	Total air flow	m³/h	216036	216036	216036	252042	252042	288048	288048
	EER - Eurovent standard (1)	kW/kW	3,03	3,03	3,00	3,03	2,98	3,04	3,03
	Sound power level [Lw] (2)	dB(A)	89,3	90,1	88,2	91,1	90,3	91,4	92,1
	Average sound pressure level [LPm] (3)	dB(A)	68,3	69,2	66,8	69,7	68,9	69,7	70,3
LNO KIT 70%	**Cooling capacity (1)**	kW	**587**	**623**	**655**	**709**	**731**	**794**	**833**
	Unit power input	kW	203,1	217,1	232,3	247,0	259,2	274,7	290,2
	Total air flow		177912	177912	177912	207564	207564	237216	237216
	EER - Eurovent standard (1)	kW/kW	2,89	2,87	2,82	2,87	2,82	2,89	2,87
	Sound power level [Lw] (2)	dB(A)	88,9	89,9	87,7	90,8	90,0	91,2	91,8
	Average sound pressure level [LPm] (3)	dB(A)	68,0	68,9	66,3	69,4	68,6	69,4	70,1
ELN KIT	**Cooling capacity (1)**	kW	**587**	**623**	**655**	**709**	**731**	**794**	**833**
	Unit power input	kW	203,1	217,1	232,3	247,0	259,2	274,7	290,2
	Total air flow		177912	177912	177912	207564	207564	237216	237216
	EER - Eurovent standard (1)	kW/kW	2,89	2,87	2,82	2,87	2,82	2,89	2,87
	Sound power level [Lw] (2)	dB(A)	86,9	87,9	85,7	88,8	88,0	89,2	89,8
	Average sound pressure level [LPm] (3)	dB(A)	66,0	66,9	64,3	67,4	66,6	67,4	68,1

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

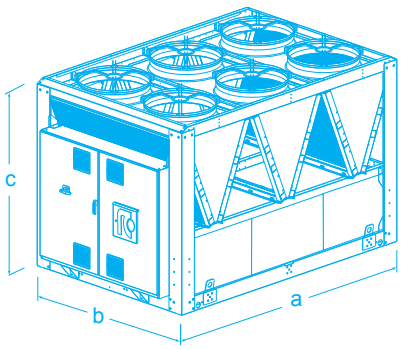
SIZE W

	a	b	c
WL	2445	1750	2110
WH	2445	1750	2410



SIZE VT

	a	b	c
VT2	2410	2260	2304
VT3	3530	2260	2304
VT4	4650	2260	2304
VT5	5770	2260	2304
VT6	6890	2260	2304
VT7	8010	2260	2304
VT8	9130	2260	2304



GLIDER EVO: Packaged air cooled liquid chillers for outdoor installation equipped with screw compressors and axial fans
Cooling Capacity: **300 ÷ 1313 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

glider evo

rcgroupairconditioning

R134a SHELL

MAIN FEATURES

- Air cooled liquid chiller.
- 20 models available, for a wide selection opportunity.
- Average step of 50kW.
- EER up to 2,78.
- ESEER up to 3,46.
- Twin-Screw compressors.
- R134a Refrigerant charge.
- Double refrigerant circuit.
- Shell and tube evaporator.
- AC Axial fans.
- Double air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS

- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of total or partial heat recovery system.
- Availability of EC fans for a higher efficiency.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

ELECTRONIC EXPANSION VALVE

The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated safety relief valve (overpressure inner valve).
- Replaceable cartridge oil filter.
- Valves for oil filling and discharge.
- Oil sight glass.
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay.
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting from model 300 V2 F06 to model 530 V2 F08 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 540 V2 F08 to model 1310 V2 F16 included.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR

- Single pass type shell and tube evaporator, optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Antifreeze heater.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSING COIL

- Heat exchanger coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control, with phase-cut electronic controller.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Component for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Energy reserve module for the electronic expansion valve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on compressor gas discharge.
- Double safety valve (only one in function) on high and low pressure side. The system include two safety valves with manual changeover system.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Pressure gauge on high and low pressure.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans.
- Fuses for water pumps (if scheduled).
- Contactors for each load.
- Compressor Part-Winding starting system from model 300 V2 F06 to model 530 V2 F08 included.
- Compressor Star / Delta starting system from model 540 V2 F08 to model 1310 V2 F16 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

GLIDER EVO SIZE	300 V2 F06	320 V2 F06	360 V2 F06	390 V2 F08	430 V2 F08	480 V2 F08	530 V2 F08	540 V2 F08	560 V2 F08	610 V2 F08	650 V2 F08
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
769 - Pumping group (1+1stby)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
770 - Pumping group (2+1stby)	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●
1005 - Oil flow switch	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

GLIDER EVO SIZE	710 V2 F10	770 V2 F10	850 V2 F10	910 V2 F12	950 V2 F12	1060 V2 F16	1120 V2 F16	1180 V2 F16	1310 V2 F16
739 - Pumping group (1 pump)	-	-	-	-	-	-	-	-	-
769 - Pumping group (1+1stby)	-	-	-	-	-	-	-	-	-
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●	●	●
770 - Pumping group (2+1stby)	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●
1005 - Oil flow switch	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA GLIDER EVO

	GLIDER EVO SIZE		300 V2 F06	320 V2 F06	360 V2 F06	390 V2 F08	430 V2 F08	480 V2 F08	530 V2 F08	540 V2 F08
STANDARD	**Cooling capacity (1)**	**kW**	**300**	**316**	**336**	**392**	**431**	**477**	**524**	**543**
	Unit power input	kW	107,9	114,5	128,2	141,0	155,6	173,5	189,2	196,7
	Evaporator water flow rate	m³/h	51,4	54,2	57,6	67,3	74,1	81,9	90,0	93,3
	Evaporator pressure drop	kPa	47	52	48	59	54	38	38	41
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	6	6	6	8	8	8	8	8
	Total air flow	m³/h	135498	135498	135498	180664	180664	180664	180664	177924
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	110	146	146	145	145	145	145	170
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	225,2	228,4	259,0	300,8	319,4	340,5	361,6	379,8
	Unit starting current (LRA)	A	427,3	405,9	492,2	661,0	670,3	821,3	842,4	557,4
	EER (1)	kW/kW	2,78	2,76	2,62	2,78	2,77	2,75	2,77	2,76
	ESEER		3,27	3,26	3,13	3,27	3,35	3,39	3,40	3,40
	Sound power level [Lw] (2)	dB(A)	92,9	91,4	91,8	91,9	96,2	96,4	96,7	96,7
	Average sound pressure level [Lpm] (3)	dB(A)	73,1	71,7	72,0	71,6	76,0	76,2	76,4	76,4
	Net weight	kg	3992	4258	4411	4544	4753	4890	5012	5117
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	141,3	141,3	141,3	168,3	168,3	168,3	168,3	168,3
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**59,5**	**62,7**	**66,7**	**77,8**	**85,6**	**94,7**	**104,0**	**108,0**
	Total heat recovery (6)									
	Heating capacity	**kW**	**394**	**417**	**451**	**515**	**570**	**633**	**699**	**726**
	Pumping group - Power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**300**	**316**	**336**	**392**	**431**	**477**	**524**	**543**
	Unit power input	kW	107,9	114,5	128,2	141,0	155,6	173,5	189,2	196,7
	Total air flow	m³/h	135498	135498	135498	180664	180664	180664	180664	177924
	EER (1)	kW/kW	2,74	2,73	2,59	2,74	2,72	2,73	2,73	2,73
	Sound power level [Lw] (2)	dB(A)	90,9	89,4	89,8	89,9	94,2	94,4	94,7	94,7
	Average sound pressure level [Lpm] (3)	dB(A)	71,1	69,7	70,0	69,6	74,0	74,2	74,4	74,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**296**	**312**	**331**	**387**	**422**	**467**	**513**	**531**
	Unit power input	kW	109,2	115,6	130,8	142,3	159,2	176,9	194,3	202,7
	Total air flow	m³/h	115173	115173	115173	153564	153564	153564	153564	151235
	EER (1)	kW/kW	2,71	2,7	2,53	2,72	2,65	2,64	2,64	2,62
	Sound power level [Lw] (2)	dB(A)	89,9	88,4	88,8	88,9	93,2	93,4	93,7	93,7
	Average sound pressure level [Lpm] (3)	dB(A)	70,1	68,7	69,0	68,6	73,0	73,2	73,4	73,4
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**290**	**306**	**323**	**379**	**410**	**453**	**497**	**513**
	Unit power input	kW	112,4	120,0	136,9	146,9	164,7	183,4	202,0	211,1
	Total air flow	m³/h	94848	94848	94848	126464	126464	126464	126464	124546
	EER (1)	kW/kW	2,58	2,55	2,36	2,58	2,49	2,47	2,46	2,43
	Sound power level [Lw] (2)	dB(A)	86,9	85,4	85,8	85,9	90,2	90,4	90,7	90,7
	Average sound pressure level [Lpm] (3)	dB(A)	67,1	65,7	66	65,6	70	70,2	70,4	70,4
ELN KIT	**Cooling capacity (1)**	**kW**	**290**	**306**	**323**	**379**	**410**	**453**	**497**	**513**
	Unit power input	kW	112,4	120,0	136,9	146,9	164,7	183,4	202,0	211,1
	Total air flow	m³/h	94848	94848	94848	126464	126464	126464	126464	124546
	EER (1)	kW/kW	2,58	2,55	2,36	2,58	2,49	2,47	2,46	2,43
	Sound power level [Lw] (2)	dB(A)	83,9	82,4	82,8	82,9	87,2	87,4	87,7	87,7
	Average sound pressure level [Lpm] (3)	dB(A)	64,1	62,7	63,0	62,6	67,0	67,2	67,4	67,4

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA GLIDER EVO

	GLIDER EVO		560 V2	610 V2	650 V2	710 V2	770 V2	850 V2	910 V2	950 V2
	SIZE		F08	F08	F08	F10	F10	F10	F12	F12
STANDARD	**Cooling capacity (1)**	**kW**	**562**	**611**	**647**	**709**	**771**	**855**	**908**	**952**
	Unit power input	kW	202,9	221,4	232,7	256,0	278,3	310,9	327,8	344,9
	Evaporator water flow rate	m³/h	96,6	105,0	111,0	122,0	132,0	147,0	156,0	164,0
	Evaporator pressure drop	kPa	45	51	56	63	73	55	63	71
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	8	8	8	9	10	10	12	12
	Total air flow	m³/h	175184	175184	175184	197082	218980	212690	262776	262776
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	194	194	194	241	241	302	289	289
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	398,0	421,6	445,2	479,2	513,2	574,8	614,2	662,2
	Unit starting current (LRA)	A	575,6	575,6	599,2	616,1	650,1	759,9	873,5	949,5
	EER (1)	kW/kW	2,77	2,76	2,78	2,77	2,77	2,75	2,77	2,76
	ESEER		3,40	3,40	3,44	3,40	3,37	3,43	3,39	3,39
	Sound power level [Lw] (2)	dB(A)	96,7	98,2	99,4	100,1	100,7	100,4	99,8	99,8
	Average sound pressure level [Lpm] (3)	dB(A)	76,4	78,0	79,2	79,4	80,0	79,7	78,8	78,8
	Net weight	kg	5221	5321	5241	6232	6517	7032	7354	7414
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	168,3	168,3	219,1	219,1	219,1	219,1
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**112,0**	**121,0**	**128,0**	**141,0**	**153,0**	**170,0**	**180,0**	**189,0**
	Total heat recovery (6)									
	Heating capacity	**kW**	**750**	**818**	**870**	**948**	**1031**	**1151**	**1214**	**1277**
	Pumping group - Power input	kW	5,5	5,5	5,5	11,0	11,0	11,0	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**562**	**611**	**647**	**709**	**771**	**855**	**908**	**952**
	Unit power input	kW	202,9	221,4	232,7	256,0	278,3	310,9	327,8	344,9
	Total air flow	m³/h	175184	175184	175184	197082	218980	212690	262776	262776
	EER (1)	kW/kW	2,77	2,76	2,78	2,77	2,77	2,75	2,77	2,76
	Sound power level [Lw] (2)	dB(A)	94,7	96,2	97,4	98,1	98,7	98,4	97,8	97,8
	Average sound pressure level [Lpm] (3)	dB(A)	74,4	76,0	77,2	77,4	78,0	77,7	76,8	76,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**550**	**596**	**630**	**691**	**752**	**831**	**886**	**930**
	Unit power input	kW	208,3	228,4	241,4	263,7	287,0	322,1	338,2	356,3
	Total air flow	m³/h	148906	148906	148906	167519	186133	180786	223359	223359
	EER (1)	kW/kW	2,64	2,61	2,61	2,62	2,62	2,58	2,62	2,61
	Sound power level [Lw] (2)	dB(A)	93,7	95,2	96,4	97,1	97,7	97,4	96,8	96,8
	Average sound pressure level [Lpm] (3)	dB(A)	73,4	75,0	76,2	76,4	77,0	76,7	75,8	75,8
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**531**	**574**	**604**	**665**	**724**	**795**	**855**	**896**
	Unit power input	kW	219,4	240,2	254,9	278,2	301,7	342,7	354,8	378,1
	Total air flow	m³/h	122628	122628	122628	137957	153286	148883	183943	183943
	EER (1)	kW/kW	2,42	2,39	2,37	2,39	2,4	2,32	2,41	2,37
	Sound power level [Lw] (2)	dB(A)	90,7	92,2	93,4	94,1	94,7	94,4	93,8	93,8
	Average sound pressure level [Lpm] (3)	dB(A)	70,4	72	73,2	73,4	74	73,7	72,8	72,8
ELN KIT	**Cooling capacity (1)**	**kW**	**531**	**574**	**604**	**665**	**724**	**795**	**855**	**896**
	Unit power input	kW	219,4	240,2	254,9	278,2	301,7	342,7	354,8	378,1
	Total air flow	m³/h	122628	122628	122628	137957	153286	148883	183943	183943
	EER (1)	kW/kW	2,42	2,39	2,37	2,39	2,4	2,32	2,41	2,37
	Sound power level [Lw] (2)	dB(A)	87,7	89,2	90,4	91,1	91,7	91,4	90,8	90,8
	Average sound pressure level [Lpm] (3)	dB(A)	67,4	69,0	70,2	70,4	71,0	70,7	69,8	69,8

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

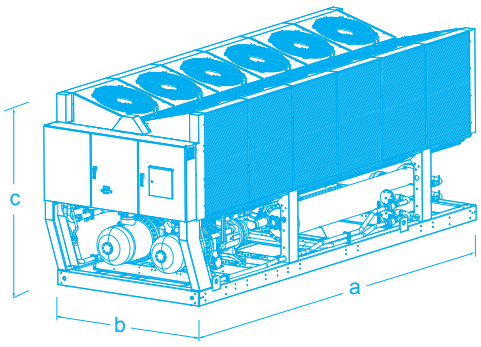
TECHNICAL DATA GLIDER EVO

	GLIDER EVO		1060 V2	1120 V2	1180 V2	1310 V2
	SIZE		F16	F16	F16	F16
STANDARD	**Cooling capacity (1)**	**kW**	**1065**	**1123**	**1184**	**1313**
	Unit power input	kW	387,3	406,9	427,4	475,7
	Evaporator water flow rate	m³/h	183,0	193,0	204,0	226,0
	Evaporator pressure drop	kPa	41	45	49	59
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	16	16	16	16
	Total air flow	m³/h	361328	361328	361328	350368
	Air circuits	n.	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	290	290	290	389
	Gas circuits	n.	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	772,0	816,0	860,0	958,4
	Unit starting current (LRA)	A	1120,2	1200,2	1244,2	1386,4
	EER (1)	kW/kW	2,75	2,76	2,77	2,76
	ESEER		3,40	3,44	3,46	3,44
	Sound power level [Lw] (2)	dB(A)	102,9	102,9	102,9	103,2
	Average sound pressure level [Lpm] (3)	dB(A)	81,1	81,1	81,1	81,4
	Net weight	kg	9491	9975	9995	10075
	Hydraulic connections					
	Evaporator IN/OUT - OD (4)	Ø mm	219,1	219,1	219,1	273
OPTIONAL	Partial heat recovery (5)					
	Heating capacity	**kW**	**212,0**	**223,0**	**235,0**	**261,0**
	Total heat recovery (6)					
	Heating capacity	**kW**	**1425**	**1511**	**1595**	**1770**
	Pumping group - Power input	kW	11,0	11,0	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**1065**	**1123**	**1184**	**1313**
	Unit power input	kW	387,3	406,9	427,4	475,7
	Total air flow	m³/h	361328	361328	361328	350368
	EER (1)	kW/kW	2,75	2,76	2,77	2,76
	Sound power level [Lw] (2)	dB(A)	100,9	100,9	100,9	101,2
	Average sound pressure level [Lpm] (3)	dB(A)	79,1	79,1	79,1	79,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**1042**	**1097**	**1154**	**1278**
	Unit power input	kW	396,2	418,7	440,5	493,4
	Total air flow	m³/h	307128	307128	307128	297812
	EER (1)	kW/kW	2,63	2,62	2,62	2,59
	Sound power level [Lw] (2)	dB(A)	99,9	99,9	99,9	100,2
	Average sound pressure level [Lpm] (3)	dB(A)	78,1	78,1	78,1	78,4
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**1008**	**1059**	**1111**	**1226**
	Unit power input	kW	413,1	435,8	462,9	519,5
	Total air flow	m³/h	252929	252929	252929	245257
	EER (1)	kW/kW	2,44	2,43	2,4	2,36
	Sound power level [Lw] (2)	dB(A)	96,9	96,9	96,9	97,2
	Average sound pressure level [Lpm] (3)	dB(A)	75,1	75,1	75,1	75,4
ELN KIT	**Cooling capacity (1)**	**kW**	**1008**	**1059**	**1111**	**1226**
	Unit power input	kW	413,1	435,8	462,9	519,5
	Total air flow	m³/h	252929	252929	252929	245257
	EER (1)	kW/kW	2,44	2,43	2,4	2,36
	Sound power level [Lw] (2)	dB(A)	93,9	93,9	93,9	94,2
	Average sound pressure level [Lpm] (3)	dB(A)	72,1	72,1	72,1	72,4

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature, according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE F	a	b	c
F06	3520	2260	2550
F08	4490	2260	2550
F10	5460	2260	2550
F12	6430	2260	2550
F16	8720	2260	2550



GLIDER EVO CLA: Packaged air cooled liquid chillers in “A” class energy efficiency for outdoor installation, equipped with screw compressors and axial fans
Cooling Capacity: **284 ÷ 1513 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

A-CLASS
RC Hi-Tech

glider evo cla

rcgroupairconditioning

R134a CLASS SHELL A C

MAIN FEATURES
- Air cooled liquid chiller.
- 26 models available, for a wide selection opportunity.
- Average step of 50kW.
- EER up to 3,39.
- ESEER up to 4,13.
- Twin-Screw compressors.
- R134a Refrigerant charge.
- Double refrigerant circuit.
- Shell and tube evaporator..
- AC Axial fans.
- Double air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS
- High EER, A class energy efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of total or partial heat recovery system.
- Availability of EC fans for a higher efficiency.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

A CLASS ENERGY EFFICIENCY
The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated safety relief valve (overpressure inner valve).
- Replaceable cartridge oil filter.
- Valves for oil filling and discharge.
- Oil sight glass.
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay.
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting from model 290 V2 F06 to model 570 V2 F10 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 620 V2 F10 to model 1510 V2 F24 included.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR

- Single pass type shell and tube evaporator, optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Antifreeze heater.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSING COIL

- Heat exchanger coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control, with phase-cut electronic controller.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Component for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Energy reserve module for the electronic expansion valve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on compressor gas discharge.
- Double safety valve (only one in function) on high and low pressure side. The system include two safety valves with manual changeover system.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Pressure gauge on high and low pressure.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans.
- Fuses for water pumps (if scheduled).
- Contactors for each load.
- Compressor Part-Winding starting system from model 290 V2 F06 to model 570 V2 F10 included.
- Compressor Star / Delta starting system from model 620 V2 F10 to model 1510 V2 F24 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

GLIDER EVO CLA SIZE	290 V2 F06	300 V2 F06	320 V2 F08	340 V2 F08	360 V2 F08	400 V2 F08	450 V2 F10	480 V2 F10	520 V2 F10	570 V2 F10	620 V2 F10
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
769 - Pumping group (1+1stby)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
770 - Pumping group (2+1stby)	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	-	-	-	-	-	-	-	-	-	-	-
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●
1005 - Oil flow switch	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

GLIDER EVO CLA SIZE	660 V2 F12	700 V2 F12	760 V2 F14	830 V2 F14	870 V2 F14	920 V2 F14	980 V2 F16	1020 V2 F16	1090 V2 F18	1150 V2 F20	1280 V2 F20
739 - Pumping group (1 pump)	●	●	-	-	-	-	-	-	-	-	-
769 - Pumping group (1+1stby)	●	●	-	-	-	-	-	-	-	-	-
740 - Pumping group (2 pumps)	-	-	●	●	●	●	●	●	●	●	●
770 - Pumping group (2+1stby)	-	-	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	-	-	-	-	-	-	-	-	-	-	-
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●
1005 - Oil flow switch	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

GLIDER EVO CLA SIZE	1350 V2 F20	1430 V2 F20	1470 V2 F22	1510 V2 F24
739 - Pumping group (1 pump)	-	-	-	-
769 - Pumping group (1+1stby)	-	-	-	-
740 - Pumping group (2 pumps)	●	●	●	●
770 - Pumping group (2+1stby)	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●
118 - Kit brine A	●	●	●	●
119 - Kit brine B	●	●	●	●
79 - Electrical panel heating system	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●
101 - EC fan	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●
450 - Desuperheater	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●
451 - 100% heat recovery	●	●	●	●
454 - Voltage free contact for total heat recovery water pump activation	●	●	●	●
Selection switch for operation mode for total heat recovery	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	●
351 - Coils with pre-painted fins	-	-	-	●
Condensing coil in special execution	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●
731 - Safety water flow switch	●	●	●	●
Analog flowmeter	●	●	●	●
650 - Compressor thermal relay	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●
Supply network control relay	●	●	●	●
83 - Compressor operation indicator	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●
1005 - Oil flow switch	●	●	●	●
85 - Demand limit	●	●	●	●
88 - Analog set point compensation	●	●	●	●
919 - Clock card	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●
926 - LON Serial board	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●
934 - MP.COM expansion card	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●
943 - Data Logger	●	●	●	●
Ambient temperature sensor	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●
962 - Kit modem GSM	●	●	●	●
957 - Plantwatch without modem	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA GLIDER EVO

	GLIDER EVO CLA SIZE		290 V2 F06	300 V2 F06	320 V2 F08	340 V2 F08	360 V2 F08	400 V2 F08	450 V2 F10	480 V2 F10
STANDARD	**Cooling capacity (1)**	**kW**	**284**	**300**	**320**	**340**	**358**	**399**	**446**	**472**
	Unit power input	kW	88,8	95,2	100,9	107,9	113,3	125,9	142,0	149,4
	Evaporator water flow rate	m³/h	48,8	51,5	54,9	58,5	61,5	68,5	76,6	81,1
	Evaporator pressure drop	kPa	30	17	19	21	17	13	17	17
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	6	6	7	8	8	8	10	10
	Total air flow	m³/h	131388	127614	153286	175184	170152	170152	212690	212690
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	74	74	96	96	96	145	120	181
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	186,8	202,6	217,8	233,0	236,2	266,8	308,6	327,2
	Unit starting current (LRA)	A	374,1	380,0	419,9	435,1	413,7	500,0	668,8	678,1
	EER (1)	kW/kW	3,20	3,15	3,17	3,15	3,16	3,17	3,14	3,16
	ESEER		3,26	3,76	4,13	4,13	4,06	3,79	3,73	3,77
	Sound power level [Lw] (2)	dB(A)	92,0	92,5	92,7	92,9	91,5	91,9	92,1	96,2
	Average sound pressure level [Lpm] (3)	dB(A)	72,3	72,8	72,5	72,7	71,3	71,7	71,4	75,5
	Net weight	kg	3738	4109	4515	4520	4697	4902	5428	5662
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	141,3	141,3	141,3	141,3	168,3	168,3	168,3	168,3
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**56,4**	**59,7**	**65,6**	**67,7**	**72,9**	**79,4**	**88,8**	**93,9**
	Total heat recovery (6)									
	Heating capacity	**kW**	**348**	**380**	**404**	**428**	**453**	**507**	**565**	**598**
	Pumping group - Power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**284**	**300**	**320**	**340**	**358**	**399**	**446**	**472**
	Unit power input	kW	88,8	95,2	100,9	107,9	113,3	125,9	142,0	149,4
	Total air flow	m³/h	131388	127614	153286	175184	170152	170152	212690	212690
	EER (1)	kW/kW	3,20	3,15	3,17	3,15	3,16	3,17	3,14	3,16
	Sound power level [Lw] (2)	dB(A)	90,0	90,5	90,7	90,9	89,5	89,9	90,1	94,2
	Average sound pressure level [Lpm] (3)	dB(A)	70,3	70,8	70,5	70,7	69,3	69,7	69,4	73,5
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**279**	**296**	**316**	**337**	**355**	**395**	**442**	**468**
	Unit power input	kW	88,6	96,4	101,3	107,7	113,8	127,4	142,1	150,0
	Total air flow	m³/h	111680	108472	130293	148906	144629	144629	180787	180787
	EER (1)	kW/kW	3,15	3,07	3,12	3,13	3,12	3,10	3,11	3,12
	Sound power level [Lw] (2)	dB(A)	89,0	89,5	89,7	89,9	88,5	88,9	89,1	93,2
	Average sound pressure level [Lpm] (3)	dB(A)	69,3	69,8	69,5	69,7	68,3	68,7	68,4	72,5
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**273**	**290**	**311**	**332**	**350**	**388**	**436**	**461**
	Unit power input	kW	88,9	99,0	103,0	108,9	115,1	130,2	143,9	152,1
	Total air flow	m³/h	91972	89330	107300	122629	119106	119106	148883	148883
	EER (1)	kW/kW	3,07	2,93	3,02	3,05	3,04	2,98	3,03	3,03
	Sound power level [Lw] (2)	dB(A)	86,0	86,5	86,7	86,9	85,5	85,9	86,1	90,2
	Average sound pressure level [Lpm] (3)	dB(A)	66,3	66,8	66,5	66,7	65,3	65,7	65,4	69,5
ELN KIT	**Cooling capacity (1)**	**kW**	**273**	**290**	**311**	**332**	**350**	**388**	**436**	**461**
	Unit power input	kW	88,9	99,0	103,0	108,9	115,1	130,2	143,9	152,1
	Total air flow	m³/h	91972	89330	107300	122629	119106	119106	148883	148883
	EER (1)	kW/kW	3,07	2,93	3,02	3,05	3,04	2,98	3,03	3,03
	Sound power level [Lw] (2)	dB(A)	83,0	83,5	83,7	83,9	82,5	82,9	83,1	87,2
	Average sound pressure level [Lpm] (3)	dB(A)	63,3	63,8	63,5	63,7	62,3	62,7	62,4	66,5

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA GLIDER EVO

	GLIDER EVO CLA		520 V2	570 V2	620 V2	660 V2	700 V2	760 V2	830 V2	870 V2
	SIZE		F10	F10	F10	F12	F12	F14	F14	F14
STANDARD	**Cooling capacity (1)**	**kW**	**518**	**566**	**615**	**656**	**696**	**762**	**828**	**873**
	Unit power input	kW	164,4	179,7	192,8	205,6	220,3	240,4	261,2	277,1
	Evaporator water flow rate	m³/h	89	97,1	106	113	120	131	142	150
	Evaporator pressure drop	kPa	17	24	49	33	38	44	51	56
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	10	10	10	11	12	13	14	14
	Total air flow	m³/h	212690	212690	212690	244303	262776	284674	306572	302169
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	181	181	181	217	217	252	252	295
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	348,3	369,4	405,8	433,3	460,8	494,8	528,8	559,6
	Unit starting current (LRA)	A	829,1	850,2	583,4	610,9	614,8	648,8	665,7	744,7
	EER (1)	kW/kW	3,15	3,15	3,19	3,19	3,16	3,17	3,17	3,15
	ESEER		3,76	3,77	3,76	3,82	3,76	3,74	3,74	3,72
	Sound power level [Lw] (2)	dB(A)	96,4	96,7	96,7	99,3	100,4	101,1	101,7	101,6
	Average sound pressure level [Lpm] (3)	dB(A)	75,8	76,0	76,0	78,2	79,4	79,7	80,3	80,1
	Net weight	kg	5999	6121	6112	6733	6743	7404	8139	8341,5
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	168,3	219,1	219,1	219,1	219,1	219,1
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**103,0**	**112,0**	**122,0**	**130,0**	**138,0**	**151,0**	**164,0**	**173,0**
	Total heat recovery (6)									
	Heating capacity	**kW**	**659**	**720**	**782**	**836**	**887**	**971**	**1053**	**1115**
	Pumping group - Power input	kW	5,5	5,5	5,5	5,5	5,5	11,0	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**518**	**566**	**615**	**656**	**696**	**762**	**828**	**873**
	Unit power input	kW	164,4	179,7	192,8	205,6	220,3	240,4	261,2	277,1
	Total air flow	m³/h	212690	212690	212690	244303	262776	284674	306572	302169
	EER (1)	kW/kW	3,15	3,15	3,19	3,19	3,16	3,17	3,17	3,15
	Sound power level [Lw] (2)	dB(A)	94,4	94,7	94,7	97,3	98,4	99,1	99,7	99,6
	Average sound pressure level [Lpm] (3)	dB(A)	73,8	74,0	74,0	76,2	77,4	77,7	78,3	78,1
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**513**	**557**	**606**	**645**	**686**	**751**	**815**	**859**
	Unit power input	kW	165,0	181,4	196,1	209,4	222,7	244,6	264,6	280,7
	Total air flow	m³/h	180787	180787	180787	207658	223360	241973	260586	256844
	EER (1)	kW/kW	3,11	3,07	3,09	3,08	3,08	3,07	3,08	3,06
	Sound power level [Lw] (2)	dB(A)	93,4	93,7	93,7	96,3	97,4	98,1	98,7	98,6
	Average sound pressure level [Lpm] (3)	dB(A)	72,8	73,0	73,0	75,2	76,4	76,7	77,3	77,1
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**506**	**545**	**591**	**629**	**670**	**733**	**796**	**837**
	Unit power input	kW	168,1	186,6	201,7	214,7	228,7	250,2	271,7	290,6
	Total air flow	m³/h	148883	148883	148883	171012	183943	199272	214600	211518
	EER (1)	kW/kW	3,01	2,92	2,93	2,93	2,93	2,93	2,93	2,88
	Sound power level [Lw] (2)	dB(A)	90,4	90,7	90,7	93,3	94,4	95,1	95,7	95,6
	Average sound pressure level [Lpm] (3)	dB(A)	69,8	70,0	70,0	72,2	73,4	73,7	74,3	74,1
ELN KIT	**Cooling capacity (1)**	**kW**	**506**	**545**	**591**	**629**	**670**	**733**	**796**	**837**
	Unit power input	kW	168,1	186,6	201,7	214,7	228,7	250,2	271,7	290,6
	Total air flow	m³/h	148883	148883	148883	171012	183943	199272	214600	211518
	EER (1)	kW/kW	3,01	2,92	2,93	2,93	2,93	2,93	2,93	2,88
	Sound power level [Lw] (2)	dB(A)	87,4	87,7	87,7	90,3	91,4	92,1	92,7	92,6
	Average sound pressure level [Lpm] (3)	dB(A)	66,8	67,0	67,0	69,2	70,4	70,7	71,3	71,1

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

TECHNICAL DATA GLIDER EVO

	GLIDER EVO CLA SIZE		920 V2 F14	980 V2 F16	1020 V2 F16	1090 V2 F18	1150 V2 F20	1280 V2 F20	1350 V2 F20	1430 V2 F20
STANDARD	**Cooling capacity (1)**	**kW**	**919**	**977**	**1024**	**1083**	**1154**	**1279**	**1355**	**1433**
	Unit power input	kW	290,8	306,3	320,0	341,6	364,0	398,4	426,1	452,1
	Evaporator water flow rate	m³/h	158	168	176	186	198	220	233	246
	Evaporator pressure drop	kPa	61	68	76	71	79	54	41	44
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	14	16	16	18	20	20	20	20
	Total air flow	m³/h	297766	350368	350368	401014	451660	437960	431670	425380
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	337	290	290	326	362	362	412	462
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	590,4	629,8	677,8	732,7	787,6	875,6	924,8	974
	Unit starting current (LRA)	A	775,5	889,1	965,1	1080,9	1135,8	1259,8	1352,8	1402
	EER (1)	kW/kW	3,16	3,19	3,20	3,17	3,17	3,21	3,18	3,17
	ESEER		3,71	3,72	3,74	3,74	3,72	3,80	3,83	3,81
	Sound power level [Lw] (2)	dB(A)	101,4	99,9	99,9	101,7	103,9	103,9	104,1	104,2
	Average sound pressure level [Lpm] (3)	dB(A)	80,0	78,1	78,1	79,5	81,5	81,5	81,7	81,8
	Net weight	kg	8544	9195	9318	10274	11180	11362	11972	12292
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	219,1	219,1	273	273	273	273	323,9	323,9
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**182,0**	**194,0**	**203,0**	**216,0**	**228,0**	**254,0**	**269,0**	**285,0**
	Total heat recovery (6)									
	Heating capacity	**kW**	**1176**	**1244**	**1306**	**1386**	**1466**	**1630**	**1735**	**1843**
	Pumping group - Power input	kW	11,0	11,0	11,0	11,0	11,0	11,0	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**919**	**977**	**1024**	**1083**	**1154**	**1279**	**1355**	**1433**
	Unit power input	kW	290,8	306,3	320,0	341,6	364,0	398,4	426,1	452,1
	Total air flow	m³/h	297766	350368	350368	401014	451660	437960	431670	425380
	EER (1)	kW/kW	3,16	3,19	3,2	3,17	3,17	3,21	3,18	3,17
	Sound power level [Lw] (2)	dB(A)	99,4	97,9	97,9	99,7	101,9	101,9	102,1	102,2
	Average sound pressure level [Lpm] (3)	dB(A)	78,0	76,1	76,1	77,5	79,5	79,5	79,7	79,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**903**	**962**	**1008**	**1066**	**1136**	**1257**	**1330**	**1405**
	Unit power input	kW	297,0	311,3	325,2	346,1	367,6	405,5	434,6	462,2
	Total air flow	m³/h	253101	297813	297813	340862	383911	372266	366920	361573
	EER (1)	kW/kW	3,04	3,09	3,10	3,08	3,09	3,10	3,06	3,04
	Sound power level [Lw] (2)	dB(A)	98,4	96,9	96,9	98,7	100,9	100,9	101,1	101,2
	Average sound pressure level [Lpm] (3)	dB(A)	77,0	75,1	75,1	76,5	78,5	78,5	78,7	78,8
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**879**	**940**	**985**	**1040**	**1109**	**1225**	**1292**	**1363**
	Unit power input	kW	307,3	319,7	336,2	356,2	377,2	418,1	450,2	481,6
	Total air flow	m³/h	208436	245258	245258	280710	316162	306572	302169	297766
	EER (1)	kW/kW	2,86	2,94	2,93	2,92	2,94	2,93	2,87	2,83
	Sound power level [Lw] (2)	dB(A)	95,4	93,9	93,9	95,7	97,9	97,9	98,1	98,2
	Average sound pressure level [Lpm] (3)	dB(A)	74,0	72,1	72,1	73,5	75,5	75,5	75,7	75,8
ELN KIT	**Cooling capacity (1)**	**kW**	**879**	**940**	**985**	**1040**	**1109**	**1225**	**1292**	**1363**
	Unit power input	kW	307,3	319,7	336,2	356,2	377,2	418,1	450,2	481,6
	Total air flow	m³/h	208436	245258	245258	280710	316162	306572	302169	297766
	EER (1)	kW/kW	2,86	2,94	2,93	2,92	2,94	2,93	2,87	2,83
	Sound power level [Lw] (2)	dB(A)	92,4	90,9	90,9	92,7	94,9	94,9	95,1	95,2
	Average sound pressure level [Lpm] (3)	dB(A)	71,0	69,1	69,1	70,5	72,5	72,5	72,7	72,8

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

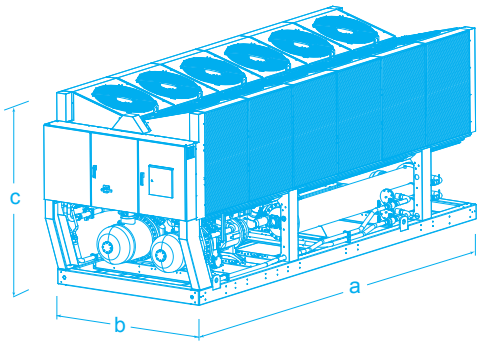
TECHNICAL DATA GLIDER EVO

	GLIDER EVO CLA SIZE		1470 V2 F22	1510 V2 F24
STANDARD	**Cooling capacity (1)**	**kW**	**1471**	**1513**
	Unit power input	kW	449,8	446,3
	Evaporator water flow rate	m³/h	253	260
	Evaporator pressure drop	kPa	35	35
	Compressors		twin-screw	twin-screw
	Quantity	n.	2	2
	Capacity control	%	25... 100%	25... 100%
	Axial fans	n.	22	24
	Total air flow	m³/h	467918	510456
	Air circuits	n.	2	2
	Refrigerant		R134a	R134a
	Total refrigerant charge (optional excluded)	kg	530	578
	Gas circuits	n.	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50
	Max unit operating current (FLA)	A	981,8	989,6
	Unit starting current (LRA)	A	1409,8	1417,6
	EER (1)	kW/kW	3,27	3,39
	ESEER		3,92	4,03
	Sound power level [Lw] (2)	dB(A)	104,2	104,2
	Average sound pressure level [Lpm] (3)	dB(A)	81,6	81,3
	Net weight	kg	12931	13090
	Hydraulic connections			
	Evaporator IN/OUT - OD (4)	Ø mm	323,9	323,9
OPTIONAL	Partial heat recovery (5)			
	Heating capacity	**kW**	**292,0**	**301,0**
	Total heat recovery (6)			
	Heating capacity	**kW**	**1869**	**1896**
	Pumping group - Power input	kW	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**1471**	**1513**
	Unit power input	kW	449,8	446,3
	Total air flow	m³/h	467918	510456
	EER (1)	kW/kW	3,27	3,39
	Sound power level [Lw] (2)	dB(A)	102,2	102,2
	Average sound pressure level [Lpm] (3)	dB(A)	79,6	79,3
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**1444**	**1488**
	Unit power input	kW	458,4	453,7
	Total air flow	m³/h	397730	433888
	EER (1)	kW/kW	3,15	3,28
	Sound power level [Lw] (2)	dB(A)	101,2	101,2
	Average sound pressure level [Lpm] (3)	dB(A)	78,6	78,3
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**1404**	**1452**
	Unit power input	kW	474,3	465,4
	Total air flow	m³/h	327543	357319
	EER (1)	kW/kW	2,96	3,12
	Sound power level [Lw] (2)	dB(A)	98,2	98,2
	Average sound pressure level [Lpm] (3)	dB(A)	75,6	75,3
ELN KIT	**Cooling capacity (1)**	**kW**	**1404**	**1452**
	Unit power input	kW	474,3	465,4
	Total air flow	m³/h	327543	357319
	EER (1)	kW/kW	2,96	3,12
	Sound power level [Lw] (2)	dB(A)	95,2	95,2
	Average sound pressure level [Lpm] (3)	dB(A)	72,6	72,3

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chiller water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C.
6. Referred to chiller water temperature 12/7°C; hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE F	a	b	c
F06	3520	2260	2550
F08	4490	2260	2550
F10	5460	2260	2550
F12	6430	2260	2550
F14	7400	2260	2550
F16	8720	2260	2550
F18	9690	2260	2550
F20	10660	2260	2550
F22	11630	2260	2550
F24	12600	2260	2550



UNICO TURBO FL: Packaged air cooled liquid chillers in “A” class energy efficiency for outdoor installation, equipped with oil-free centrifugal compressors with magnetic levitation bearings, flooded evaporator and microchannel condensing coils.
Cooling Capacity: **280 ÷ 1500 kW**

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

A-CLASS RC Hi-Tech

INVERTER RC Hi-Tech

LOW NOISE RC Hi-Tech

unico turbo FL

rcgroupairconditioning

A CLASS · INVERTER · OIL FREE · R134a · FLOODED · MICRO CHANNEL

MAIN FEATURES
- Air cooled liquid chiller in A class energy efficiency.
- 17 models available, for a wide selection opportunity.
- Average step of 70kW.
- EER up to 3,48.
- ESEER up to 5,88.
- Oil-free centrifugal compressors with magnetic levitation bearings driven by built-in inverter.
- R134a Refrigerant charge.
- Single refrigerant circuit.
- AC Axial fans.
- Flooded evaporator.
- Microchannel condensing coils in aluminium.
- Electronic expansion valve.
- Single air circuit.
- Modular construction.
- Suitable for outdoor installation.

MAIN BENEFITS
- Up to four centrifugal compressors with magnetic levitation bearings on the refrigerant circuit for an high efficiency.
- No need of power factor correction.
- Minimum starting current (LRA)
- Low refrigerant charge.
- Very high EER and ESEER. A Class energy efficiency.
- Quiet operation.
- Availability of kit for further reduction of the noise.
- Availability of EC fans for a higher efficiency.
- Availability of pumping groups.
- Microprocessor control system with 7” touch screen display.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

MAGNETIC LEVITATION CENTRIFUGAL COMPRESSOR
The TURBO FL liquid chillers are equipped with two-stage centrifugal compressor with variable speed, which is able to follow punctually plant demands, obtaining values of energy efficiency ratio (EER) growing in a narrowing of the cooling load. The compressors are equipped with magnetic levitation oil-free bearings which compared to traditional ball bearings, completely eliminate all the maintenance procedures of lubrication.

A CLASS ENERGY EFFICIENCY
The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: 4÷15°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002 textured.

COMPRESSORS

- Twin-turbine centrifugal compressor, oil-free type, optimized for R134a refrigerant. The term “oil-free” refers to the total absence of lubricating oil within the compressor
- Magnetic levitation bearings.
- Manometric compression ratio: 1.5 ÷ 5.0
- Stepless capacity control trough integrated inverter.
- High efficiency permanent-magnet synchronous motor with integrated Soft-Start system (starting current limited to 5A).
- Power factor motor cosφ > 0.9 for a large part of the operating range
- Motor and electronic power section cooling by liquid refrigerant injection into the integrated cooling circuit.
- Electric motor thermal protection via internal winding temperature sensors.
- Electronic integrated control for operation and alarms status.
- Sensor on refrigerant discharge for temperature monitoring.
- Inner sensors for electronic components and inverter temperature control.
- Security system to protect the crankshaft and magnetic bearings in the event of failure of power supply.
- Installation with walls sound attenuators
- Degree of protection: IP54.
- Electric resistance of the suction pipe, together with activated antifreeze evaporator, to prevent the migration of refrigerant inside the compressor.

EVAPORATOR

- Flooded shell and tube evaporator, optimized for R134a refrigerant.
- Version two passes, characterized by low pressure losses on the water side.
- Water tubes with a helical rifled internal surface.
- Integrated liquid drop separator.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow switch for water flow control.
- Large liquid level indicator
- Antifreeze heater.

CONDENSING COIL

- Microchannel condensing coil in aluminium.
- Single row
- Low air side pressure drop
- High efficiency of heat exchange.
- Reduced internal volume capable of containing the total refrigerant charge.
- High performance also in low noise structure,in combination of the fans listed below.
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- valve by-pass for start-up.
- Electronic by-pass valve for compressor start.
- Non return valve on by-pass line for compressor start.
- Economizer for model 280 T1E, 560 T2E, 810 T2E, 1070 T4E, 1120 T4E, 1200 T3E, 1500 T4E. The system includes:
  - Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
  - Anticondensate insulation made of polyurethane.
  - Intermediate electronic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Service valve on liquid line.
- Service valve on gas discharge.
- Non return valve on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection and cooling line of the compressor
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- Microprocessor system with “Touch Screen” graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are supplied as standard with counter flange.
- The hydraulic connections with grooved end are supplied as standard with flexible joint and adapter pipe.

OPTIONAL ACCESSORIES

UNICO TURBO FL SIZE	280 T1E VT3	340 T1 VT3	410 T2 VT4	490 T2 VT4	560 T2E VT5	680 T2 VT6	810 T2E VT7	740 T3 VT6	820 T3 VT7	900 T3 VT8	1200 T3E VT10
739 - Pumping group (1 pump)	-	-	●	●	●	●	-	●	-	-	-
769 - Pumping group (1+1stby)	-	-	●	●	●	●	-	●	-	-	-
740 - Pumping group (2 pumps)	-	-	-	-	-	-	●	-	●	●	●
770 - Pumping group (2+1stby)	-	-	-	-	-	-	●	-	●	●	●
756 - Pumping group LN (1 pump)	-	-	●	●	●	●	●	●	●	●	-
771 - Pumping group LN (1+1stby)	-	-	●	●	●	●	●	●	●	●	-
757 - Pumping group LN (2 pumps)	-	-	-	-	-	-	-	-	-	-	●
772 - Pumping group LN (2+1stby)	-	-	-	-	-	-	-	-	-	-	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
Active filters for containment of the harmonic distortion	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
179 - Double refrigerant circuit	-	-	-	-	-	-	-	-	-	-	-
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
350 - Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

UNICO TURBO FL SIZE	980 T4 VT8	1070 T4E VT9	1120 T4E VT10	1360 T4 VT11	1380 T4 VT12	1500 T4E VT12
739 - Pumping group (1 pump)	-	-	-	-	-	-
769 - Pumping group (1+1stby)	-	-	-	-	-	-
740 - Pumping group (2 pumps)	●	●	●	●	●	●
770 - Pumping group (2+1stby)	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	-	-	-	-
771 - Pumping group LN (1+1stby)	●	●	-	-	-	-
757 - Pumping group LN (2 pumps)	-	-	●	●	●	●
772 - Pumping group LN (2+1stby)	-	-	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●
Active filters for containment of the harmonic distortion	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●
179 - Double refrigerant circuit	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●
350 - Kit TK PRO corrosion resistant painting treatment	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA UNICO TURBO FL

	UNICO TURBO FL SIZE		280 T1E VT3	340 T1 VT3	410 T2 VT4	490 T2 VT4	560 T2E VT5	680 T2 VT6	810 T2E VT7	740 T3 VT6
STANDARD	**Cooling capacity (1)**	**kW**	**280**	**340**	**410**	**490**	**560**	**680**	**810**	**740**
	Unit power input	kW	81,2	99,7	121,3	152,2	171,3	204,2	252,3	212,6
	Evaporator water flow rate	m³/h	48,2	58,5	70,5	84,3	96,3	117,0	139,0	127,0
	Evaporator pressure drop	kPa	25	24	34	25	31	22	31	25
	Compressors		centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal
	Quantity	n.	1	1	2	2	2	2	2	3
	Cooling capacity control	%	55...100%	60...100%	37...100%	33...100%	28...100%	30...100%	26...100%	25...100%
	Axial fans	n.	6	6	8	8	10	12	14	12
	Total air flow	m³/h	145500	145500	194000	194000	242500	291000	339500	291000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	130	117	123	143	149	208	215	208
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	162,4	233,4	309,2	309,2	317,0	466,8	474,6	463,8
	Unit starting current (LRA)	A	28,4	28,4	41,2	41,2	49,0	56,8	64,6	61,8
	EER (1)	kW/kW	3,45	3,41	3,38	3,22	3,27	3,33	3,21	3,48
	ESEER		4,95	5,38	5,10	5,32	5,39	5,29	5,51	5,88
	Sound power level [Lw] (2)	dB(A)	93,3	93,4	94,8	94,8	95,6	96,4	97,0	96,5
	Average sound pressure level [L_{Pm}] (3)	dB(A)	73,8	73,9	74,8	74,8	75,1	75,4	75,6	75,5
	Net weight	kg	2559	2626	3378	3658	4203	5056	5614	5241
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	114,3	114,3	114,3	141,3	141,3	141,3	168,3	168,3
OPT	Pumping group									
	2 poles motor - Power input	kW	--	--	5,5	5,5	5,5	11,0	11,0	11,0
	4 poles motor - Power input	kW	--	--	5,5	5,5	5,5	11,0	11,0	11,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**280**	**340**	**410**	**490**	**560**	**680**	**810**	**740**
	Unit power input	kW	80,3	98,7	119,8	150,8	169,3	202,7	250,2	210,7
	Total air flow	m³/h	145500	145500	194000	194000	242500	291000	339500	291000
	EER (1)	kW/kW	3,45	3,41	3,38	3,22	3,27	3,33	3,21	3,48
	Sound power level [Lw] (2)	dB(A)	92,2	92,3	93,7	93,7	94,5	95,3	95,9	95,4
	Average sound pressure level [L_{Pm}] (3)	dB(A)	72,7	72,8	73,7	73,7	74,0	74,3	74,5	74,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**268**	**324**	**380**	**465**	**532**	**650**	**765**	**740**
	Unit power input	kW	73,2	89,2	117,3	138,3	154,4	185,4	226,5	202,4
	Total air flow	m³/h	123675	123675	164900	164900	206125	247350	288575	247350
	EER (1)	kW/kW	3,62	3,59	3,21	3,33	3,41	3,48	3,35	3,62
	Sound power level [Lw] (2)	dB(A)	91,1	91,2	92,6	92,6	93,4	94,2	94,8	94,3
	Average sound pressure level [L_{Pm}] (3)	dB(A)	71,6	71,7	72,6	72,6	72,9	73,2	73,4	73,3
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**253**	**300**	**368**	**432**	**495**	**600**	**708**	**690**
	Unit power input	kW	65,8	80,1	109,2	124,2	139,0	164,8	201,6	182,8
	Total air flow		101850	101850	135800	135800	169750	203700	237650	203700
	EER (1)	kW/kW	3,80	3,71	3,33	3,45	3,53	3,61	3,48	3,74
	Sound power level [Lw] (2)	dB(A)	89,4	89,5	90,9	90,9	91,7	92,5	93,1	92,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	69,9	70,0	70,9	70,9	71,2	71,5	71,7	71,6

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

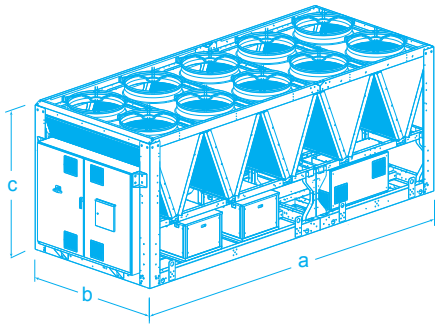
TECHNICAL DATA UNICO TURBO FL

	UNICO TURBO FL SIZE		820 T3 VT7	900 T3 VT8	1200 T3E VT10	980 T4 VT8	1070 T4E VT9	1120 T4E VT10	1360 T4 VT11	1380 T4 VT12	1500 T4E VT12
STANDARD	**Cooling capacity (1)**	**kW**	**820**	**900**	**1200**	**980**	**1070**	**1120**	**1360**	**1380**	**1500**
	Unit power input	kW	250,8	262,4	376,2	305,3	329,2	341,5	415,9	408,3	461,5
	Evaporator water flow rate	m³/h	141,0	155,0	206,0	169,0	184,0	193,0	234,0	237,0	258,0
	Evaporator pressure drop	kPa	32	37	38	26	31	34	37	38	44
	Compressors		centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal
	Quantity	n.	3	3	3	4	4	4	4	4	4
	Cooling capacity control	%	23...100%	22...100%	18...100%	16...100%	15...100%	14...100%	15...100%	15...100%	14...100%
	Axial fans	n.	14	16	20	16	18	20	22	24	24
	Total air flow	m³/h	339500	388000	485000	388000	436500	485000	533500	582000	582000
	Air circuits	n.	1	1	1	1	1	1	1	1	1
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	215	332	378	365	371	378	396	402	402
	Gas circuits	n.	1	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	471,6	692,4	708,0	618,4	626,2	634,0	925,8	933,6	933,6
	Unit starting current (LRA)	A	69,6	77,4	93,0	82,4	90,2	98,0	105,8	113,6	113,6
	EER (1)	kW/kW	3,27	3,43	3,19	3,21	3,25	3,28	3,27	3,38	3,25
	ESEER		5,17	5,62	5,65	5,41	5,32	5,39	5,29	5,56	5,58
	Sound power level [Lw] (2)	dB(A)	97,1	97,8	98,6	97,8	98,2	98,6	99,1	99,5	99,5
	Average sound pressure level [L_{Pm}] (3)	dB(A)	75,7	76,1	76,2	76,1	76,1	76,2	76,4	76,5	76,5
	Net weight	kg	5743	6772	8021	7065	7652	8154	8925	9427	9537
	Hydraulic connections										
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3
OPT	Pumping group										
	2 poles motor - Power input	kW	11,0	11,0	22,0	11,0	22,0	22,0	22,0	22,0	22,0
	4 poles motor - Power input	kW	11,0	11,0	15,0	11,0	11,0	15,0	15,0	15,0	15,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**820**	**900**	**1200**	**980**	**1070**	**1120**	**1360**	**1380**	**1500**
	Unit power input	kW	248,2	259,7	371,6	302,7	326,1	337,6	411,0	403,5	456,5
	Total air flow	m³/h	339500	388000	485000	388000	436500	485000	533500	582000	582000
	EER (1)	kW/kW	3,27	3,43	3,19	3,21	3,25	3,28	3,27	3,38	3,25
	Sound power level [Lw] (2)	dB(A)	96,0	96,7	97,5	96,7	97,1	97,5	98,0	98,4	98,4
	Average sound pressure level [L_{Pm}] (3)	dB(A)	74,6	75,0	75,1	75,0	75,0	75,1	75,3	75,4	75,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**780**	**848**	**1133**	**929**	**1010**	**1062**	**1295**	**1311**	**1404**
	Unit power input	kW	227,5	236,6	336,7	277,6	296,6	308,7	373,8	366,9	413,9
	Total air flow	m³/h	288575	329800	412250	329800	371025	412250	453475	494700	494700
	EER (1)	kW/kW	3,40	3,55	3,33	3,32	3,37	3,41	3,43	3,54	3,35
	Sound power level [Lw] (2)	dB(A)	94,9	95,6	96,4	95,6	96,0	96,4	96,9	97,3	97,3
	Average sound pressure level [L_{Pm}] (3)	dB(A)	73,5	73,9	74,0	73,9	73,9	74,0	74,2	74,3	74,3
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**727**	**766**	**1041**	**863**	**932**	**987**	**1196**	**1214**	**1279**
	Unit power input	kW	204,6	211,4	299,1	249,4	265,2	276,1	331,9	326,7	366,7
	Total air flow		237650	271600	339500	271600	305550	339500	373450	407400	407400
	EER (1)	kW/kW	3,52	3,59	3,45	3,44	3,49	3,54	3,57	3,68	3,45
	Sound power level [Lw] (2)	dB(A)	93,2	93,9	94,7	93,9	94,3	94,7	95,2	95,6	95,6
	Average sound pressure level [L_{Pm}] (3)	dB(A)	71,8	72,2	72,3	72,2	72,2	72,3	72,5	72,6	72,6

1. Referred to chilled water temperature 12/7°C and 35°C ambient air temperature according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 – 2.
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

SIZE VT	a	b	c
VT3	3530	2260	2304
VT4	4650	2260	2304
VT5	5770	2260	2304
VT6	6890	2260	2304
VT7	8010	2260	2304
VT8	9130	2260	2304
VT9	10250	2260	2304
VT10	11370	2260	2304
VT11	12490	2260	2304
VT12	13610	2260	2304



MAXIMO: Packaged air cooled liquid chillers with free-cooling system for outdoor installation, equipped with scroll compressors and axial fans
Cooling Capacity: **20,6 ÷ 279 kW**
Free-Cooling Capacity: **19,2 ÷ 194 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

FREE COOLING
RC Hi-Tech

maximo

rcgroupairconditioning

R410A · FREE COOLING · PLATE · EC

MAIN FEATURES
- Air cooled liquid chiller with free-cooling system.
- 29 models available, for a wide selection opportunity.
- Average step of 12,5kW.
- EER up to 3,05.
- ESEER up to 3,80.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- EC Axial fans.
- Single air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS
- Units equipped with two scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Indirect free cooling system.
- High EER and ESEER.
- EC axial fans for a high efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

INDIRECT FREE COOLING SYSTEM
Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

FANS WITH BRUSHLESS TYPE EC MOTOR
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: 4÷15°C
Ambient temperature: -10÷45°C

WORKING LIMITS IN FREE-COOLING MODE
Minimum chilled water outlet temperature: -15°C
Minimum ambient temperature: -20°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Sub-cooling circuit to allow a significant increase in cooling capacity.
- Frame in galvanized steel.

FREE-COOLING COIL

- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Thermostatic expansion valve up to model 76 P2 C3 D included.
- Electronic expansion valve from model 98 P2 C4 S included. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure. The electronic expansion valve exclude the installation of the electromagnetic valve on liquid line.
- Sight glass.
- Liquid receiver.
- Electromagnetic valve on liquid line. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3” included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

MAXIMO	21 P1 S	24 P1 S	28 P1 S	30 P1 S	34 P1 S	40 P1 S	50 P1 S	52 P2 S	52 P2 D	58 P2 S	58 P2 D
SIZE	C1	C1	C1	C1	C2	C2	C2	C2	C2	C3	C3
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
NNN - Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MAXIMO	62 P1 S	65 P2 S	65 P2 D	76 P2 S	76 P2 D	98 P2 S	98 P2 D	124 P2 S	124 P2 D	158 P2 S	158 P2 D
SIZE	C3	C3	C3	C3	C3	C4	C4	C4	C4	C4	C4
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
NNN - Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

MAXIMO SIZE	180 P2 S C5	180 P2 D C5	197 P2 S C5	197 P2 D C5	230 P3 S C5	240 P4 D C5H	270 P4 D C5H
739 - Pumping group (1 pump)	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
NNN - Expansion valve energy reserve module	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA MAXIMO

	MAXIMO		21 P1 S	24 P1 S	28 P1 S	30 P1 S	34 P1 S	40 P1 S	50 P1 S	52 P2 S
	SIZE		C1	C1	C1	C1	C2	C2	C2	C2
STANDARD	**Cooling capacity (1)**	**kW**	**20,6**	**23,2**	**27,4**	**30,1**	**36,2**	**40,8**	**50,1**	**52,0**
	Unit power input	kW	7,2	8,4	10,0	11,5	11,9	14,5	19,3	20,2
	Free-Cooling capacity (2)	**kW**	**19,2**	**20,1**	**24,3**	**25,1**	**32,5**	**36,7**	**43,8**	**44,2**
	Total water flow rate	m³/h	3,8	4,3	5,1	5,6	6,7	7,5	9,2	9,6
	Total pressure drop	kPa	73	91	109	105	103	113	109	117
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	2
	Capacity steps	n.	1	1	1	1	1	1	1	2
	Axial fans EC	n.	1	1	1	1	2	2	2	2
	Total air flow	m³/h	7500	7500	9650	9650	12000	14000	17300	17300
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	11,3	11,3	11,3	11,5	13,7	13,7	15,0	15,3
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	17,5	22,5	23,6	26,6	34,0	37,0	43,2	47,2
	Unit starting current (LRA)	A	96,5	112,5	119,6	119,6	143,0	177,0	228,2	143,2
	EER (1)	kW/kW	2,88	2,77	2,74	2,61	3,05	2,82	2,59	2,57
	ESEER		3,31	3,20	3,18	3,07	3,52	3,22	3,00	3,13
	Sound power level [Lw] (3)	dB(A)	80,8	81,2	82,6	81,8	83,6	86,6	89,8	87,2
	Average sound pressure level [L_{Pm}] (4)	dB(A)	64,2	64,6	66,0	65,2	66,4	69,4	72,5	70,0
	Net weight	kg	430	440	440	440	600	600	740	700
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"
	Evaporator IN/OUT - OD (5)	Ø mm	-	-	-	-	-	-	-	-
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**7,1**	**8,0**	**9,4**	**10,4**	**12,5**	**14,0**	**17,2**	**17,9**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,1	1,1	1,1	1,1	1,5	1,5	1,5	1,5
	2 pump - 2 poles electric motor	kW	-	-	-	-	-	-	-	-
	Water tank - volume	l	130	130	130	130	210	210	210	210
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**20,6**	**23,2**	**27,4**	**30,1**	**36,2**	**40,8**	**50,1**	**52,0**
	Unit power input	kW	6,8	7,9	9,4	10,9	11,2	13,7	18,5	19,3
	Free-Cooling capacity (2)	kW	19,2	20,1	24,3	25,1	32,5	36,7	43,8	44,2
	Total air flow	m³/h	7500	7500	9650	9650	12000	14000	17300	17300
	EER (1)	kW/kW	2,88	2,77	2,74	2,61	3,05	2,82	2,59	2,57
	Sound power level [Lw] (3)	dB(A)	80,3	80,4	82,1	81,1	83,0	86,2	88,4	87,0
	Average sound pressure level [L_{Pm}] (4)	dB(A)	63,7	63,8	65,5	64,5	65,8	69,0	71,2	69,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**20,1**	**22,6**	**26,7**	**29,1**	**35,3**	**39,7**	**48,8**	**50,4**
	Unit power input	kW	6,9	8,1	9,4	11,1	11,5	13,8	18,5	19,5
	Free-Cooling capacity (2)	kW	19,0	19,9	24,1	24,8	32,2	36,4	43,4	43,9
	Total air flow	m³/h	6375	6375	8203	8203	10200	11900	14705	14705
	EER (1)	kW/kW	2,79	2,66	2,67	2,49	2,91	2,73	2,52	2,47
	Sound power level [Lw] (3)	dB(A)	76,7	76,9	78,5	77,6	79,4	82,5	85,2	83,2
	Average sound pressure level [L_{Pm}] (4)	dB(A)	60,1	60,3	61,9	61,0	62,2	65,3	68,0	66,0
ELN KIT	**Cooling capacity (1)**	**kW**	**19,4**	**21,6**	**25,6**	**27,7**	**33,8**	**38,2**	**46,9**	**48,1**
	Unit power input	kW	7,1	8,4	9,8	11,6	11,9	14,2	19,1	20,3
	Free-Cooling capacity (2)	kW	18,7	19,6	23,7	24,4	31,8	35,9	42,9	43,3
	Total air flow		5250	5250	6755	6755	8400	9800	12110	12110
	EER (1)	kW/kW	2,61	2,45	2,49	2,28	2,70	2,56	2,36	2,28
	Sound power level [Lw] (3)	dB(A)	72,8	73,3	74,6	73,9	75,7	78,5	82,3	79,0
	Average sound pressure level [L_{Pm}] (4)	dB(A)	56,2	56,8	58,0	57,3	58,5	61,3	65,1	61,8

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA MAXIMO

	MAXIMO		52 P2 D	58 P2 S	58 P2 D	62 P1 S	65 P2 S	65 P2 D	76 P2 S	76 P2 D
	SIZE		C2	C3	C3	C3	C3	C3	C3	C3
STANDARD	**Cooling capacity (1)**	**kW**	**51,9**	**60,5**	**60,7**	**64,3**	**68,0**	**67,8**	**77,8**	**77,4**
	Unit power input	kW	20,2	21,6	21,4	23,4	24,6	24,3	29,8	29,7
	Free-Cooling capacity (2)	**kW**	**44,2**	**55,4**	**55,5**	**57,9**	**60,4**	**60,3**	**66,8**	**66,7**
	Total water flow rate	m³/h	9,6	11,2	11,2	11,8	12,5	12,5	14,3	14,3
	Total pressure drop	kPa	94	107	80	103	118	95	114	94
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	1	2	2	2	2
	Capacity steps	n.	2	2	2	1	2	2	2	2
	Axial fans EC	n.	2	3	3	3	3	3	3	3
	Total air flow	m³/h	17300	21000	21000	22000	23000	23000	25750	25750
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	16,0	21,7	19,3	18,9	22,1	19,6	28,6	25,5
	Gas circuits	n.	2	1	2	1	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	47,2	54,5	54,5	53,0	66,5	66,5	72,8	72,8
	Unit starting current (LRA)	A	143,2	147,5	147,5	276,5	175,5	175,5	212,8	212,8
	EER (1)	kW/kW	2,57	2,80	2,84	2,75	2,76	2,79	2,61	2,61
	ESEER		3,55	3,44	3,80	3,16	3,34	3,68	3,09	3,47
	Sound power level [Lw] (3)	dB(A)	87,2	88,2	88,2	93,0	88,1	88,1	87,3	87,3
	Average sound pressure level [LPm] (4)	dB(A)	70,0	70,3	70,3	75,1	70,2	70,2	69,4	69,4
	Net weight	kg	700	930	920	970	940	930	1000	1000
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	-	-	-	-	-	-	-
	Evaporator IN/OUT - OD (5)	Ø mm	-	76,1	76,1	76,1	76,1	76,1	76,1	76,1
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**17,8**	**20,8**	**20,9**	**22,1**	**23,4**	**23,3**	**26,8**	**26,6**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,5	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	2 pump - 2 poles electric motor	kW	-	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	Water tank - volume	l	210	360	360	360	360	360	360	360
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**51,9**	**60,5**	**60,7**	**64,3**	**68,0**	**67,8**	**77,8**	**77,4**
	Unit power input	kW	19,4	20,6	20,6	22,4	23,5	23,4	28,6	28,6
	Free-Cooling capacity (2)	kW	44,2	55,4	55,5	57,9	60,4	60,3	66,8	66,7
	Total air flow	m³/h	17300	21000	21000	22000	23000	23000	25750	25750
	EER (1)	kW/kW	2,57	2,80	2,84	2,75	2,76	2,79	2,61	2,61
	Sound power level [Lw] (3)	dB(A)	87,0	87,9	87,9	91,5	87,9	87,9	87,0	87,0
	Average sound pressure level [LPm] (4)	dB(A)	69,8	70,0	70,0	73,6	70,0	70,0	69,2	69,2
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**50,2**	**58,8**	**58,9**	**62,6**	**66,0**	**65,8**	**75,6**	**75,2**
	Unit power input	kW	19,5	20,9	20,8	22,6	23,6	23,5	28,7	28,6
	Free-Cooling capacity (2)	kW	43,8	54,9	55,0	57,5	59,8	59,8	66,2	66,1
	Total air flow	m³/h	14705	17850	17850	18700	19550	19550	21888	21888
	EER (1)	kW/kW	2,47	2,69	2,73	2,66	2,67	2,69	2,53	2,54
	Sound power level [Lw] (3)	dB(A)	83,2	84,2	84,2	88,4	84,1	84,1	83,3	83,3
	Average sound pressure level [LPm] (4)	dB(A)	66,0	66,3	66,3	70,5	66,2	66,2	65,4	65,4
ELN KIT	**Cooling capacity (1)**	**kW**	**47,9**	**56,4**	**56,5**	**60,2**	**63,2**	**63,0**	**72,4**	**72,0**
	Unit power input	kW	20,3	21,7	21,6	23,3	24,4	24,3	29,4	29,4
	Free-Cooling capacity (2)	kW	43,2	54,2	54,2	56,8	59,1	59,0	65,4	65,3
	Total air flow		12110	14700	14700	15400	16100	16100	18025	18025
	EER (1)	kW/kW	2,28	2,50	2,53	2,49	2,49	2,50	2,37	2,37
	Sound power level [Lw] (3)	dB(A)	79,0	79,9	79,9	85,6	79,8	79,8	79,1	79,1
	Average sound pressure level [LPm] (4)	dB(A)	61,8	62,0	62,0	67,7	61,9	61,9	61,2	61,2

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA MAXIMO

	MAXIMO		98 P2 S	98 P2 D	124 P2 S	124 P2 D	158 P2 S	158 P2 D	180 P2 S	180 P2 D
	SIZE		C4	C4	C4	C4	C4	C4	C5	C5
STANDARD	**Cooling capacity (1)**	**kW**	**101,0**	**99,8**	**124,0**	**122,0**	**159,0**	**161,0**	**183,0**	**184,0**
	Unit power input	kW	37,0	36,6	48,4	48,4	65,2	65,2	70,4	70,8
	Free-Cooling capacity (2)	**kW**	**85,7**	**85,3**	**101,0**	**101,0**	**116,0**	**116,0**	**136,0**	**137,0**
	Total water flow rate	m³/h	18,6	18,4	22,9	22,5	29,4	29,8	33,7	33,9
	Total pressure drop	kPa	94	78	86	75	95	84	77	80
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Axial fans EC	n.	4	4	4	4	4	4	5	5
	Total air flow	m³/h	35000	35000	42000	42000	46800	46800	53000	53000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	33,9	31,3	38,6	42,1	50,9	42,9	73,7	65,8
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	86,4	86,4	108,4	108,4	142,2	142,2	161,7	161,7
	Unit starting current (LRA)	A	271,4	271,4	331,9	331,9	386,8	386,8	473,7	473,7
	EER (1)	kW/kW	2,73	2,73	2,56	2,52	2,44	2,47	2,60	2,60
	ESEER		3,25	3,64	3,01	3,41	2,96	3,30	3,12	3,51
	Sound power level [Lw] (3)	dB(A)	87,0	87,0	90,9	90,9	93,0	93,0	93,3	93,3
	Average sound pressure level [LPm] (4)	dB(A)	68,4	68,4	72,3	72,3	74,4	74,4	74,1	74,1
	Net weight	kg	1470	1470	1610	1610	1660	1640	2240	2210
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	-	-	-	-	-	-	-	-
	Evaporator IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**34,8**	**34,3**	**42,6**	**42,0**	**54,8**	**55,5**	**62,9**	**63,3**
	Pumping group									
	1 pump - 2 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	5,5	5,5
	2 pump - 2 poles electric motor	kW	4,0	4,0	4,0	4,0	4,0	4,0	7,5	7,5
	Water tank - volume	l	520	520	520	520	520	520	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**101,0**	**99,8**	**124,0**	**122,0**	**159,0**	**161,0**	**183,0**	**184,0**
	Unit power input	kW	35,7	35,5	47,2	47,2	63,3	63,6	68,8	69,0
	Free-Cooling capacity (2)	kW	85,7	85,3	101,0	101,0	116,0	116,0	136,0	137,0
	Total air flow	m³/h	35000	35000	42000	42000	46800	46800	53000	53000
	EER (1)	kW/kW	2,73	2,73	2,56	2,52	2,44	2,47	2,60	2,60
	Sound power level [Lw] (3)	dB(A)	86,2	86,2	90,6	90,6	92,8	92,8	93,2	93,2
	Average sound pressure level [LPm] (4)	dB(A)	67,6	67,6	72,0	72,0	74,2	74,2	73,9	73,9
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**98,4**	**97,2**	**120,0**	**119,0**	**154,0**	**156,0**	**177,0**	**178,0**
	Unit power input	kW	36,0	35,8	47,1	47,1	63,1	63,4	69,1	69,3
	Free-Cooling capacity (2)	kW	84,9	84,5	100,0	99,6	115,0	115,0	135,0	135,0
	Total air flow	m³/h	29750	29750	35700	35700	39780	39780	45050	45050
	EER (1)	kW/kW	2,65	2,64	2,48	2,46	2,38	2,40	2,51	2,51
	Sound power level [Lw] (3)	dB(A)	82,7	82,7	86,8	86,8	89,0	89,0	89,4	89,4
	Average sound pressure level [LPm] (4)	dB(A)	64,1	64,1	68,2	68,2	70,4	70,4	70,1	70,1
ELN KIT	**Cooling capacity (1)**	**kW**	**94,7**	**93,6**	**115,0**	**114,0**	**146,0**	**148,0**	**169,0**	**170,0**
	Unit power input	kW	37,2	37,0	48,3	48,2	65,0	65,4	71,6	71,9
	Free-Cooling capacity (2)	kW	83,7	83,3	98,7	98,2	113,0	113,0	132,0	132,0
	Total air flow		24500	24500	29400	29400	32760	32760	37100	37100
	EER (1)	kW/kW	2,47	2,46	2,32	2,31	2,19	2,22	2,31	2,32
	Sound power level [Lw] (3)	dB(A)	79,2	79,2	82,7	82,7	84,6	84,6	85,0	85,0
	Average sound pressure level [LPm] (4)	dB(A)	60,6	60,6	64,1	64,1	66,0	66,0	65,7	65,7

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

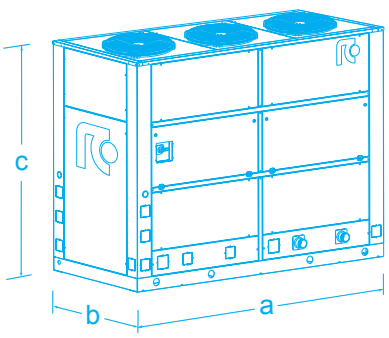
TECHNICAL DATA MAXIMO

	MAXIMO		197 P2 S	197 P2 D	230 P3 S	240 P4 D	270 P4 D
	SIZE		C5	C5	C5	C5H	C5H
STANDARD	**Cooling capacity (1)**	**kW**	**201,0**	**198,0**	**226,0**	**251,0**	**279,0**
	Unit power input	kW	80,4	80,8	99,1	97,3	114,8
	Free-Cooling capacity (2)	**kW**	**148,0**	**148,0**	**156,0**	**168,0**	**194,0**
	Total water flow rate	m³/h	37,0	36,6	41,8	46,3	51,5
	Total pressure drop	kPa	103	95	113	111	117
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	3	4	4
	Capacity steps	n.	2	2	3	4	4
	Axial fans EC	n.	5	5	5	5	5
	Total air flow	m³/h	54000	54000	56300	69000	69000
	Air circuits	n.	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	83,1	102,2	83,7	127,0	126,6
	Gas circuits	n.	1	2	1	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	178,3	178,3	210,5	208,3	242,1
	Unit starting current (LRA)	A	490,3	490,3	455,1	431,8	486,7
	EER (1)	kW/kW	2,50	2,45	2,28	2,58	2,43
	ESEER		2,96	3,43	3,52	3,66	3,64
	Sound power level [Lw] (3)	dB(A)	93,7	93,7	94,7	93,4	93,4
	Average sound pressure level [LPm] (4)	dB(A)	74,4	74,4	75,4	74,1	74,1
	Net weight	kg	2220	2230	2370	2510	2510
	Hydraulic connections						
	Evaporator IN/OUT - ISO 7/1 – R	Ø	-	-	-	-	-
	Evaporator IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)						
	Heating capacity	**kW**	**69,0**	**68,2**	**77,7**	**86,4**	**96,1**
	Pumping group						
	1 pump - 2 poles electric motor	kW	5,5	5,5	5,5	5,5	5,5
	2 pump - 2 poles electric motor	kW	7,5	7,5	7,5	7,5	7,5
	Water tank - volume	l	720	720	720	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**201,0**	**198,0**	**226,0**	**251,0**	**279,0**
	Unit power input	kW	78,2	78,8	96,5	94,4	111,1
	Free-Cooling capacity (2)	kW	148,0	148,0	156,0	168,0	194,0
	Total air flow	m³/h	54000	54000	56300	69000	69000
	EER (1)	kW/kW	2,50	2,45	2,28	2,58	2,43
	Sound power level [Lw] (3)	dB(A)	93,6	93,6	94,5	93,0	93,0
	Average sound pressure level [LPm] (4)	dB(A)	74,3	74,3	75,2	73,8	73,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**194,0**	**191,0**	**217,0**	**243,0**	**268,0**
	Unit power input	kW	79,2	79,8	98,2	94,9	112,6
	Free-Cooling capacity (2)	kW	147,0	147,0	155,0	167,0	192,0
	Total air flow	m³/h	45900	45900	47855	58650	58650
	EER (1)	kW/kW	2,38	2,33	2,15	2,49	2,31
	Sound power level [Lw] (3)	dB(A)	89,8	89,8	90,7	89,3	89,3
	Average sound pressure level [LPm] (4)	dB(A)	70,5	70,5	71,4	70,0	70,0
ELN KIT	**Cooling capacity (1)**	**kW**	**183,0**	**181,0**	**203,0**	**231,0**	**252,0**
	Unit power input	kW	83,2	83,9	102,8	98,3	118,1
	Free-Cooling capacity (2)	kW	145,0	144,0	153,0	165,0	190,0
	Total air flow		37800	37800	39410	48300	48300
	EER (1)	kW/kW	2,15	2,11	1,93	2,29	2,08
	Sound power level [Lw] (3)	dB(A)	85,4	85,4	86,3	85,2	85,2
	Average sound pressure level [LPm] (4)	dB(A)	66,1	66,1	67,1	65,9	65,9

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE C	a	b	c
C1	1250	890	2010
C2	1800	1040	2060
C3	2600	1200	2060
C4	3700	1260	2050
C5	4950	1260	2090
C5H	4950	1260	2090



MAXIMO PF: Packaged air cooled liquid chillers with free-cooling system for indoor installation, equipped with scroll compressors and plug fan
Cooling Capacity: **21,4 ÷ 277 kW**
Free-Cooling Capacity: **18,1 ÷ 176 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

FREE COOLING
RC Hi-Tech

maximo pf

rcgroupairconditioning

R410A | FREE COOLING | PLATE | EC

MAIN FEATURES
- Air cooled liquid chiller with free-cooling system.
- 29 models available, for a wide selection opportunity.
- Average step of 12,5kW.
- EER up to 2,82.
- ESEER up to 3,47.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- EC Plug fan.
- Single air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS
- Units equipped with two scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Indirect free cooling system.
- High ESEER.
- EC Plug fan for a high efficiency.
- Availability of kit for the reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

INDIRECT FREE COOLING SYSTEM
Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

INDOOR INSTALLATION
The machines are designed for indoor installation and ducting for air suction and discharge. For outdoor installation the use of the dedicated optional kit is mandatory. The machine must be installed under a cover or anyway protected against atmospherics agent.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: 4÷15°C
Ambient temperature: -10÷45°C

WORKING LIMITS IN FREE-COOLING MODE
Minimum chilled water outlet temperature: -15°C
Minimum ambient temperature: -20°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- Antifreeze heater.

CONDENSING COIL

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Sub-cooling circuit to allow a significant increase in cooling capacity.
- Frame in galvanized steel.

FREE-COOLING COIL

- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION

- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Thermostatic expansion valve up to model 85 P2 C3 D included.
- Electronic expansion valve from model 107 P2 C3 D included. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure. The electronic expansion valve exclude the installation of the electromagnetic valve on liquid line.
- Sight glass.
- Electromagnetic valve on liquid line. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

MAXIMO PF	22 P1	24 P1	28 P1	32 P1	36 P1	42 P1	53 P1	67 P1	55 P2	55 P2	62 P2
	S	S	S	S	S	S	S	S	S	D	S
SIZE	C1	C1	C1	C1	C1	C1	C2	C2	C2	C2	C2
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MAXIMO PF	62 P2	71 P2	71 P2	85 P2	85 P2	107 P2	107 P2	135 P2	135 P2	170 P2	170 P2
	D	S	D	S	D	S	D	S	D	S	D
SIZE	C2	C2	C2	C3	C3	C3	C3	C4	C4	C4	C4
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	●	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

MAXIMO PF SIZE	195 P2 S C4	195 P2 D C4	220 P2 S C5	220 P2 D C5	250 P3 S C5	265 P4 D C5	290 P4 D C5
739 - Pumping group (1 pump)	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA MAXIMO PF

	MAXIMO PF		22 P1 S	24 P1 S	28 P1 S	32 P1 S	36 P1 S	42 P1 S	53 P1 S	67 P1 S
	SIZE		C1	C1	C1	C1	C1	C1	C2	C2
STANDARD	**Cooling capacity (1)**	**kW**	**21,4**	**23,9**	**27,9**	**31,6**	**35,2**	**39,6**	**51,4**	**64,4**
	Unit power input	kW	7,6	8,9	10,8	11,6	14,0	17,0	20,6	25,6
	Free-Cooling capacity (2)	**kW**	**18,1**	**19,5**	**22,9**	**26,0**	**28,2**	**29,9**	**42,3**	**52,1**
	Total water flow rate	m³/h	4,0	4,4	5,2	5,8	6,5	7,3	9,5	11,9
	Total pressure drop	kPa	75	95	111	113	109	122	113	139
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1
	Centrifugal fans EC	n.	1	1	1	1	1	1	2	2
	Total air flow	m³/h	6500	7000	8500	10000	11000	11500	16000	21000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	11,3	11,3	11,3	11,5	11,6	11,6	18	18,5
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	20,3	25,3	26,3	29,9	35,9	38,9	48,6	56,9
	Unit starting current (LRA)	A	99,3	115,3	122,3	122,9	144,9	178,9	233,6	280,4
	EER (1)	kW/kW	2,82	2,69	2,58	2,72	2,51	2,33	2,50	2,52
	ESEER		3,24	3,10	3,01	3,21	2,92	2,66	2,90	3,04
	Sound power level [Lw] (3)	dB(A)	87,3	88,9	93,0	92,1	94,5	95,5	95,0	97,2
	Average sound pressure level [Lpm] (4)	dB(A)	70,7	72,3	76,4	75,5	77,9	78,9	77,8	76,4
	Net weight	kg	450	460	460	470	470	480	750	790
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"
	Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**7,4**	**8,2**	**9,6**	**10,9**	**12,1**	**13,6**	**17,7**	**22,2**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,1	1,1	1,1	1,1	1,1	1,1	1,5	1,5
	2 pump - 2 poles electric motor	kW	-	-	-	-	-	-	-	-
	Water tank - volume	l	130	130	130	130	130	130	210	210
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**21,4**	**23,9**	**27,9**	**31,6**	**35,2**	**39,6**	**51,4**	**64,4**
	Unit power input	kW	7,2	8,4	10,2	10,9	13,3	16,1	19,6	24,3
	Free-Cooling capacity (2)	kW	18,1	19,5	22,9	26,0	28,2	29,9	42,3	52,1
	Total air flow	m³/h	6500	7000	8500	10000	11000	11500	16000	21000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,82	2,69	2,58	2,72	2,51	2,33	2,50	2,52
	Sound power level [Lw] (3)	dB(A)	87,1	88,7	92,8	92,1	94,1	96,0	94,6	96,4
	Average sound pressure level [Lpm] (4)	dB(A)	70,5	72,1	76,2	75,5	77,5	79,4	77,4	75,9
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**20,8**	**23,2**	**27,0**	**30,6**	**34,0**	**38,2**	**50,0**	**62,6**
	Unit power input	kW	7,3	8,5	10,1	11,1	13,1	15,9	19,5	24,3
	Free-Cooling capacity (2)	kW	17,9	19,4	22,7	25,7	28,0	29,6	41,9	51,7
	Total air flow	m³/h	5525	5950	7225	8500	9350	9775	13600	17850
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,72	2,59	2,52	2,62	2,48	2,29	2,45	2,45
	Sound power level [Lw] (3)	dB(A)	83,6	85,2	89,3	88,2	90,6	92,5	91,2	93,0
	Average sound pressure level [Lpm] (4)	dB(A)	67,0	68,6	72,7	71,6	74,0	75,9	74,0	72,4
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**19,9**	**22,1**	**25,8**	**29,2**	**32,5**	**36,3**	**47,9**	**59,9**
	Unit power input	kW	7,6	8,8	10,4	11,6	13,2	16,2	20,1	25,1
	Free-Cooling capacity (2)	kW	17,6	19,1	22,3	25,3	27,6	29,2	41,5	51,1
	Total air flow	m³/h	4550	4900	5950	7000	7700	8050	11200	14700
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,51	2,39	2,35	2,40	2,34	2,14	2,29	2,28
	Sound power level [Lw] (3)	dB(A)	80,4	82,0	86,1	83,6	87,4	89,3	88,2	90,1
	Average sound pressure level [Lpm] (4)	dB(A)	63,8	65,4	69,5	67,1	70,8	72,7	71,0	69,2

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA MAXIMO PF

	MAXIMO PF		55 P2 S	55 P2 D	62 P2 S	62 P2 D	71 P2 S	71 P2 D	85 P2 S	85 P2 D
	SIZE		C2	C2	C2	C2	C2	C2	C3	C3
STANDARD	**Cooling capacity (1)**	**kW**	**54,1**	**54,2**	**60,7**	**60,9**	**68,4**	**68,3**	**80,5**	**80,1**
	Unit power input	kW	21,8	21,6	24,0	23,8	28,3	28,1	31,1	30,8
	Free-Cooling capacity (2)	**kW**	**45,7**	**45,7**	**50,6**	**50,6**	**55,6**	**55,5**	**67,1**	**67,0**
	Total water flow rate	m³/h	10,0	10,0	11,2	11,2	12,6	12,6	14,9	14,8
	Total pressure drop	kPa	124	100	139	112	157	135	120	98
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Centrifugal fans EC	n.	2	2	2	2	2	2	3	3
	Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	18,3	16	18,3	16	18,7	16,2	28,7	25,5
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	53,8	53,8	58,4	58,4	70,4	70,4	82,7	82,7
	Unit starting current (LRA)	A	149,8	149,8	151,4	151,4	179,4	179,4	222,7	222,7
	EER (1)	kW/kW	2,48	2,51	2,53	2,56	2,42	2,43	2,59	2,60
	ESEER		3,35	3,08	3,40	2,90	2,89	3,16	3,08	3,42
	Sound power level [Lw] (3)	dB(A)	93,6	93,6	87,5	87,5	89,8	89,8	94,4	94,4
	Average sound pressure level [Lpm] (4)	dB(A)	76,4	70,3	70,3	80,0	72,6	72,6	76,5	76,5
	Net weight	kg	740	740	810	810	820	820	1050	1050
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	2"	2"	2"	--	--
	Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	76,1	76,1
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**18,6**	**18,6**	**20,9**	**21,0**	**23,5**	**23,5**	**27,7**	**27,6**
	Pumping group									
	1 pump - 2 poles electric motor	kW	1,5	1,5	1,5	1,5	1,5	1,5	3,0	3,0
	2 pump - 2 poles electric motor	kW	-	-	-	-	-	-	3,0	3,0
	Water tank - volume	l	210	210	210	210	210	210	360	360
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**54,1**	**54,2**	**60,7**	**60,9**	**68,4**	**68,3**	**80,5**	**80,1**
	Unit power input	kW	20,8	20,7	22,8	22,8	26,9	26,8	29,7	29,7
	Free-Cooling capacity (2)	kW	45,7	45,7	50,6	50,6	55,6	55,5	67,1	67,0
	Total air flow	m³/h	18000	18000	20500	20500	23000	23000	25500	25500
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,48	2,51	2,53	2,56	2,42	2,43	2,59	2,60
	Sound power level [Lw] (3)	dB(A)	93,1	93,1	86,5	86,5	89,0	89,0	93,7	93,7
	Average sound pressure level [Lpm] (4)	dB(A)	75,9	69,3	69,3	79,2	71,8	71,8	75,8	75,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**52,5**	**52,6**	**58,9**	**59,0**	**66,3**	**66,2**	**78,2**	**77,8**
	Unit power input	kW	20,6	20,5	22,5	22,6	26,2	26,1	29,6	29,5
	Free-Cooling capacity (2)	kW	45,3	45,4	50,2	50,2	55,1	55,1	66,5	66,4
	Total air flow	m³/h	15300	15300	17425	17425	19550	19550	21675	21675
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,43	2,46	2,49	2,50	2,41	2,42	2,54	2,54
	Sound power level [Lw] (3)	dB(A)	89,6	89,6	83,1	83,1	85,5	85,5	90,3	90,3
	Average sound pressure level [Lpm] (4)	dB(A)	72,4	65,9	65,9	75,8	68,3	68,3	72,4	72,4
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**50,2**	**50,3**	**56,3**	**56,4**	**63,3**	**63,2**	**74,9**	**74,5**
	Unit power input	kW	21,3	21,1	23,1	23,1	26,6	26,5	30,2	30,2
	Free-Cooling capacity (2)	kW	44,8	44,8	49,6	49,6	54,4	54,4	65,8	65,7
	Total air flow	m³/h	12600	12600	14350	14350	16100	16100	17850	17850
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,26	2,30	2,33	2,35	2,27	2,29	2,39	2,39
	Sound power level [Lw] (3)	dB(A)	86,4	86,4	80,2	80,2	82,5	82,5	87,2	87,2
	Average sound pressure level [Lpm] (4)	dB(A)	69,2	63,0	63,0	72,9	65,3	65,3	69,3	69,3

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA MAXIMO PF

	MAXIMO PF		107 P2 S	107 P2 D	135 P2 S	135 P2 D	170 P2 S	170 P2 D	195 P2 S	195 P2 D
	SIZE		C3	C3	C4	C4	C4	C4	C4	C4
STANDARD	**Cooling capacity (1)**	**kW**	**103,0**	**102,0**	**128,0**	**126,0**	**166,0**	**164,0**	**182,0**	**185,0**
	Unit power input	kW	41,9	41,6	49,8	49,8	67,2	67,2	69,2	79,7
	Free-Cooling capacity (2)	**kW**	**81,1**	**80,9**	**99,5**	**99,0**	**124,0**	**123,0**	**127,0**	**127,0**
	Total water flow rate	m³/h	19,1	18,9	23,5	23,2	30,6	30,2	33,6	34,2
	Total pressure drop	kPa	155	139	88	77	107	101	123	117
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Centrifugal fans EC	n.	3	3	4	4	4	4	4	4
	Total air flow	m³/h	32000	32000	40000	40000	52000	52000	52000	52000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	32	29,3	35,1	38,6	50,9	42,6	51,9	44
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	94,7	94,7	113,8	113,8	147,6	147,6	164,2	164,2
	Unit starting current (LRA)	A	279,7	279,7	337,3	337,3	392,2	392,2	456,2	456,2
	EER (1)	kW/kW	2,46	2,45	2,57	2,53	2,47	2,44	2,63	2,32
	ESEER		2,88	3,15	3,03	3,47	2,90	3,21	2,78	3,44
	Sound power level [Lw] (3)	dB(A)	99,2	99,2	92,7	92,7	96,2	96,2	96,2	96,2
	Average sound pressure level [Lpm] (4)	dB(A)	81,3	81,3	74,1	74,1	77,6	77,6	77,6	77,6
	Net weight	kg	1240	1240	1690	1690	1800	1780	1850	1820
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (5)	Ø mm	76,1	76,1	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**35,6**	**35,2**	**43,9**	**43,2**	**57,2**	**56,3**	**62,6**	**63,7**
	Pumping group									
	1 pump - 2 poles electric motor	kW	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0
	2 pump - 2 poles electric motor	kW	3,0	3,0	4,0	4,0	4,0	4,0	4,0	4,0
	Water tank - volume	l	360	360	520	520	520	520	520	520
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**103,0**	**102,0**	**128,0**	**126,0**	**166,0**	**164,0**	**182,0**	**185,0**
	Unit power input	kW	40,0	39,9	48,4	48,4	65,2	65,2	66,7	77,2
	Free-Cooling capacity (2)	kW	81,1	80,9	99,5	99,0	124,0	123,0	127,0	127,0
	Total air flow	m³/h	32000	32000	40000	40000	52000	52000	52000	52000
	External static pressure	Pa	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,46	2,45	2,57	2,53	2,47	2,44	2,63	2,32
	Sound power level [Lw] (3)	dB(A)	98,5	98,5	90,2	90,2	95,0	95,0	95,7	95,7
	Average sound pressure level [Lpm] (4)	dB(A)	80,6	80,6	71,6	71,6	76,4	76,4	77,1	77,1
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**101,0**	**99,4**	**124,0**	**122,0**	**161,0**	**159,0**	**176,0**	**179,0**
	Unit power input	kW	39,2	39,2	48,4	48,3	63,7	63,7	65,3	76,3
	Free-Cooling capacity (2)	kW	80,6	80,3	98,6	98,1	123,0	122,0	126,0	126,0
	Total air flow	m³/h	27200	27200	34000	34000	44200	44200	44200	44200
	External static pressure	Pa	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,46	2,44	2,49	2,46	2,45	2,43	2,61	2,28
	Sound power level [Lw] (3)	dB(A)	95,1	95,1	87,8	87,8	91,9	91,9	92,6	92,6
	Average sound pressure level [Lpm] (4)	dB(A)	77,2	77,2	69,2	69,2	73,3	73,3	74,0	74,0
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**96,5**	**95,5**	**118,0**	**117,0**	**155,0**	**153,0**	**167,0**	**170,0**
	Unit power input	kW	40,0	39,9	49,8	49,7	64,4	64,3	66,4	78,3
	Free-Cooling capacity (2)	kW	79,7	79,5	97,3	96,8	121,0	121,0	124,0	125,0
	Total air flow	m³/h	22400	22400	28000	28000	36400	36400	36400	36400
	External static pressure	Pa	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,32	2,31	2,31	2,30	2,34	2,32	2,44	2,12
	Sound power level [Lw] (3)	dB(A)	92,0	92,0	86,9	86,9	89,7	89,7	90,3	90,3
	Average sound pressure level [Lpm] (4)	dB(A)	74,1	74,1	68,3	68,3	71,1	71,1	71,7	71,7

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

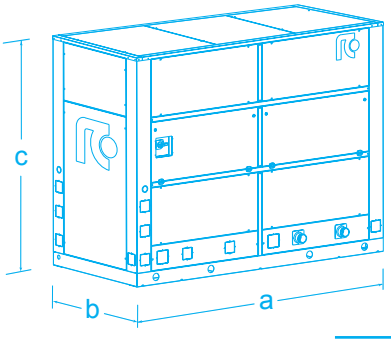
TECHNICAL DATA MAXIMO PF

	MAXIMO PF		220 P2 S	220 P2 D	250 P3 S	265 P4 D	290 P4 D
	SIZE		C5	C5	C5	C5	C5
STANDARD	**Cooling capacity (1)**	**kW**	**210,0**	**214,0**	**240,0**	**253,0**	**277,0**
	Unit power input	kW	84,0	84,3	103,0	106,8	125,3
	Free-Cooling capacity (2)	**kW**	**163,0**	**163,0**	**171,0**	**173,0**	**176,0**
	Total water flow rate	m³/h	38,8	39,4	44,4	46,7	51,3
	Total pressure drop	kPa	112	106	124	131	148
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	3	4	4
	Capacity steps	n.	2	2	3	4	4
	Centrifugal fans EC	n.	5	5	5	5	5
	Total air flow	m³/h	62500	62500	64000	64000	64000
	External static pressure	Pa	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	83,1	102,2	83,7	113,3	113,2
	Gas circuits	n.	1	2	1	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	185	185	217,2	215	315,8
	Unit starting current (LRA)	A	477,0	477,0	461,8	438,5	607,8
	EER (1)	kW/kW	2,50	2,54	2,33	2,37	2,21
	ESEER		3,02	3,28	3,42	3,39	3,36
	Sound power level [Lw] (3)	dB(A)	96,8	96,8	97,2	97,3	97,3
	Average sound pressure level [Lpm] (4)	dB(A)	77,6	77,6	77,9	78,0	78,0
	Net weight	kg	2320	2330	2490	2670	2720
	Hydraulic connections						
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--
	Evaporator IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)						
	Heating capacity	**kW**	**72,3**	**73,5**	**82,7**	**87,0**	**95,4**
	Pumping group						
	1 pump - 2 poles electric motor	kW	5,5	5,5	5,5	5,5	5,5
	2 pump - 2 poles electric motor	kW	7,5	7,5	7,5	7,5	7,5
	Water tank - volume	l	720	720	720	720	720
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**210,0**	**214,0**	**240,0**	**253,0**	**277,0**
	Unit power input	kW	81,5	81,8	99,7	103,0	121,0
	Free-Cooling capacity (2)	kW	163,0	163,0	171,0	173,0	176,0
	Total air flow	m³/h	62500	62500	64000	64000	64000
	External static pressure	Pa	50	50	50	50	50
	EER (1)	kW/kW	2,50	2,54	2,33	2,37	2,21
	Sound power level [Lw] (3)	dB(A)	95,3	95,3	95,8	96,4	96,4
	Average sound pressure level [Lpm] (4)	dB(A)	76,1	76,1	76,5	77,1	77,1
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**204,0**	**207,0**	**232,0**	**244,0**	**266,0**
	Unit power input	kW	80,3	80,7	99,3	102,5	122,0
	Free-Cooling capacity (2)	kW	161,0	162,0	169,0	171,0	175,0
	Total air flow	m³/h	53125	53125	54400	54400	54400
	External static pressure	Pa	36	36	36	36	36
	EER (1)	kW/kW	2,47	2,49	2,27	2,31	2,11
	Sound power level [Lw] (3)	dB(A)	92,4	92,4	92,8	93,3	93,3
	Average sound pressure level [Lpm] (4)	dB(A)	73,1	73,1	73,5	74,0	74,0
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**195,0**	**198,0**	**220,0**	**231,0**	**248,0**
	Unit power input	kW	82,2	82,7	102,5	105,5	127,5
	Free-Cooling capacity (2)	kW	159,0	160,0	167,0	169,0	172,0
	Total air flow	m³/h	43750	43750	44800	44800	44800
	External static pressure	Pa	25	25	25	25	25
	EER (1)	kW/kW	2,31	2,33	2,09	2,13	1,89
	Sound power level [Lw] (3)	dB(A)	90,5	90,5	90,8	91,2	91,2
	Average sound pressure level [Lpm] (4)	dB(A)	71,2	71,2	71,5	71,9	71,9

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE C	a	b	c
C1	1250	1010	1950
C2	1800	1180	2000
C3	2600	1340	2000
C4	3700	1490	2000
C5	4950	1500	2040



EAGLE FREE: Packaged air cooled liquid chillers with free-cooling system for outdoor installation, equipped with scroll compressors and axial fans
Cooling Capacity: **69,7 ÷ 331 kW**
Free-Cooling Capacity: **47,5 ÷ 194 kW**

FREE COOLING
RC Hi-Tech

eagle free

rcgroupairconditioning

FREE COOLING | R410A | PLATE | A C

MAIN FEATURES

- Air cooled liquid chiller with free-cooling system.
- 17 models available, for a wide selection opportunity.
- Average step of 20kW.
- EER up to 2,96.
- ESEER up to 3,85.
- Scroll compressors.
- R410A Refrigerant charge.
- Single or double refrigerant circuit.
- Plate type heat exchangers.
- AC Axial fans.
- Single air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS

- Units equipped with two scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Indirect free cooling system.
- Availability of EC axial fans for a high efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Components dedicated to the safety of the unity.
- Eurovent Certification.

INDIRECT FREE COOLING SYSTEM

Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

ELECTRONIC EXPANSION VALVE

The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: 4÷15°C
Ambient temperature: -10÷45°C

WORKING LIMITS IN FREE-COOLING MODE

Minimum chilled water outlet temperature: -15°C
Minimum ambient temperature: -20°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Compressors compartment.
- Colour: RAL 9002

COMPRESSORS
- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow safety switch.
- Antifreeze heater.

CONDENSING AND FREE-COOLING COIL
- Heat exchangers contained in single coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor.
- Stepless variable speed with phase-cut electronic controller for condensing pressure control.
- Stepless variable speed with phase-cut electronic controller for free-cooling control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Electronic expansion valve. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Liquid receiver with safety valve.
- Safety valve on low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.
  - Additional module with the following inlets / outlets:

    INLETS
    - o External alarm 1
    - o External alarm 2
    - o Line current indication.
    - o Line voltage indication / Compensation
    - o Ambient air temperature

    OUTLETS
    - o External alarm 1
    - o External alarm 2
    - o General alarm 2
    - o General alarm 3
- Driver for the additional module.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3” included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

EAGLE FREE	T 60 P2 S	T 60 P2 D	T 70 P2 S	T 70 P2 D	T 90 P2 S	T 90 P2 D	T 120 P2 S	T 120 P2 D	T 135 P2 S	T 150 P2 S	T 150 P2 D
SIZE	N6	N6	N6	N6	N7	N7	N7	N7	N7	N8	N8
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	-	-	-	-	-	-	-	-	-	-	-
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	-	●	●	●	●	●	●	●
450 - Desuperheater	●	-	●	-	●	-	●	-	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

EAGLE FREE	T 190 P4 D	T 200 P2 S	T 200 P2 D	T 240 P4 D	T 270 P4 D	T 300 P4 D
SIZE	N9	N8	N8	N9	N10	N10
739 - Pumping group (1 pump)	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	-	-	-	-	●	●
172 - Rubber support (kit)	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●
Expansion valve energy reserve module	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA EAGLE FREE

	EAGLE FREE		T 60 P2 S	T 60 P2 D	T 70 P2 S	T 70 P2 D	T 90 P2 S	T 90 P2 D	T 120 P2 S	T 120 P2 D
	SIZE		N6	N6	N6	N6	N7	N7	N7	N7
STANDARD	**Cooling capacity (1)**	**kW**	**69,7**	**69,7**	**79,8**	**79,6**	**104,0**	**103,0**	**126,0**	**124,0**
	Unit power input	kW	23,7	23,5	28,2	27,9	36,5	36,3	47,0	46,6
	Free-Cooling capacity (2)	**kW**	**47,5**	**47,5**	**51,4**	**51,4**	**64,2**	**63,9**	**71,3**	**71,0**
	Total water flow rate	m³/h	12,8	12,8	14,7	14,7	19,1	18,9	23,3	22,9
	Total pressure drop	kPa	132	108	153	130	110	94	135	122
	Compressors									
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Axial fans	n.	6	6	6	6	2	2	2	2
	Total air flow	m³/h	30000	30000	33000	33000	44000	44000	48000	48000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	31,6	34,6	32,0	35,6	42,0	40,8	42,9	41,4
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	64,4	64,4	70,4	70,4	87,8	87,8	104,8	104,8
	Unit starting current (LRA)	A	173,4	173,4	209,4	209,4	272,8	272,8	328,3	328,3
	EER (1)	kW/kW	2,94	2,96	2,83	2,85	2,85	2,84	2,68	2,66
	ESEER		3,78	3,49	3,68	3,31	3,58	3,31	3,53	3,15
	Sound power level [Lw] (3)	dB(A)	83,3	83,3	83,8	83,8	92,3	92,3	92,5	92,5
	Average sound pressure level [Lpm] (4)	dB(A)	66,3	66,3	66,4	66,4	74,2	74,2	74,4	74,4
	Net weight	kg	830	810	870	850	1170	1150	1280	1270
	Hydraulic connections									
	Evaporator IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	2"	--	--	--	--
	Evaporator IN/OUT - OD (5)	Ø mm	--	--	--	--	76,1	76,1	76,1	76,1
OPTIONAL	Partial heat recovery (6)									
	Heating capacity	**kW**	**24,0**	**--**	**27,5**	**--**	**35,7**	**--**	**43,4**	**--**
	Pumping group									
	Power input	kW	1,1	1,1	2,2	2,2	2,2	2,2	2,2	2,2
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**69,7**	**69,7**	**79,8**	**79,6**	**104,0**	**103,0**	**126,0**	**124,0**
	Unit power input	kW	22,5	22,5	26,8	26,7	35,1	35,0	45,0	44,8
	Free-Cooling capacity (2)	kW	47,5	47,5	51,4	51,4	64,2	63,9	71,3	71,0
	Total air flow	m³/h	30000	30000	33000	33000	44000	44000	48000	48000
	EER (1)	kW/kW	2,94	2,96	2,83	2,85	2,85	2,84	2,68	2,66
	Sound power level [Lw] (3)	dB(A)	83,2	83,2	83,7	83,7	92,2	92,2	92,3	92,3
	Average sound pressure level [Lpm] (4)	dB(A)	66,2	66,2	66,2	66,2	74,1	74,1	74,2	74,2
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**68,3**	**68,3**	**78,1**	**78,0**	**102,0**	**101,0**	**123,0**	**122,0**
	Unit power input	kW	22,9	22,9	27,3	27,3	35,6	35,5	46,0	45,8
	Free-Cooling capacity (2)	kW	47,2	47,2	51,1	51,1	63,7	63,4	70,8	70,5
	Total air flow	m³/h	25500	25500	28050	28050	37400	37400	40800	40800
	EER (1)	kW/kW	2,84	2,86	2,73	2,73	2,76	2,75	2,57	2,57
	Sound power level [Lw] (3)	dB(A)	79,9	79,9	80,3	80,3	88,8	88,8	89,0	89,0
	Average sound pressure level [Lpm] (4)	dB(A)	62,8	62,8	62,9	62,9	70,7	70,7	70,9	70,9
ELN KIT	**Cooling capacity (1)**	**kW**	**66,3**	**66,3**	**75,7**	**75,6**	**98,8**	**97,7**	**119,0**	**117,0**
	Unit power input	kW	23,7	23,7	28,3	28,2	36,6	36,5	47,6	47,4
	Free-Cooling capacity (2)	kW	46,8	46,8	50,7	50,7	63,0	62,7	70,0	69,7
	Total air flow	m³/h	21000	21000	23100	23100	30800	30800	33600	33600
	EER (1)	kW/kW	2,67	2,69	2,56	2,57	2,61	2,59	2,41	2,39
	Sound power level [Lw] (3)	dB(A)	76,1	76,1	76,7	76,7	84,9	84,9	85,3	85,3
	Average sound pressure level [Lpm] (4)	dB(A)	59,0	59,0	59,2	59,2	66,8	66,8	67,2	67,2

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

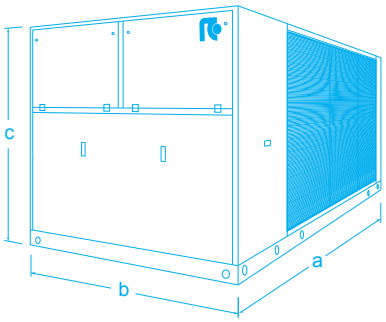
TECHNICAL DATA EAGLE FREE

	EAGLE FREE		T 135 P2 S	T 150 P2 S	T 150 P2 D	T 190 P4 D	T 200 P2 S	T 200 P2 D	T 240 P4 D	T 270 P4 D	T 300 P4 D
	SIZE		N7	N8	N8	N9	N8	N8	N9	N10	N10
STANDARD	**Cooling capacity (1)**	**kW**	**141,0**	**168,0**	**171,0**	**202,0**	**203,0**	**208,0**	**247,0**	**292,0**	**331,0**
	Unit power input	kW	54,7	59,6	59,8	75,4	78,1	79,4	98,0	110,6	124,0
	Free-Cooling capacity (2)	**kW**	**73,8**	**108,0**	**109,0**	**117,0**	**118,0**	**119,0**	**132,0**	**176,0**	**194,0**
	Total water flow rate	m³/h	26,1	31,0	31,4	37,3	37,4	38,4	45,6	53,9	60,9
	Total pressure drop	kPa	156	132	120	106	136	133	142	164	190
	Compressors										
	Quantity	n.	2	2	2	4	2	2	4	4	4
	Capacity steps	n.	2	2	2	4	2	2	4	4	4
	Axial fans	n.	2	3	3	3	3	4	4	6	6
	Total air flow	m³/h	50000	66000	66000	72000	72000	76000	88000	108000	126000
	Air circuits	n.	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	43,6	62,6	64,6	68,4	66,4	67,0	68,0	94,2	95,8
	Gas circuits	n.	1	1	2	2	1	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	121,7	142,5	142,5	171,7	175,7	179,6	209,6	251,2	285,0
	Unit starting current (LRA)	A	366,3	387,1	387,1	356,7	477,7	481,6	433,1	495,8	529,6
	EER (1)	kW/kW	2,58	2,82	2,86	2,68	2,60	2,62	2,52	2,64	2,67
	ESEER		3,47	3,60	3,33	3,85	3,49	3,09	3,64	3,64	3,74
	Sound power level [Lw] (3)	dB(A)	93,5	95,4	95,4	94,8	94,8	94,8	100,0	101,8	101,8
	Average sound pressure level [Lpm] (4)	dB(A)	75,4	76,0	76,0	75,4	75,4	75,4	80,2	81,5	81,5
	Net weight	kg	1350	1560	1580	1840	1710	1730	1850	2260	2710
	Hydraulic connections										
	Evaporator IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (5)	Ø mm	76,1	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)										
	Heating capacity	**kW**	**48,6**	**57,8**	**58,7**	**69,6**	**69,8**	**71,7**	**85,0**	**101,0**	**114,0**
	Pumping group										
	Power input	kW	2,2	4,0	4,0	4,0	4,0	4,0	4,0	5,5	7,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**141,0**	**168,0**	**171,0**	**202,0**	**203,0**	**208,0**	**247,0**	**292,0**	**331,0**
	Unit power input	kW	52,2	57,2	57,5	73,1	75,1	76,4	94,2	105,9	118,2
	Free-Cooling capacity (2)	kW	73,8	108,0	109,0	117,0	118,0	119,0	132,0	176,0	194,0
	Total air flow	m³/h	50000	66000	66000	72000	72000	76000	88000	108000	126000
	EER (1)	kW/kW	2,58	2,82	2,86	2,68	2,60	2,62	2,52	2,64	2,67
	Sound power level [Lw] (3)	dB(A)	93,3	95,2	95,2	94,6	94,6	94,6	96,3	97,5	97,5
	Average sound pressure level [Lpm] (4)	dB(A)	75,2	75,8	75,8	75,3	75,3	75,3	76,5	77,2	77,2
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**138,0**	**164,0**	**167,0**	**197,0**	**198,0**	**203,0**	**240,0**	**285,0**	**323,0**
	Unit power input	kW	53,6	58,2	58,5	75,0	76,7	77,8	96,6	107,9	120,7
	Free-Cooling capacity (2)	kW	73,3	108,0	108,0	117,0	118,0	118,0	131,0	175,0	193,0
	Total air flow	m³/h	42500	56100	56100	61200	61200	64600	74800	91800	107100
	EER (1)	kW/kW	2,47	2,71	2,75	2,55	2,49	2,52	2,40	2,54	2,56
	Sound power level [Lw] (3)	dB(A)	90,0	91,9	91,9	91,3	91,3	91,3	93,3	94,6	94,6
	Average sound pressure level [Lpm] (4)	dB(A)	71,9	72,5	72,5	71,9	71,9	71,9	73,5	74,2	74,2
ELN KIT	**Cooling capacity (1)**	**kW**	**132,0**	**159,0**	**161,0**	**190,0**	**190,0**	**195,0**	**231,0**	**275,0**	**311,0**
	Unit power input	kW	55,9	60,1	60,4	78,3	79,6	80,2	100,4	111,1	124,1
	Free-Cooling capacity (2)	kW	72,4	107,0	107,0	115,0	116,0	117,0	130,0	174,0	192,0
	Total air flow	m³/h	35000	46200	46200	50400	50400	53200	61600	75600	88200
	EER (1)	kW/kW	2,27	2,56	2,58	2,36	2,31	2,36	2,23	2,38	2,40
	Sound power level [Lw] (3)	dB(A)	86,3	88,0	88,0	87,6	87,6	87,6	90,2	91,7	91,7
	Average sound pressure level [Lpm] (4)	dB(A)	68,2	68,6	68,6	68,3	68,3	68,3	70,4	71,4	71,4

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE N	a	b	c
N6	2580	1200	1630
N7	3020	1200	1950
N8	4400	1800	1190
N9	3600	2290	2250
N10	4600	2290	2250



GLIDER EVO FREE: Packaged air cooled liquid chillers with free-cooling system for outdoor installation, equipped with screw compressors and axial fans
Cooling Capacity: **314 ÷ 1343 kW**
Free-Cooling Capacity: **308 ÷ 938 kW**

GLYCOL FREE
RC Hi-Tech

FREE COOLING
RC Hi-Tech

glider evo free

rcgroupairconditioning

R134a SHELL A C FREE COOLING

MAIN FEATURES

- Air cooled liquid chiller with free-cooling system.
- 21 models available, for a wide selection opportunity.
- Average step of 50 kW
- EER up to 2,73
- ESEER up to 3,25
- Twin-Screw compressors.
- R134a Refrigerant charge.
- Double refrigerant circuit.
- Shell and tube evaporator.
- AC Axial fans.
- Double air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS

- Indirect free cooling system.
- Availability of Glycol Free system.
- Low footprint.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Availability of EC axial fans for a higher efficiency.
- Complete set of components dedicated to the safety of the unity.

INDIRECT FREE COOLING SYSTEM

Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷45°C

WORKING LIMITS IN FREE-COOLING MODE

Minimum chilled water outlet temperature: -15°C
Minimum ambient temperature: -20°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated safety relief valve (overpressure inner valve).
- Replaceable cartridge type oil filter.
- Valves for oil filling and discharge.
- Oil sight glass.
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting from model 290 V2 F06 to model 470 V2 F08 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 520 V2 F08 to model 1220 V2 F16 included.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR

- Single pass type shell and tube evaporator optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSING AND FREE-COOLING COIL

- Heat exchangers contained in single coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor.
- Stepless variable speed with phase-cut electronic controller for condensing pressure control.
- Stepless variable speed with phase-cut electronic controller for free-cooling control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Component for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Energy reserve module for the electronic expansion valve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on compressor gas discharge.
- Double safety valve (only one in function) on high and low pressure side. The system include two safety valves with manual changeover system.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Pressure gauge on high and low pressure.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans.
- Fuses for water pumps (if scheduled).
- Contactors for each load.
- Compressor Part-Winding starting system from model 290 V2 F06 to model 470 V2 F08 included.
- Compressor Star / Delta starting system from model 520 V2 F08 to model 1220 V2 F16 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.
- Additional module “1” for ambient air temperature inlet.
- Driver for the additional module “1”.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

GLIDER EVO FREE SIZE	290 V2 F06	310 V2 F06	330 V2 F06	350 V2 F06	370 V2 F06	410 V2 F08	440 V2 F08	470 V2 F08	520 V2 F08	550 V2 F08	610 V2 F08
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●
769 - Pumping group (1+1stby)	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-
770 - Pumping group (2+1stby)	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
Condensing pressure / free cooling control system	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●
143 - Glycol free	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●
1005- Safety oil flow switch	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

GLIDER EVO FREE SIZE	670 V2 F10	720 V2 F10	770 V2 F10	810 V2 F10	870 V2 F12	930 V2 F12	980 V2 F12	1030 V2 F12	1130 V2 F14	1220 V2 F16
739 - Pumping group (1 pump)	●	●	●	●	●	●	-	-	-	-
769 - Pumping group (1+1stby)	●	●	●	●	●	●	-	-	-	-
740 - Pumping group (2 pumps)	-	-	-	-	-	-	●	●	●	●
770 - Pumping group (2+1stby)	-	-	-	-	-	-	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●
Condensing pressure / free cooling control system	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●
143 - Glycol free	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●
1005- Safety oil flow switch	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA GLIDER EVO FREE

	GLIDER EVO FREE SIZE		290 V2 F06	310 V2 F06	330 V2 F06	350 V2 F06	370 V2 F06	410 V2 F08	440 V2 F08	470 V2 F08
STANDARD	**Cooling capacity (1)**	**kW**	**314**	**340**	**365**	**387**	**409**	**452**	**481**	**510**
	Unit power input	kW	115,0	124,5	135,2	144,9	154,3	169,9	181,5	195,4
	Free-Cooling capacity (2)	**kW**	**308**	**315**	**321**	**326**	**330**	**439**	**446**	**452**
	Total water flow rate	m³/h	56,3	61	65,5	69,4	73,3	81,1	86,3	91,6
	Total pressure drop	kPa	103	89	98	83	91	121	111	124
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
	Axial fans	n.	6	6	6	6	6	8	8	8
	Total air flow	m³/h	119280	119280	119280	119280	119280	163168	163168	163168
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	146	146	146	146	146	145	145	145
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	225,4	239,4	254,4	267,4	281,4	310,2	332,2	263,2
	Unit starting current (LRA)	A	414,4	474,4	488,4	561,4	575,4	573,2	627,2	650,2
	EER (1)	kW/kW	2,73	2,73	2,70	2,67	2,65	2,66	2,65	2,61
	ESEER		3,04	3,09	3,08	3,10	3,10	3,07	3,08	3,08
	Sound power level [Lw] (3)	dB(A)	91,4	91,6	91,7	91,7	91,8	92,1	94,5	96,1
	Average sound pressure level [Lpm] (4)	dB(A)	71,7	71,8	71,9	72,0	72,0	71,9	74,3	75,9
	Net weight	kg	5751	5891	5906	5926	5931	7131	7158	7173
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	139,7	139,7	139,7	139,7	139,7	139,7	139,7	139,7
OPTIONAL	Glycol free system (2)									
	Cooling capacity	**kW**	**230**	**235**	**240**	**244**	**247**	**328**	**333**	**338**
	Glycol free water pump power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
	Partial heat recovery (6)									
	Heating capacity	**kW**	**61,9**	**67**	**71,9**	**76,2**	**80,5**	**89,1**	**94,8**	**101**
	Pumping group									
	Power input	kW	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**314**	**340**	**365**	**387**	**409**	**452**	**481**	**510**
	Unit power input	kW	115,0	124,5	135,2	144,9	154,3	169,9	181,5	195,4
	Free-Cooling capacity (2)	**kW**	**308**	**315**	**321**	**326**	**330**	**439**	**446**	**452**
	Total air flow	m³/h	119280	119280	119280	119280	119280	163168	163168	163168
	EER (1)	kW/kW	2,73	2,73	2,70	2,67	2,65	2,66	2,65	2,61
	Sound power level [Lw] (3)	dB(A)	89,4	89,6	89,7	89,7	89,8	90,1	92,5	94,1
	Average sound pressure level [Lpm] (4)	dB(A)	69,7	69,8	69,9	70,0	70,0	69,9	72,3	73,9
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**308**	**333**	**357**	**377**	**398**	**443**	**470**	**497**
	Unit power input	kW	115,8	125,7	136,8	147,8	157,9	171,7	185,0	198,8
	Free-Cooling capacity (2)	**kW**	**306**	**313**	**320**	**324**	**328**	**437**	**443**	**449**
	Total air flow	m³/h	101388	101388	101388	101388	101388	138693	138693	138693
	EER (1)	kW/kW	2,66	2,65	2,61	2,55	2,52	2,58	2,54	2,50
	Sound power level [Lw] (3)	dB(A)	88,4	88,6	88,7	88,7	88,8	89,1	91,5	93,1
	Average sound pressure level [Lpm] (4)	dB(A)	68,7	68,8	68,9	69,0	69,0	68,9	71,3	72,9
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**299**	**322**	**345**	**363**	**382**	**430**	**455**	**479**
	Unit power input	kW	118,7	129,3	142,0	152,5	163,9	176,2	191,2	205,6
	Free-Cooling capacity (2)	**kW**	**303**	**310**	**317**	**321**	**325**	**433**	**440**	**446**
	Total air flow	m³/h	83496	83496	83496	83496	83496	114218	114218	114218
	EER (1)	kW/kW	2,52	2,49	2,43	2,38	2,33	2,44	2,38	2,33
	Sound power level [Lw] (3)	dB(A)	85,4	85,6	85,7	85,7	85,8	86,1	88,5	90,1
	Average sound pressure level [Lpm] (4)	dB(A)	65,7	65,8	65,9	66,0	66,0	65,9	68,3	69,9
ELN KIT	**Cooling capacity (1)**	**kW**	**299**	**322**	**345**	**363**	**382**	**430**	**455**	**479**
	Unit power input	kW	118,7	129,3	142,0	152,5	163,9	176,2	191,2	205,6
	Free-Cooling capacity (2)	**kW**	**303**	**310**	**317**	**321**	**325**	**433**	**440**	**446**
	Total air flow		83496	83496	83496	83496	83496	114217	114217	114217
	EER (1)	kW/kW	2,52	2,49	2,43	2,38	2,33	2,44	2,38	2,33
	Sound power level [Lw] (3)	dB(A)	82,4	82,6	82,7	82,7	82,8	83,1	85,5	87,1
	Average sound pressure level [Lpm] (4)	dB(A)	62,7	62,8	62,9	63,0	63,0	62,9	65,3	66,9

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA GLIDER EVO FREE

	GLIDER EVO FREE		520 V2	550 V2	610 V2	670 V2	720 V2	770 V2	810 V2	870 V2
	SIZE		F08	F08	F08	F10	F10	F10	F10	F12
STANDARD	**Cooling capacity (1)**	**kW**	**572**	**600**	**674**	**736**	**796**	**845**	**887**	**952**
	Unit power input	kW	221,7	235,3	255,3	278,8	300,4	320,1	334,7	366,2
	Free-Cooling capacity (2)	**kW**	**455**	**460**	**469**	**590**	**598**	**593**	**572**	**693**
	Total water flow rate	m³/h	103	108	121	132	143	152	159	171
	Total pressure drop	kPa	131	141	167	202	229	257	89	106
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%	25...100%
	Axial fans	n.	8	8	8	10	10	10	10	12
	Total air flow	m³/h	159040	159040	159040	203960	203960	198800	198800	244752
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	194	194	194	181	181	241	241	217
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	396,2	421,2	445,2	478,0	503,0	526,0	549,0	603,8
	Unit starting current (LRA)	A	776,2	793,2	817,2	682,0	707,0	736,0	759,0	887,8
	EER (1)	kW/kW	2,58	2,55	2,64	2,64	2,65	2,64	2,65	2,60
	ESEER		3,05	3,05	3,19	3,18	3,25	3,21	3,22	3,17
	Sound power level [Lw] (3)	dB(A)	96,1	97,5	98,6	99,3	99,9	99,8	99,6	100,0
	Average sound pressure level [Lpm] (4)	dB(A)	75,9	77,3	78,4	78,7	79,2	79,1	79,0	79,0
	Net weight	kg	7637	7647	7657	8924	9344	9664	9674	10664
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	139,7	139,7	139,7	168,3	168,3	168,3	168,3	168,3
OPTIONAL	Glycol free system (2)									
	Cooling capacity	**kW**	**341**	**344**	**351**	**442**	**448**	**444**	**428**	**519**
	Glycol free water pump power input	kW	7,5	7,5	15,0	15,0	15,0	15,0	15,0	15,0
	Partial heat recovery (6)									
	Heating capacity	**kW**	**113**	**118**	**133**	**145**	**157**	**166**	**175**	**187**
	Pumping group									
	Power input	kW	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**572**	**600**	**674**	**736**	**796**	**845**	**887**	**952**
	Unit power input	kW	221,7	235,3	255,3	278,8	300,4	320,1	334,7	366,2
	Free-Cooling capacity (2)	**kW**	**455**	**460**	**469**	**590**	**598**	**593**	**572**	**693**
	Total air flow	m³/h	159040	159040	159040	203960	203960	198800	198800	244752
	EER (1)	kW/kW	2,58	2,55	2,64	2,64	2,65	2,64	2,65	2,60
	Sound power level [Lw] (3)	dB(A)	94,1	95,5	96,6	97,3	97,9	97,8	97,6	98,0
	Average sound pressure level [Lpm] (4)	dB(A)	73,9	75,3	76,4	76,7	77,2	77,1	77,0	77,0
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**556**	**583**	**653**	**715**	**770**	**817**	**856**	**923**
	Unit power input	kW	227,9	241,9	263,3	286,0	308,0	329,4	345,2	375,2
	Free-Cooling capacity (2)	**kW**	**453**	**457**	**467**	**587**	**595**	**590**	**568**	**689**
	Total air flow	m³/h	135184	135184	135184	173366	173366	168980	168980	208039
	EER (1)	kW/kW	2,44	2,41	2,48	2,50	2,50	2,48	2,48	2,46
	Sound power level [Lw] (3)	dB(A)	93,1	94,5	95,6	96,3	96,9	96,8	96,6	97,0
	Average sound pressure level [Lpm] (4)	dB(A)	72,9	74,3	75,4	75,7	76,2	76,1	76,0	76,0
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**534**	**558**	**623**	**685**	**735**	**779**	**813**	**883**
	Unit power input	kW	237,3	253,6	276,9	297,8	321,0	343,2	361,3	392,4
	Free-Cooling capacity (2)	**kW**	**450**	**454**	**463**	**583**	**590**	**586**	**563**	**684**
	Total air flow	m³/h	111328	111328	111328	142772	142772	139160	139160	171326
	EER (1)	kW/kW	2,25	2,20	2,25	2,30	2,29	2,27	2,25	2,25
	Sound power level [Lw] (3)	dB(A)	90,1	91,5	92,6	93,3	93,9	93,8	93,6	94,0
	Average sound pressure level [Lpm] (4)	dB(A)	69,9	71,3	72,4	72,7	73,2	73,1	73,0	73,0
ELN KIT	**Cooling capacity (1)**	**kW**	**534**	**558**	**623**	**685**	**735**	**779**	**813**	**883**
	Unit power input	kW	237,3	253,6	276,9	297,8	321,0	343,2	361,3	392,4
	Free-Cooling capacity (2)	**kW**	**450**	**454**	**463**	**583**	**590**	**586**	**563**	**684**
	Total air flow		111328	111328	111328	142772	142772	139160	139160	171326
	EER (1)	kW/kW	2,25	2,20	2,25	2,30	2,29	2,27	2,25	2,25
	Sound power level [Lw] (3)	dB(A)	87,1	88,5	89,6	90,3	90,9	90,8	90,6	91,0
	Average sound pressure level [Lpm] (4)	dB(A)	66,9	68,3	69,4	69,7	70,2	70,1	70,0	70,0

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

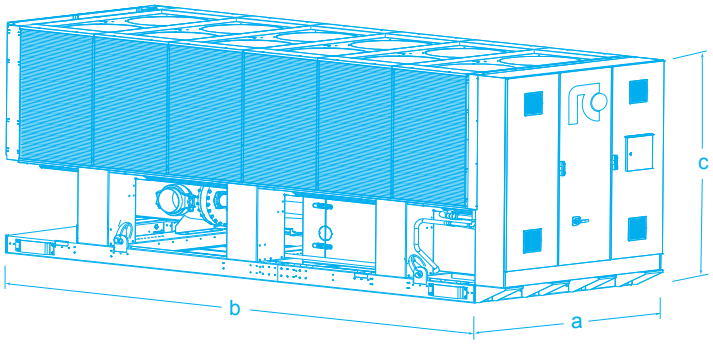
TECHNICAL DATA GLIDER EVO FREE

	GLIDER EVO FREE		930 V2	980 V2	1030 V2	1130 V2	1220 V2
	SIZE		F12	F12	F12	F14	F16
STANDARD	**Cooling capacity (1)**	**kW**	**1017**	**1071**	**1128**	**1238**	**1343**
	Unit power input	kW	394,2	416,7	438,9	470,7	512,6
	Free-Cooling capacity (2)	**kW**	**702**	**709**	**703**	**819**	**938**
	Total water flow rate	m³/h	183	193	203	220	241
	Total pressure drop	kPa	114	123	139	130	172
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2
	Capacity control	%	25...100%	25...100%	25...100%	25...100%	25...100%
	Axial fans	n.	12	12	12	14	16
	Total air flow	m³/h	244752	244752	238560	278320	318080
	Air circuits	n.	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	217	217	289	337	389
	Gas circuits	n.	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	650,8	689,8	728,8	820,6	896,4
	Unit starting current (LRA)	A	934,8	998,8	1037,8	1242,6	1396,4
	EER (1)	kW/kW	2,58	2,57	2,57	2,63	2,62
	ESEER		3,19	3,21	3,16	3,24	3,13
	Sound power level [Lw] (3)	dB(A)	99,2	100,9	102,1	102,1	102,4
	Average sound pressure level [Lpm] (4)	dB(A)	78,2	79,8	81,0	80,7	80,6
	Net weight	kg	10734	10774	11146	12126	13636
	Hydraulic connections						
	Evaporator IN/OUT - OD (5)	Ø mm	168,3	168,3	168,3	168,3	168,3
OPTIONAL	Glycol free system (2)						
	Cooling capacity	**kW**	**525**	**530**	**526**	**613**	**702**
	Glycol free water pump power input	kW	15,0	15,0	15,0	15,0	15,0
	Partial heat recovery (6)						
	Heating capacity	**kW**	**200**	**211**	**222**	**244**	**265**
	Pumping group						
	Power input	kW	7,5	15,0	15,0	15,0	15,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**1017**	**1071**	**1128**	**1238**	**1343**
	Unit power input	kW	394,2	416,7	438,9	470,7	512,6
	Free-Cooling capacity (2)	**kW**	**702**	**709**	**703**	**819**	**938**
	Total air flow	m³/h	244752	244752	238560	278320	318080
	EER (1)	kW/kW	2,58	2,57	2,57	2,63	2,62
	Sound power level [Lw] (3)	dB(A)	97,2	98,9	100,1	100,1	100,4
	Average sound pressure level [Lpm] (4)	dB(A)	76,2	77,8	79,0	78,7	78,6
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**984**	**1034**	**1089**	**1197**	**1303**
	Unit power input	kW	404,9	430,8	453,8	486,6	527,5
	Free-Cooling capacity (2)	**kW**	**698**	**705**	**699**	**816**	**933**
	Total air flow	m³/h	208039	208039	202776	236572	270368
	EER (1)	kW/kW	2,43	2,40	2,40	2,46	2,47
	Sound power level [Lw] (3)	dB(A)	96,2	97,9	99,1	99,1	99,4
	Average sound pressure level [Lpm] (4)	dB(A)	75,2	76,8	78,0	77,7	77,6
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**938**	**982**	**1033**	**1138**	**1246**
	Unit power input	kW	424,4	452,5	480,5	510,3	551,3
	Free-Cooling capacity (2)	**kW**	**692**	**699**	**693**	**810**	**927**
	Total air flow	m³/h	171326	171326	166992	194824	222656
	EER (1)	kW/kW	2,21	2,17	2,15	2,23	2,26
	Sound power level [Lw] (3)	dB(A)	93,2	94,9	96,1	96,1	96,4
	Average sound pressure level [Lpm] (4)	dB(A)	72,2	73,8	75,0	74,7	74,6
ELN KIT	**Cooling capacity (1)**	**kW**	**938**	**982**	**1033**	**1138**	**1246**
	Unit power input	kW	424,4	452,5	480,5	510,3	551,3
	Free-Cooling capacity (2)	**kW**	**692**	**699**	**693**	**810**	**927**
	Total air flow		171326	171326	166992	194824	222656
	EER (1)	kW/kW	2,21	2,17	2,15	2,23	2,26
	Sound power level [Lw] (3)	dB(A)	90,2	91,9	93,1	93,1	93,4
	Average sound pressure level [Lpm] (4)	dB(A)	69,2	70,8	72,0	71,7	71,6

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C.
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE F	a	b	c
F06	3640	2260	2550
F08	4610	2260	2550
F10	5580	2260	2550
F12	6550	2260	2550
F14	7520	2260	2550
F16	8720	2260	2250



GLIDER EVO FREE CLA: Packaged air cooled liquid chillers with free-cooling system in “A” class energy efficiency, for outdoor installation, equipped with screw compressors and axial fans
Cooling Capacity: **319 ÷ 1583 kW**
Free-Cooling Capacity: **323 ÷ 1369 kW**

A-CLASS RC Hi-Tech

GLYCOL FREE RC Hi-Tech

FREE COOLING RC Hi-Tech

glider evo free cla

rcgroupairconditioning

R134a · A CLASS · SHELL · A C · FREE COOLING

MAIN FEATURES
- Air cooled liquid chiller with free-cooling system in A class energy efficiency.
- 24 models available, for a wide selection opportunity.
- Average step of 50kW.
- EER up to 3,34.
- ESEER up to 3,83.
- Twin-Screw compressors.
- R134a Refrigerant charge.
- Double refrigerant circuit.
- Shell and tube evaporator.
- AC Axial fans.
- Double air circuit.
- Electronic expansion valve.
- Suitable for outdoor installation.

MAIN BENEFITS
- Indirect free cooling system.
- Availability of Glycol Free system.
- High EER and ESEER, A class energy efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Availability of EC axial fans for a higher efficiency.
- Complete set of components dedicated to the safety of the unity.

INDIRECT FREE COOLING SYSTEM: Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

GLYCOL FREE: The accessory allows to use pure water instead of antifreeze solutions in the hydraulic circuit of the plant.

A CLASS ENERGY EFFICIENCY: The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷45°C

WORKING LIMITS IN FREE-COOLING MODE
Minimum chilled water outlet temperature: -15°C
Minimum ambient temperature: -20°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated safety relief valve (overpressure inner valve).
- Replaceable cartridge type oil filter.
- Valves for oil filling and discharge.
- Oil sight glass.
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting from model 290 V2 F06 to model 590 V2 F10 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 630 V2 F12 to model 1450 V2 F24 included.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR

- Single pass type shell and tube evaporator optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSING AND FREE-COOLING COIL

- Heat exchangers contained in single coil with high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor.
- Stepless variable speed with phase-cut electronic controller for condensing pressure control.
- Stepless variable speed with phase-cut electronic controller for free-cooling control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Component for each refrigerant circuit:

- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Energy reserve module for the electronic expansion valve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on compressor gas discharge.
- Double safety valve (only one in function) on high and low pressure side. The system include two safety valves with manual changeover system.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Pressure gauge on high and low pressure.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:

- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans.
- Fuses for water pumps (if scheduled).
- Contactors for each load.
- Compressor Part-Winding starting system from model 290 V2 F06 to model 590 V2 F10 included.
- Compressor Star / Delta starting system from model 630 V2 F12 to model 1450 V2 F24 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.
- Additional module “1” for ambient air temperature inlet.
- Driver for the additional module “1”.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

GLIDER EVO FREE CLA SIZE	290 V2 F06	310 V2 F06	330 V2 F08	360 V2 F08	380 V2 F08	420 V2 F08	460 V2 F10	490 V2 F10	540 V2 F10	590 V2 F10	630 V2 F12	680 V2 F14
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●	●	●
769 - Pumping group (1+1stby)	●	●	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-	-	-	-
770 - Pumping group (2+1stby)	-	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●
Condensing pressure / free cooling control system	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●	●
143 - Glycol free	●	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Oil flow-switch	●	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

GLIDER EVO FREE CLA SIZE	720 V2 F14	790 V2 F16	860 V2 F16	910 V2 F16	960 V2 F16	1050 V2 F16	1110 V2 F18	1170 V2 F20	1240 V2 F20	1310 V2 F20	1380 V2 F22	1450 V2 F24
739 - Pumping group (1 pump)	●	-	-	-	-	-	-	-	-	-	-	-
769 - Pumping group (1+1stby)	●	-	-	-	-	-	-	-	-	-	-	-
740 - Pumping group (2 pumps)	-	●	●	●	●	●	●	●	●	●	●	●
770 - Pumping group (2+1stby)	-	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	-	-	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●
Condensing pressure / free cooling control system	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●	●	●
Condensing coil in special execution	●	●	●	●	●	●	●	●	●	●	●	●
250 - Coils protection nets (kit)	●	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●	●
Analog flowmeter	●	●	●	●	●	●	●	●	●	●	●	●
143 - Glycol free	●	●	●	●	●	●	-	-	-	-	-	-
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Oil flow-switch												
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●	●
934 - MP.COM expansion card	●	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA GLIDER EVO FREE CLA

	GLIDER EVO FREE CLA		290 V2	310 V2	330 V2	360 V2	380 V2	420 V2	460 V2	490 V2
	SIZE		F06	F06	F08	F08	F08	F08	F10	F10
STANDARD	**Cooling capacity (1)**	**kW**	**319**	**335**	**361**	**386**	**409**	**451**	**501**	**532**
	Unit power input	kW	95,5	100,9	109,1	117,7	124,7	138,3	154,6	165,7
	Free-Cooling capacity (2)	**kW**	**323**	**325**	**397**	**435**	**438**	**452**	**558**	**568**
	Evaporator water flow rate	m³/h	57,2	60	64,6	69,2	73,2	80,8	89,8	95,2
	Evaporator pressure drop	kPa	54	53	67	74	76	89	125	147
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	6	6	7	8	8	8	10	10
	Total air flow	m³/h	122336	119280	142772	163168	159040	159040	198800	198800
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	110	146	145	145	194	194	241	241
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	186,8	202,6	217,8	233,0	236,2	266,8	308,6	327,2
	Unit starting current (LRA)	A	374,1	380,0	419,9	435,1	413,7	500,0	668,8	678,1
	EER (1)	kW/kW	3,34	3,32	3,31	3,28	3,28	3,26	3,24	3,21
	ESEER		3,78	3,77	3,78	3,74	3,76	3,77	3,74	3,75
	Sound power level [Lw] (3)	dB(A)	92,1	92,5	92,7	92,9	91,5	91,9	92,1	96,2
	Average sound pressure level [Lpm] (4)	dB(A)	72,4	72,8	72,5	72,7	71,3	71,7	71,4	75,6
	Net weight	kg	5330	5923	6633	6638	6857	6895	8018	8030
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	168,3	168,3	168,3	168,3	168,3	219,1	219,1	219,1
OPTIONAL	Glycol free system (2)									
	Cooling capacity	**kW**	**241**	**243**	**297**	**325**	**327**	**338**	**418**	**425**
	Glycol free water pump power input	kW	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
	Partial heat recovery (6)									
	Heating capacity	**kW**	**62,8**	**65,9**	**71,0**	**76,0**	**80,5**	**88,8**	**98,6**	**105,0**
	Pumping group									
	Power input	kW	7,5	7,5	7,5	7,5	7,5	7,5	7,5	7,5
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**319**	**335**	**361**	**386**	**409**	**451**	**501**	**532**
	Unit power input	kW	95,5	100,9	109,1	117,7	124,7	138,3	154,6	165,7
	Free-Cooling capacity (2)	**kW**	**323**	**325**	**397**	**435**	**438**	**452**	**559**	**568**
	Total air flow	m³/h	122376	119280	142772	163168	159040	159040	198800	198800
	EER (1)	kW/kW	3,34	3,32	3,31	3,28	3,28	3,26	3,24	3,21
	Sound power level [Lw] (3)	dB(A)	90,1	90,5	90,7	90,9	89,5	89,9	90,1	94,2
	Average sound pressure level [Lpm] (4)	dB(A)	70,4	70,8	70,5	70,7	69,3	69,7	69,4	73,6
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**313**	**330**	**356**	**382**	**404**	**445**	**496**	**522**
	Unit power input	kW	95,4	102,5	110,2	117,9	125,1	140,8	155,0	167,3
	Free-Cooling capacity (2)	**kW**	**321**	**323**	**395**	**433**	**436**	**451**	**557**	**566**
	Total air flow	m³/h	104019	101388	121356	138692	135184	135184	168980	168980
	EER (1)	kW/kW	3,28	3,22	3,23	3,24	3,23	3,16	3,2	3,12
	Sound power level [Lw] (3)	dB(A)	89,1	89,5	89,7	89,9	88,5	88,9	89,1	93,2
	Average sound pressure level [Lpm] (4)	dB(A)	69,4	69,8	69,5	69,7	68,3	68,7	68,4	72,6
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**305**	**322**	**349**	**375**	**397**	**436**	**487**	**509**
	Unit power input	kW	96,5	106,3	112,2	120,2	128,5	144,4	158,6	172,0
	Free-Cooling capacity (2)	**kW**	**318**	**321**	**393**	**431**	**434**	**448**	**554**	**562**
	Total air flow	m³/h	85663	83496	99940	114218	111328	111328	139160	139160
	EER (1)	kW/kW	3,16	3,03	3,11	3,12	3,09	3,02	3,07	2,96
	Sound power level [Lw] (3)	dB(A)	86,1	86,5	86,7	86,9	85,5	85,9	86,1	90,2
	Average sound pressure level [Lpm] (4)	dB(A)	66,4	66,8	66,5	66,7	65,3	65,7	65,4	69,6
ELN KIT	**Cooling capacity (1)**	**kW**	**305**	**322**	**349**	**375**	**397**	**436**	**487**	**509**
	Unit power input	kW	96,5	106,3	112,2	120,2	128,5	144,4	158,6	172,0
	Free-Cooling capacity (2)	**kW**	**318**	**321**	**393**	**431**	**434**	**448**	**554**	**562**
	Total air flow		85663	83496	99940	114218	111328	111328	139160	139160
	EER (1)	kW/kW	3,16	3,03	3,11	3,12	3,09	3,02	3,07	2,96
	Sound power level [Lw] (3)	dB(A)	83,1	83,5	83,7	83,9	82,5	82,9	83,1	87,2
	Average sound pressure level [Lpm] (4)	dB(A)	63,4	63,8	63,5	63,7	62,3	62,7	62,4	66,6

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

TECHNICAL DATA GLIDER EVO FREE CLA

	GLIDER EVO FREE CLA		540 V2	590 V2	630 V2	680 V2	720 V2	790 V2	860 V2	910 V2
	SIZE		F10	F10	F12	F14	F14	F16	F16	F16
STANDARD	**Cooling capacity (1)**	**kW**	**584**	**638**	**691**	**735**	**781**	**863**	**943**	**993**
	Unit power input	kW	183,1	200,6	210,7	227,6	244,1	266,4	291,0	308,4
	Free-Cooling capacity (2)	**kW**	**584**	**597**	**655**	**734**	**773**	**867**	**917**	**930**
	Evaporator water flow rate	m³/h	105	114	124	132	140	155	169	178
	Evaporator pressure drop	kPa	163	181	92	105	113	110	125	135
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	10	10	12	13	14	15	16	16
	Total air flow	m³/h	198800	198800	238560	261794	278320	302070	318080	318080
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	241	241	289	294,5	337	339,5	389	389
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	348,3	369,4	413,6	441,1	468,6	502,6	536,6	567,4
	Unit starting current (LRA)	A	829,1	850,2	591,2	595,1	622,6	639,5	673,5	752,5
	EER (1)	kW/kW	3,23	3,24	3,24	3,20	3,18	3,24	3,24	3,22
	ESEER		3,75	3,75	3,71	3,72	3,77	3,74	3,72	3,71
	Sound power level [Lw] (3)	dB(A)	96,5	96,7	97,7	99,3	100,4	101,1	101,7	101,6
	Average sound pressure level [Lpm] (4)	dB(A)	75,8	76	76,7	77,9	79	79,3	79,9	79,8
	Net weight	kg	8182	8304	9086	9669	9872	11754	12233	12267
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1	219,1	273
OPTIONAL	Glycol free system (2)									
	Cooling capacity	**kW**	**437**	**447**	**490**	**549**	**578**	**649**	**686**	**696**
	Glycol free water pump power input	kW	5,5	7,5	7,5	7,5	7,5	15,0	15,0	15,0
	Partial heat recovery (6)									
	Heating capacity	**kW**	**115,0**	**125,0**	**136,0**	**144,0**	**153,0**	**170,0**	**186,0**	**196,0**
	Pumping group									
	Power input	kW	7,5	7,5	7,5	7,5	7,5	15,0	15,0	15,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**583**	**637**	**689**	**733**	**779**	**861**	**943**	**993**
	Unit power input	kW	176,9	192,9	208,0	224,0	239,2	261,1	291,0	308,4
	Free-Cooling capacity (2)	**kW**	**584**	**597**	**655**	**734**	**773**	**867**	**917**	**930**
	Total air flow	m³/h	198800	198800	238560	261794	278320	302070	318080	318080
	EER (1)	kW/kW	3,23	3,24	3,24	3,20	3,18	3,24	3,24	3,22
	Sound power level [Lw] (3)	dB(A)	94,5	94,7	95,7	97,3	98,4	99,1	99,7	99,6
	Average sound pressure level [Lpm] (4)	dB(A)	73,8	74,0	74,7	75,9	77,0	77,3	77,9	77,8
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**573**	**626**	**679**	**721**	**765**	**848**	**929**	**976**
	Unit power input	kW	179,7	195,7	210,3	226,9	242,8	264,4	294,9	312,8
	Free-Cooling capacity (2)	**kW**	**582**	**594**	**652**	**731**	**769**	**864**	**913**	**926**
	Total air flow	m³/h	168980	168980	202776	222524	236572	256759	270368	270368
	EER (1)	kW/kW	3,13	3,14	3,16	3,11	3,08	3,15	3,15	3,12
	Sound power level [Lw] (3)	dB(A)	93,5	93,7	94,7	96,3	97,4	98,1	98,7	98,6
	Average sound pressure level [Lpm] (4)	dB(A)	72,8	73,0	73,7	74,9	76,0	76,3	76,9	76,8
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**558**	**609**	**663**	**703**	**746**	**828**	**907**	**952**
	Unit power input	kW	185,6	202,6	216,5	232,9	248,5	270,8	293,5	311,1
	Free-Cooling capacity (2)	**kW**	**578**	**591**	**648**	**726**	**764**	**859**	**908**	**921**
	Total air flow	m³/h	139160	139160	166992	183256	194824	211449	222656	222656
	EER (1)	kW/kW	2,96	2,96	3,00	2,96	2,94	3,01	3,09	3,06
	Sound power level [Lw] (3)	dB(A)	90,5	90,7	91,7	93,3	94,4	95,1	95,7	95,6
	Average sound pressure level [Lpm] (4)	dB(A)	69,8	70,0	70,7	71,9	73,0	73,3	73,9	73,8
ELN KIT	**Cooling capacity (1)**	**kW**	**558**	**609**	**663**	**703**	**746**	**828**	**907**	**952**
	Unit power input	kW	185,6	202,6	216,5	232,9	248,5	270,8	293,5	311,1
	Free-Cooling capacity (2)	**kW**	**578**	**591**	**648**	**726**	**764**	**859**	**908**	**921**
	Total air flow		139160	139160	166992	183256	194824	211449	222656	222656
	EER (1)	kW/kW	2,96	2,96	3,00	2,96	2,94	3,01	3,09	3,06
	Sound power level [Lw] (3)	dB(A)	87,5	87,7	88,7	90,3	91,4	92,1	92,7	92,6
	Average sound pressure level [Lpm] (4)	dB(A)	66,8	67,0	67,7	68,9	70,0	70,3	70,9	70,8

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

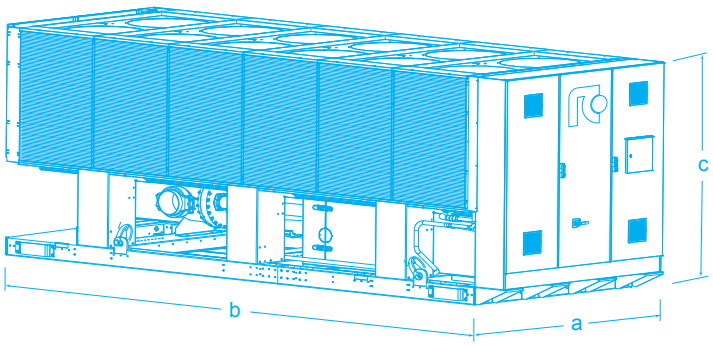
TECHNICAL DATA GLIDER EVO FREE CLA

	GLIDER EVO FREE CLA		960 V2	1050 V2	1110 V2	1170 V2	1240 V2	1310 V2	1380 V2	1450 V2
	SIZE		F16	F16	F18	F20	F20	F20	F22	F24
STANDARD	**Cooling capacity (1)**	**kW**	**1043**	**1146**	**1215**	**1285**	**1361**	**1438**	**1508**	**1583**
	Unit power input	kW	324,9	358,1	379,7	404,1	429,3	455,1	480,3	488,6
	Free-Cooling capacity (2)	**kW**	**943**	**965**	**1055**	**1198**	**1213**	**1228**	**1315**	**1369**
	Evaporator water flow rate	m³/h	187	205	218	230	244	258	270	284
	Evaporator pressure drop	kPa	147	133	148	189	206	203	223	91
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%	25... 100%
	Axial fans	n.	16	16	18	20	20	20	22	24
	Total air flow	m³/h	318080	318080	357840	397600	397600	397600	437360	477120
	Air circuits	n.	2	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	389	389	436	482	482	482	530	578
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	598,2	677,8	732,7	787,6	831,6	875,6	932,6	989,6
	Unit starting current (LRA)	A	783,3	889,1	1080,9	1135,8	1215,8	1259,8	1360,6	1417,6
	EER (1)	kW/kW	3,21	3,20	3,20	3,18	3,17	3,16	3,14	3,24
	ESEER		3,72	3,83	3,79	3,77	3,78	3,83	3,81	3,79
	Sound power level [Lw] (3)	dB(A)	101,4	99,9	101,7	103,9	103,9	103,9	104,1	104,2
	Average sound pressure level [Lpm] (4)	dB(A)	79,6	78,1	79,5	81,5	81,5	81,5	81,4	81,3
	Net weight	kg	12277	12376	13934	15142	15402	15422	16101	16780
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	273	273	273	273	323,9	323,9	323,9	323,9
OPTIONAL	Glycol free system (2)									
	Cooling capacity	**kW**	**705**	**722**	**790**	**897**	**909**	**920**	**985**	**1024**
	Glycol free water pump power input	kW	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0
	Partial heat recovery (6)									
	Heating capacity	**kW**	**206,0**	**225,0**	**239,0**	**253,0**	**267,0**	**283,0**	**296,0**	**311,0**
	Pumping group									
	Power input	kW	15,0	15,0	15,0	15,0	15,0	15,0	15,0	15,0
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**1043**	**1146**	**1215**	**1285**	**1361**	**1438**	**1508**	**1583**
	Unit power input	kW	324,9	358,1	379,7	404,1	429,3	455,1	480,3	488,6
	Free-Cooling capacity (2)	**kW**	**943**	**965**	**1056**	**1198**	**1214**	**1229**	**1316**	**1370**
	Total air flow	m³/h	318080	318080	357840	397600	397600	397600	437360	477120
	EER (1)	kW/kW	3,21	3,2	3,2	3,18	3,17	3,16	3,14	3,24
	Sound power level [Lw] (3)	dB(A)	99,4	97,9	99,7	101,9	101,9	101,9	102,1	102,2
	Average sound pressure level [Lpm] (4)	dB(A)	77,6	76,1	77,5	79,5	79,5	79,5	79,4	79,3
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**1025**	**1124**	**1193**	**1262**	**1334**	**1407**	**1477**	**1553**
	Unit power input	kW	330,6	367,3	386,1	409,7	435,9	465,9	489,1	497,8
	Free-Cooling capacity (2)	**kW**	**939**	**961**	**1052**	**1194**	**1209**	**1224**	**1311**	**1364**
	Total air flow	m³/h	270368	270368	304164	337960	337960	337960	371756	405552
	EER (1)	kW/kW	3,1	3,06	3,09	3,08	3,06	3,02	3,02	3,12
	Sound power level [Lw] (3)	dB(A)	98,4	96,9	98,7	100,9	100,9	100,9	101,1	101,2
	Average sound pressure level [Lpm] (4)	dB(A)	76,6	75,1	76,5	78,5	78,5	78,5	78,4	78,3
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**997**	**1091**	**1159**	**1227**	**1294**	**1362**	**1432**	**1509**
	Unit power input	kW	329,0	382,8	399,7	421,6	450,9	483,0	506,0	515,0
	Free-Cooling capacity (2)	**kW**	**933**	**956**	**1046**	**1187**	**1202**	**1217**	**1303**	**1354**
	Total air flow	m³/h	222656	222656	250488	278320	278320	278320	306152	333984
	EER (1)	kW/kW	3,03	2,85	2,9	2,91	2,87	2,82	2,83	2,93
	Sound power level [Lw] (3)	dB(A)	95,4	93,9	95,7	97,9	97,9	97,9	98,1	98,2
	Average sound pressure level [Lpm] (4)	dB(A)	73,6	72,1	73,5	75,5	75,5	75,5	75,4	75,3
ELN KIT	**Cooling capacity (1)**	**kW**	**997**	**1091**	**1159**	**1227**	**1294**	**1362**	**1432**	**1509**
	Unit power input	kW	329,0	382,8	399,7	421,6	450,9	483,0	506,0	515,0
	Free-Cooling capacity (2)	**kW**	**933**	**956**	**1046**	**1187**	**1202**	**1217**	**1303**	**1354**
	Total air flow		222656	222656	250488	278320	278320	278320	306152	333984
	EER (1)	kW/kW	3,03	2,85	2,9	2,91	2,87	2,82	2,83	2,93
	Sound power level [Lw] (3)	dB(A)	92,4	90,9	92,7	94,9	94,9	94,9	95,1	95,2
	Average sound pressure level [Lpm] (4)	dB(A)	70,6	69,1	70,5	72,5	72,5	72,5	72,4	72,3

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chiller water temperature 12/7°C; 35°C ambient temperature and hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE F	a	b	c
F06	3520	2260	2550
F08	4490	2260	2550
F10	5460	2260	2550
F12	6430	2260	2550
F14	7400	2260	2550
F16	8720	2260	2550
F18	9690	2260	2550
F20	10660	2260	2550
F22	11630	2260	2550
F24	12600	2260	2550



unico turbo FL free

UNICO TURBO FL FREE: Packaged air cooled liquid chillers with free-cooling system in "A" class energy efficiency for outdoor installation, equipped with oil-free centrifugal compressors with magnetic levitation bearings, flooded evaporator and microchannel condensing coils

Cooling Capacity: **402 ÷ 1548 kW**

Free-Cooling Capacity: **358 ÷ 1180 kW**

A-CLASS RC Hi-Tech

INVERTER RC Hi-Tech

FREECOOLING RC Hi-Tech

LOW NOISE RC Hi-Tech

unico turbo FL free

rcgroupairconditioning

A CLASS · INVERTER · OIL FREE · R134a · AC · FLOODED · MICRO CHANNEL · FREE COOLING

MAIN FEATURES

- Air cooled liquid chiller with free-cooling system in A class energy efficiency.
- 15 models available, for a wide selection opportunity.
- Average step of 100kW.
- EER up to 3,60.
- ESEER up to 5,76.
- Oil-free centrifugal compressors with magnetic levitation bearings driven by built-in inverter.
- R134a Refrigerant charge.
- Single refrigerant circuit.
- AC Axial fans.
- Flooded evaporator.
- Microchannel condensing coils in aluminium.
- Electronic expansion valve.
- Single air circuit.
- Modular construction.
- Suitable for outdoor installation.

MAIN BENEFITS

- Up to four centrifugal compressors with magnetic levitation bearings on the refrigerant circuit for an high efficiency.
- No need of power factor correction.
- Minimum starting current (LRA)
- Low refrigerant charge.
- Very high EER and ESEER. A Class energy efficiency.
- Quiet operation.
- Availability of kit for further reduction of the noise.
- Availability of EC fans for a higher efficiency.
- Microprocessor control system with 7" touch screen display.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.

INDIRECT FREE COOLING SYSTEM: Complete cooling of the chilled water of the existing cooling system with the outside air. The energy saving will be higher the longer the outside temperature remains below the required temperature for cooling.

A CLASS ENERGY EFFICIENCY: The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -10÷15°C

Ambient temperature: -10÷43°C

WORKING LIMITS IN FREE-COOLING MODE

Minimum chilled water outlet temperature: -15°C

Minimum ambient temperature: -20°C

rcgroup.it

1 9 6 3 2 0 1 3

fifty cool years

COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002 textured.

COMPRESSORS
- Twin-turbine centrifugal compressor, oil-free type, optimized for R134a refrigerant. The term “oil-free” refers to the total absence of lubricating oil within the compressor
- Magnetic levitation bearings.
- Manometric compression ratio: 1.5 ÷ 5.0
- Stepless capacity control trough integrated inverter.
- High efficiency permanent-magnet synchronous motor with integrated Soft-Start system (starting current limited to 5A).
- Power factor motor cosφ > 0.9 for a large part of the operating range
- Motor and electronic power section cooling by liquid refrigerant injection into the integrated cooling circuit.
- Electric motor thermal protection via internal winding temperature sensors.
- Electronic integrated control for operation and alarms status.
- Sensor on refrigerant discharge for temperature monitoring.
- Inner sensors for electronic components and inverter temperature control.
- Security system to protect the crankshaft and magnetic bearings in the event of failure of power supply.
- Installation with walls sound attenuators
- Degree of protection: IP54.
- Electric resistance of the suction pipe, together with activated antifreeze evaporator, to prevent the migration of refrigerant inside the compressor.

EVAPORATOR
- Flooded shell and tube evaporator, optimized for R134a refrigerant.
- Version two passes, characterized by low pressure losses on the water side.
- Water tubes with a helical rifled internal surface.
- Integrated liquid drop separator.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow switch for water flow control.
- Large liquid level indicator
- Antifreeze heater.

CONDENSING COIL
- Microchannel condensing coil in aluminium.
- Single row
- Low air side pressure drop
- High efficiency of heat exchange.
- Special protective surface treatment - acrylic painting TK-PRO that achieves a high resistance to atmospheric agents, while maintaining the same conditions of heat exchange capacity. (contact the Commercial RC GROUP).
- Reduced internal volume capable of containing the total refrigerant charge.
- High performance also in low noise structure,in combination of the fans listed below.
- Frame in galvanized steel.

FREE-COOLING COIL
- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.
- Motorized valves for free-cooling water circuit control.
- Temperature sensor on ambient air.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor AC type electric motor with stepless variable speed for condensing pressure control.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- valve by-pass for start-up.
- Electronic by-pass valve for compressor start.
- Non return valve on by-pass line for compressor start.
- Economizer for model 560 T2E, 810 T2E, 1070 T4E, 1120 T4E, 1200 T3E, 1500 T4E.
  The system includes:
  - Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
  - Anticondensate insulation made of polyurethane.
  - Intermediate electronic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Service valve on liquid line.
- Service valve on gas discharge.
- Non return valve on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection and cooling line of the compressor
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, complete with:
- Main switch with door lock safety.
- Fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM
- Microprocessor system with “Touch Screen” graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are supplied as standard with counter flange.
- The hydraulic connections with grooved end are supplied as standard with flexible joint and adapter pipe.

OPTIONAL ACCESSORIES

UNICO TURBO FL FREE SIZE	410 T2 VT4	490 T2 VT4	560 T2E VT5	680 T2 VT6	740 T3 VT6	810 T2E VT7	820 T3 VT7	900 T3 VT8	980 T4 VT8	1070 T4E VT9	1120 T4E VT10
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
Active filters for containment of the harmonic distortion	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●
79 - Heating system for electrical panel	●	●	●	●	●	●	●	●	●	●	●
351 - Free cooling coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

UNICO TURBO FL FREE SIZE	1200 T3E VT10	1360 T4 VT11	1380 T4 VT12	1500 T4E VT12
150 - LNO kit (noise reduction)	●	●	●	●
Active filters for containment of the harmonic distortion	●	●	●	●
172 - Rubber support (kit)	●	●	●	●
101 - EC fan	●	●	●	●
79 - Heating system for electrical panel	●	●	●	●
351 - Free cooling coils with pre-painted fins	●	●	●	●
1005 - Power supply analyzer	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●
926 - LON Serial board	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●
962 - Kit modem GSM	●	●	●	●
957 - Plantwatch without modem	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA UNICO TURBO FL FREE

	UNICO TURBO FL FREE SIZE		410 T2 VT4	490 T2 VT4	560 T2E VT5	680 T2 VT6	740 T3 VT6	810 T2E VT7	820 T3 VT7	900 T3 VT8
STANDARD	**Cooling capacity (1)**	**kW**	**402**	**510**	**597**	**716**	**852**	**771**	**856**	**929**
	Unit power input	kW	111,7	153,6	177,7	219,0	263,0	215,4	253,3	261,0
	Free-Cooling capacity (2)	**kW**	**358**	**392**	**479**	**575**	**675**	**589**	**676**	**758**
	Total water flow rate	m³/h	71,9	91,3	107,0	128,0	152,0	138,0	153,0	166,0
	Total pressure drop	kPa	92	144	128	128	132	146	134	120
	Compressors		centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal
	Quantity	n.	2	2	2	2	3	2	3	3
	Cooling capacity control	%	37...100%	33...100%	28...100%	30...100%	25...100%	26...100%	23...100%	22...100%
	Axial fans	n.	8	8	10	12	12	14	14	16
	Total air flow	m³/h	170360	170360	212950	255540	298130	255540	298130	340720
	Air circuits	n.	1	1	1	1	1	1	1	1
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	123	143	149	208	215	208	215	332
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	310,2	310,2	318	466,8	464,8	474,6	472,6	692,4
	Unit starting current (LRA)	A	41,2	41,2	49	56,8	61,8	64,6	69,6	77,4
	EER (1)	kW/kW	3,60	3,32	3,36	3,27	3,24	3,58	3,38	3,56
	ESEER		5,07	5,05	5,15	5,35	5,47	5,34	5,03	5,23
	Sound power level [Lw] (3)	dB(A)	94,8	94,8	95,6	96,4	97,0	96,5	97,1	97,8
	Average sound pressure level [L_{Pm}] (4)	dB(A)	74,8	74,8	75,1	75,4	75,6	75,5	75,7	76,1
	Net weight	kg	3768	4063	4705	5681	5866	6341	6471	7602
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	168,3	168,3	168,3	168,3	168,3	168,3	168,3	168,3
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**402**	**510**	**597**	**716**	**852**	**771**	**856**	**929**
	Unit power input	kW	111,7	153,6	177,7	219,0	263,0	215,4	253,3	261,0
	Free-Cooling capacity (2)	**kW**	**358**	**392**	**479**	**575**	**675**	**589**	**676**	**758**
	Total air flow	m³/h	170360	170360	212950	255540	298130	255540	298130	340720
	EER (1)	kW/kW	3,60	3,32	3,36	3,27	3,24	3,58	3,38	3,56
	Sound power level [Lw] (3)	dB(A)	93,7	93,7	94,5	95,3	95,9	95,4	96,0	96,7
	Average sound pressure level [L_{Pm}] (4)	dB(A)	73,7	73,7	74,0	74,3	74,5	74,4	74,6	75,0
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**376**	**484**	**562**	**683**	**805**	**770**	**813**	**883**
	Unit power input	kW	105,9	151,3	172,4	211,5	263,1	227,8	247,9	266,0
	Free-Cooling capacity (2)	**kW**	**348**	**385**	**468**	**565**	**661**	**589**	**664**	**744**
	Total air flow	m³/h	144806	144806	181007,5	217209	253410,5	217209	253410,5	289612
	EER (1)	kW/kW	3,55	3,20	3,26	3,23	3,06	3,38	3,28	3,32
	Sound power level [Lw] (3)	dB(A)	92,6	92,6	93,4	94,2	94,8	94,3	94,9	95,6
	Average sound pressure level [L_{Pm}] (4)	dB(A)	72,6	72,6	72,9	73,2	73,4	73,3	73,5	73,9
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**380**	**446**	**520**	**626**	**737**	**713**	**754**	**796**
	Unit power input	kW	109,8	142,0	162,5	195,0	233,2	216,1	233,4	249,5
	Free-Cooling capacity (2)	**kW**	**349**	**374**	**454**	**546**	**639**	**574**	**645**	**713**
	Total air flow	m³/h	119252	119252	149065	178878	208691	178878	208691	238504
	EER (1)	kW/kW	3,46	3,14	3,20	3,21	3,16	3,30	3,23	3,19
	Sound power level [Lw] (3)	dB(A)	90,9	90,9	91,7	92,5	93,1	92,6	93,2	93,9
	Average sound pressure level [L_{Pm}] (4)	dB(A)	70,9	70,9	71,2	71,5	71,7	71,6	71,8	72,2

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

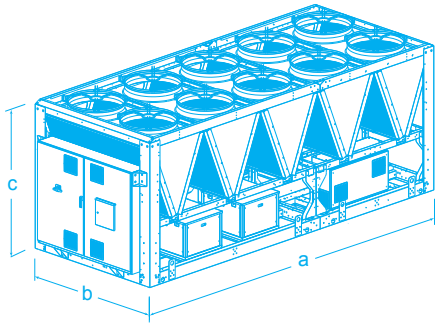
TECHNICAL DATA UNICO TURBO FL FREE

	UNICO TURBO FL FREE SIZE		980 T4 VT8	1070 T4E VT9	1120 T4E VT10	1200 T3E VT10	1360 T4 VT11	1380 T4 VT12	1500 T4E VT12
STANDARD	**Cooling capacity (1)**	**kW**	**1261**	**1021**	**1125**	**1194**	**1429**	**1453**	**1548**
	Unit power input	kW	390,4	308,5	337,8	351,2	438,3	426,1	463,5
	Free-Cooling capacity (2)	**kW**	**976**	**784**	**876**	**958**	**1084**	**1155**	**1180**
	Total water flow rate	m³/h	226,0	183,0	201,0	214,0	256,0	260,0	277,0
	Total pressure drop	kPa	142	144	138	128	150	130	148
	Compressors		centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal
	Quantity	n.	4	4	4	3	4	4	4
	Cooling capacity control	%	16...100%	15...100%	14...100%	18...100%	15...100%	15...100%	14...100%
	Axial fans	n.	16	18	20	20	22	24	24
	Total air flow	m³/h	425900	340720	383310	425900	468490	511080	511080
	Air circuits	n.	1	1	1	1	1	1	1
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	378	365	371	378	396	402	402
	Gas circuits	n.	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	619,4	627,2	634	708	925,8	933,6	933,6
	Unit starting current (LRA)	A	82,4	90,2	98	93	105,8	113,6	113,6
	EER (1)	kW/kW	3,23	3,31	3,33	3,40	3,26	3,41	3,34
	ESEER		5,35	5,20	5,27	5,31	5,56	5,76	5,60
	Sound power level [Lw] (3)	dB(A)	98,6	97,8	98,2	98,6	99,1	99,5	99,5
	Average sound pressure level [L_{Pm}] (4)	dB(A)	76,2	76,1	76,1	76,2	76,4	76,5	76,5
	Net weight	kg	7895	8584	9189	9056	10062	10667	10777
	Hydraulic connections								
	Evaporator IN/OUT - OD (5)	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1	219,1
LNO KIT 100%	**Cooling capacity (1)**	**kW**	**1261**	**1021**	**1125**	**1194**	**1429**	**1457**	**1548**
	Unit power input	kW	390,4	308,5	337,8	351,2	438,3	421,1	463,5
	Free-Cooling capacity (2)	**kW**	**976**	**784**	**876**	**958**	**1084**	**1156**	**1180**
	Total air flow	m³/h	425900	340720	383310	425900	468490	511080	511080
	EER (1)	kW/kW	3,23	3,31	3,33	3,40	3,26	3,46	3,34
	Sound power level [Lw] (3)	dB(A)	97,5	96,7	97,1	97,5	98,0	98,4	98,4
	Average sound pressure level [L_{Pm}] (4)	dB(A)	75,1	75,0	75,0	75,1	75,3	75,4	75,4
LNO KIT 85%	**Cooling capacity (1)**	**kW**	**1189**	**966**	**1064**	**1122**	**1359**	**1378**	**1468**
	Unit power input	kW	386,0	302,8	332,5	340,0	423,4	412,6	454,5
	Free-Cooling capacity (2)	**kW**	**956**	**769**	**859**	**936**	**1066**	**1133**	**1159**
	Total air flow	m³/h	362015	289612	325813,5	362015	398216,5	434418	434418
	EER (1)	kW/kW	3,08	3,19	3,20	3,30	3,21	3,34	3,23
	Sound power level [Lw] (3)	dB(A)	96,4	95,6	96,0	96,4	96,9	97,3	97,3
	Average sound pressure level [L_{Pm}] (4)	dB(A)	74,0	73,9	73,9	74,0	74,2	74,3	74,3
LNO KIT 70%	**Cooling capacity (1)**	**kW**	**1082**	**892**	**976**	**1037**	**1243**	**1273**	**1330**
	Unit power input	kW	347,9	284,1	310,8	319,1	376,7	381,1	446,3
	Free-Cooling capacity (2)	**kW**	**923**	**747**	**831**	**907**	**1032**	**1099**	**1118**
	Total air flow	m³/h	298130	238504	268317	298130	327943	357756	357756
	EER (1)	kW/kW	3,11	3,14	3,14	3,25	3,30	3,34	2,98
	Sound power level [Lw] (3)	dB(A)	94,7	93,9	94,3	94,7	95,2	95,6	95,6
	Average sound pressure level [L_{Pm}] (4)	dB(A)	72,3	72,2	72,2	72,3	72,5	72,6	72,6

1. Referred to chiller water temperature 15/10°C; 20% Ethylene glycol solution; ambient temperature 35°C,
2. Referred to chiller water inlet temperature 15°C; 20% Ethylene glycol solution; ambient temperature 3°C.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

SIZE VT	a	b	c
VT3	3530	2260	2304
VT4	4650	2260	2304
VT5	5770	2260	2304
VT6	6890	2260	2304
VT7	8010	2260	2304
VT8	9130	2260	2304
VT9	10250	2260	2304
VT10	11370	2260	2304
VT11	12490	2260	2304
VT12	13610	2260	2304



NEMO: Packaged water cooled liquid chillers for indoor installation, equipped with scroll compressor and plate heat exchangers
Cooling Capacity: **5,7 ÷ 30,5 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

nemo

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Water cooled liquid chiller.
- 13 models available, for a wide selection opportunity.
- Average step of 2,5kW.
- EER up to 4,43
- ESEER up to 4,75.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- High EER and ESEER.
- Availability of partial heat recovery system.
- Small dimensions for an easy installation.
- Reduced noise emission
- Easily of maintenance.
- Eurovent Certification.

COMPLETENESS OF EQUIPMENT AND OPTIONAL
The units are standardly equipped with 3-speed water pump.
On request is possible to install the system for the domestic hot water production and a chilled water tank.

INDOOR INSTALLATION
The machines are designed for indoor installation.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷20°C
Condenser outlet water temperature: 20÷60°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002
- Insulation of the internal framework.

COMPRESSOR

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100%).
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.
- Electric motor:
  - Version M: single-phase electric motor with direct on line starting.
  - Version T: 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- 3-speed circulation pump.

CONDENSER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- 0÷10V proportional signal to manage the condensing control system of the 2-way motorized valve.

REFRIGERANT CIRCUIT

- Thermostatic expansion valve.
- Service valves on liquid line and gas discharge.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch.
- Magnetothermic switch or fuses for compressor.
- Contactor for compressor.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply:
  - M: 230/3/50
  - T: 400/3/50+N.

CONTROL SYSTEM

- Microprocessor control. The system includes:
  - Display for the visualization of the alarm codes, set values and temperature values.
  - Dynamic set point.
  - Compressor running hour meter.
  - Contact for general alarm remotization.
  - “Low Temperature” set for operation with chilled water production up to -10°C.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections correspond to ISO 228/1 – G M

OPTIONAL ACCESSORIES

NEMO MODEL	M 06 P1 J3	M 08 P1 J3	M 10 P1 J3	M 13 P1 J3	T 06 P1 J3	T 08 P1 J3	T 10 P1 J3	T 13 P1 J3	T 15 P1 J3	T 17 P1 J3	T 20 P1 J3	T 25 P1 J3	T 30 P1 J3
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
764 - Water tank	●	●	●	●	●	●	●	●	●	●	●	●	●
117 - Low water temperature set	●	●	●	●	●	●	●	●	●	●	●	●	●
920 - Remote control kit	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

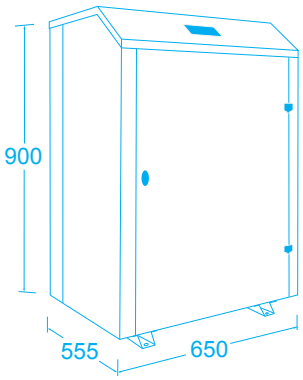
TECHNICAL DATA NEMO

	NEMO		M 06 P1	M 08 P1	M 10 P1	M 13 P1	T 06 P1	T 08 P1	T 10 P1	T 13 P1
	SIZE		J3	J3	J3	J3	J3	J3	J3	J3
STANDARD	**Cooling capacity (1)**	**kW**	**5,7**	**7,4**	**11,1**	**14,1**	**5,7**	**7,3**	**10,4**	**13,3**
	Unit power input	kW	1,6	2,0	2,7	3,4	1,6	2,0	2,6	3,3
	Evaporator water flow rate	m³/h	1,0	1,3	1,9	2,4	1,0	1,3	1,8	2,3
	Evaporator pressure drop	kPa	35	33	37	40	35	32	36	40
	Condenser water flow rate	m³/h	1,2	1,6	2,3	3,0	1,2	1,6	2,2	2,8
	Condenser pressure drop	kPa	54	49	53	58	53	48	53	57
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1
	Pumping group									
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	0,7	0,9	1,1	1,4	0,7	0,9	1,1	1,4
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0	12,3
	Unit starting current (LRA)	A	64,0	71,0	102,0	119,5	32,0	42,0	47,0	55,5
	EER (1)	kW/kW	3,63	3,66	4,12	4,19	3,62	3,72	4,01	4,07
	ESEER		3,68	3,77	4,22	4,30	3,85	3,99	4,28	4,35
	Sound power level [Lw] (2)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2	58,2
	Average sound pressure level [Lpm] (3)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0	44,0
	Net weight	kg	88,7	91,4	101,5	106,3	88,7	91,4	101,5	106,3
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
OPT	Partial heat recovery (4)									
	Heating capacity	**kW**	**0,9**	**1,2**	**1,7**	**2,2**	**0,9**	**1,1**	**1,6**	**2,1**
	Water tank - volume	l	40	40	40	40	40	40	40	40

	NEMO		T 15 P1	T 17 P1	T 20 P1	T 25 P1	T 30 P1
	SIZE		J3	J3	J3	J3	J3
STANDARD	**Cooling capacity (1)**	**kW**	**15,1**	**17,4**	**20,1**	**24,8**	**30,5**
	Unit power input	kW	3,8	4,4	5,0	6,1	6,9
	Evaporator water flow rate	m³/h	2,6	3,0	3,5	4,3	5,2
	Evaporator pressure drop	kPa	37	43	40	40	44
	Condenser water flow rate	m³/h	3,2	3,7	4,3	5,3	6,4
	Condenser pressure drop	kPa	53	61	55	53	49
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1
	Pumping group						
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	1,5	1,8	1,8	2,5	3,1
	Gas circuits	n.	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	13,8	17,0	17,0	23,0	24,0
	Unit starting current (LRA)	A	68,0	79,0	105,0	115,0	122,0
	EER (1)	kW/kW	4,00	3,94	4,06	4,07	4,43
	ESEER		4,26	4,15	4,34	4,33	4,75
	Sound power level [Lw] (2)	dB(A)	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (3)	dB(A)	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	114,5	116,0	118,5	141,7	147,4
	Hydraulic connections						
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
OPT	Partial heat recovery (4)						
	Heating capacity	**kW**	**2,4**	**2,7**	**3,1**	**3,9**	**4,8**
	Water tank - volume	l	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)



MANTA: Packaged water cooled liquid chillers for indoor installation, equipped with scroll compressors and plate heat exchangers
Cooling Capacity: **29,1 ÷ 670,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

manta

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Water cooled liquid chiller.
- 33 models available, for a wide selection opportunity.
- Average step of 25kW.
- EER up to 4,18.
- ESEER up to 5,51.
- Scroll compressors.
- R410A Refrigerant charge.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- Up to three scroll compressors for each refrigerant circuit to reach a high efficiency.
- Units with single or double refrigerant circuits.
- High ESEER.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

REDUCED NOISE EMISSION
The machines are characterized by a low sound level guaranteed by the containing structure.

DOMESTIC HOT WATER
On request is possible to install the system for the domestic hot water production.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -12÷20°C
Condenser outlet water temperature: 20÷60°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.

CONDENSER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- 0÷10V proportional signal to manage the condensing control system of the 2-way motorized valve.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Thermostatic expansion valve up to model T 150 P2 included.
- Electronic expansion valve from model T 170 P4 included. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
  The expansion valve is equipped with energy reserve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Electromagnetic valve on liquid line up to model T 150 P2 included. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valves on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

MANTA	T 27 P1	T 30 P1	T 33 P1	T 40 P1	T 40 P2	T 40 P2	T 48 P2	T 48 P2	T 54 P2	T 54 P2	T 60 P2
	S	S	S	S	S	D	S	D	S	D	S
SIZE	J4	J4	J4	J4	J7	J7	J7	J7	J7	J7	J7
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
Condenser flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Condenser flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

OPTIONAL ACCESSORIES

MANTA	T 60 P2	T 70 P2	T 70 P2	T 90 P2	T 90 P2	T 120 P2	T 120 P2	T 150 P2	T 150 P2	T 170 P4	T 175 P3
	D	S	D	S	D	S	D	S	D	D	S
SIZE	J7	J7	J7	J7	J7	J7	J7	J8	J8	J8	J8
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
Condenser flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Condenser flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	-	●	-	●	-	●	-	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	-
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MANTA	T 190 P4	T 200 P2	T 200 P2	T 220 P3	T 240 P4	T 290 P3	T 300 P4	T 340 P4	T 380 P4	T 460 P6	T 570 P6
	D	S	D	S	D	S	D	D	D	D	D
SIZE	J9	J9	J9	J9	J9	J9	J9	J10	J10	J10	J10
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	-	-	-	-	-	-	-	-	-	-	-
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA MANTA

	MANTA		T 27 P1 S	T 30 P1 S	T 33 P1 S	T 40 P1 S	T 40 P2 S	T 40 P2 D	T 48 P2 S	T 48 P2 D
	SIZE		J4	J4	J4	J4	J7	J7	J7	J7
STANDARD	**Cooling capacity (1)**	**kW**	**29,1**	**32,9**	**36,6**	**41,3**	**47,6**	**48,5**	**56,9**	**56,7**
	Unit power input	kW	7,1	7,9	9,0	10,1	12,3	12,2	14,2	13,6
	Evaporator water flow rate	m³/h	5,0	5,7	6,3	7,1	8,2	8,3	9,8	9,7
	Evaporator pressure drop	kPa	55	56	50	37	46	28	47	29
	Condenser water flow rate	m³/h	6,1	7,0	7,8	8,9	10,2	10,4	12,1	12,1
	Condenser pressure drop	kPa	69	63	64	47	57	38	57	38
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	2	2	2	2
	Capacity steps	n.	1	1	1	1	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	2,9	2,9	3,0	3,9	4,2	5,0	4,3	5,7
	Gas circuits	n.	1	1	1	1	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	22	25	31	34	42	42	44	44
	Unit starting current (LRA)	A	118	118	140	173	132	132	140	140
	EER (1)	kW/kW	4,10	4,14	4,06	4,08	3,88	3,99	4,01	4,16
	ESEER		4,33	4,37	4,26	6,14	4,81	4,52	5,07	4,78
	Sound power level [Lw] (2)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9
	Average sound pressure level [Lpm] (3)	dB(A)	50,0	51,0	52,0	53,0	53,0	53,0	53,0	53,0
	Net weight	kg	258	260	270	281	440	450	444	455
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"
	Evaporator IN/OUT - OD (4)	Ø mm	--	--	--	--	--	--	--	--
OPT	Partial heat recovery (5)									
	Heating capacity	**kW**	**4,5**	**5,1**	**5,7**	**6,4**	**7,4**	**--**	**8,9**	**--**

	MANTA		T 54 P2 S	T 54 P2 D	T 60 P2 S	T 60 P2 D	T 70 P2 S	T 70 P2 D	T 90 P2 S	T 90 P2 D
	SIZE		J7	J7	J7	J7	J7	J7	J7	J7
STANDARD	**Cooling capacity (1)**	**kW**	**65,4**	**64,2**	**69,8**	**70,4**	**83,4**	**83,1**	**108,0**	**107,0**
	Unit power input	kW	16,2	15,4	17,9	17,3	21,9	20,9	27,7	26,8
	Evaporator water flow rate	m³/h	11,2	11,0	12,0	12,1	14,3	14,3	18,5	18,4
	Evaporator pressure drop	kPa	50	28	43	28	50	28	46	29
	Condenser water flow rate	m³/h	13,9	13,6	15,0	15,0	18,0	17,8	23,2	23,0
	Condenser pressure drop	kPa	60	37	51	36	60	37	52	36
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,7	5,7	5,8	5,7	6,6	8,1	8,7	10,4
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	50	50	62	62	68	68	80	80
	Unit starting current (LRA)	A	143	143	171	171	207	207	265	265
	EER (1)	kW/kW	4,03	4,18	3,91	4,06	3,80	3,97	3,90	3,99
	ESEER		5,03	4,77	4,79	4,59	4,88	4,60	4,90	4,55
	Sound power level [Lw] (2)	dB(A)	69,9	69,9	70,9	70,9	71,9	71,9	76,9	76,9
	Average sound pressure level [Lpm] (3)	dB(A)	54,0	54,0	55,0	55,0	56,0	56,0	61,0	61,0
	Net weight	kg	455	468	460	485	465	495	715	760
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	2"	2"	2"	2"	2"	2"	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	--	--	--	--	--	--	76,1	76,1
OPT	Partial heat recovery (5)									
	Heating capacity	**kW**	**10,2**	**--**	**10,9**	**--**	**13,0**	**--**	**16,9**	**--**

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

TECHNICAL DATA MANTA

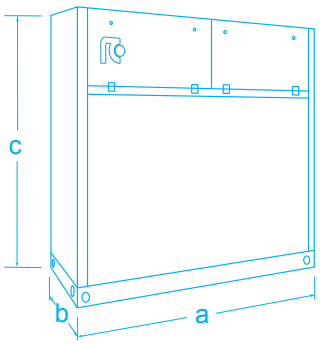
	MANTA		T 120 P2 S	T 120 P2 D	T 150 P2 S	T 150 P2 D	T 170 P4 D	T 175 P3 S	T 190 P4 D	T 200 P2 S
	SIZE		J7	J7	J8	J8	J8	J8	J9	J9
STANDARD	**Cooling capacity (1)**	**kW**	**135,0**	**134,0**	**175,0**	**173,0**	**200,0**	**199,0**	**214,0**	**229,0**
	Unit power input	kW	35,0	34,2	44,3	43,5	48,3	52,2	56,3	56,8
	Evaporator water flow rate	m³/h	23,1	23,0	30,0	29,7	34,3	34,2	36,8	39,2
	Evaporator pressure drop	kPa	48	38	46	42	42	54	34	46
	Condenser water flow rate	m³/h	29,1	28,8	37,5	37,2	42,6	43,1	46,6	48,8
	Condenser pressure drop	kPa	53	47	45	47	70	51	42	62
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	4	3	4	2
	Capacity steps	n.	2	2	2	2	4	3	4	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,7	12,7	12,4	17,0	17,8	16,0	23,9	22,4
	Gas circuits	n.	1	2	1	2	2	1	2	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	97	97	131	131	148	146	160	164
	Unit starting current (LRA)	A	321	321	375	375	333	369	345	466
	EER (1)	kW/kW	3,86	3,92	3,95	3,98	4,14	3,81	3,80	4,03
	ESEER		4,87	4,47	5,03	4,54	5,44	5,11	5,11	4,52
	Sound power level [Lw] (2)	dB(A)	80,1	80,1	81,0	81,0	81,0	82,8	81,0	81,0
	Average sound pressure level [Lpm] (3)	dB(A)	64,0	64,0	64,0	64,0	64,0	65,8	64,0	64,0
	Net weight	kg	775	788	1022	1030	1130	1152	1315	1085
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9
OPT	Partial heat recovery (5)									
	Heating capacity	**kW**	**21,0**	**--**	**27,2**	**27,0**	**31,2**	**31,1**	**33,5**	**35,6**

	MANTA		T 200 P2 D	T 220 P3 S	T 240 P4 D	T 290 P3 S	T 300 P4 D	T 340 P4 D	T 380 P4 D	T 460 P6 D	T 570 P6 D
	SIZE		J9	J9	J9	J9	J9	J10	J10	J10	J10
STANDARD	**Cooling capacity (1)**	**kW**	**227,0**	**270,0**	**276,0**	**331,0**	**347,0**	**403,0**	**446,0**	**534,0**	**670,0**
	Unit power input	kW	55,6	65,9	69,0	83,0	88,5	101,0	112,9	130,2	170,9
	Evaporator water flow rate	m³/h	38,9	46,4	47,3	56,8	59,5	69,1	76,6	91,6	115,0
	Evaporator pressure drop	kPa	53	52	61	49	70	70	64	63	85
	Condenser water flow rate	m³/h	48,5	57,6	59,0	71,1	74,5	86,2	95,7	114,0	144,0
	Condenser pressure drop	kPa	71	68	81	60	89	86	74	64	83
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	3	4	3	4	4	4	6	6
	Capacity steps	n.	2	3	4	3	4	4	4	6	6
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	22,8	23,1	24,7	30,3	31,6	31,1	48,1	49,5	62,4
	Gas circuits	n.	2	1	2	1	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	164	197	246	194	262	295	328	393	492
	Unit starting current (LRA)	A	466	441	584	418	507	597	630	637	794
	EER (1)	kW/kW	4,08	4,10	4,00	3,99	3,92	3,99	3,95	4,10	3,92
	ESEER		5,11	5,37	5,19	5,27	5,09	5,20	5,19	5,51	5,25
	Sound power level [Lw] (2)	dB(A)	81,0	82,8	84,1	82,8	84,1	84,5	84,5	86,3	86,3
	Average sound pressure level [Lpm] (3)	dB(A)	64,0	65,8	67,0	65,8	67,0	67,0	67,0	68,8	68,8
	Net weight	kg	1115	1302	1545	1403	1590	1665	1775	2270	2300
	Hydraulic connections										
	Evaporator / Condenser IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPT	Partial heat recovery (5)										
	Heating capacity	**kW**	**35,3**	**42,1**	**43,0**	**51,7**	**54,1**	**62,8**	**69,6**	**83,2**	**104,0**

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)

SIZE J	a	b	c
J4	1000	650	1400
J7	1200	750	1700
J8	1800	1200	1740
J9	1800	1200	1740
J10	1800	1800	1740



FRIGO SCREW K: Packaged water cooled liquid chillers for indoor installation, equipped with screw compressor and plate heat exchangers
Cooling Capacity: **186 ÷ 656 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

frigo screw k

rcgroupairconditioning

R134a PLATE

MAIN FEATURES
- Water cooled liquid chiller.
- 13 models available, for a wide selection opportunity.
- Average step of 35kW.
- EER up to 4,76.
- ESEER up to 5,53.
- Single screw compressor.
- R134a Refrigerant charge.
- Electronic expansion valve.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- High ESEER.
- Availability of kit for the reduction of the noise.
- Reduced footprint.
- Easily of maintenance.
- Eurovent Certification.

HEAVY DUTY APPLICATIONS
The machines are particularly suitable for installation in marine applications.

INDOOR INSTALLATION
The machines are designed for indoor installation.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷15°C
Condenser outlet water temperature: 19÷63°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

COMPONENTS

FRAMEWORK
- Base and self supporting frame in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSOR
- Twin screw semi-hermetic compressor with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated overpressure valve.
- Replaceable cartridge type oil filter.
- Oil flow switch.
- Valves for oil filling and discharge.
- Sight glass
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting from model 190 V1 up to model 270 V1 included.
- 2-pole 3-phase electric motor with Star / Delta starting for all other machines.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- From model 360 V1 up to model 660 V1 the unit is equipped with two evaporators. The parallel of the hydraulic circuit is at Customer care.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSER
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- From model 360 V1 up to model 660 V1 the unit is equipped with two condensers. The parallel of the hydraulic circuit is at Customer care.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

REFRIGERANT CIRCUIT
- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for compressor.
- Contactors for compressor (2 contactors for Part-Winding start system – 3 contactors for Star / Delta start system).
- Compressor Part-Winding start system from model 190 V1 up to model 270 V1 included.
- Compressor Star / Delta start system for all other machines.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO SCREW K	190 V1	210 V1	240 V1	250 V1	270 V1	310 V1	360 V1	410 V1	470 V1	500 V1	530 V1	580 V1	660 V1
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	-	-	-	-	-	-	-	-	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA FRIGO SCREW K

	FRIGO SCREW K		190 V1	210 V1	240 V1	250 V1	270 V1	310 V1	360 V1	410 V1
STANDARD	**Cooling capacity (1)**	**kW**	**186**	**207**	**231**	**249**	**263**	**307**	**354**	**411**
	Unit power input	kW	39,2	43,5	48,7	52,3	55,7	65,0	74,8	86,9
	Evaporator water flow rate	m³/h	31,9	35,6	39,7	42,8	45,2	52,6	60,7	70,5
	Evaporator pressure drop	kPa	18	22	20	18	27	31	32	33
	Condenser water flow rate	m³/h	38,9	43,3	48,4	52,1	55,1	63,0	73,9	84,0
	Condenser pressure drop	kPa	6	5	5	5	7	7	8	8
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity control	%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	15	16	17	17	15	16	37	42
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	102,5	117,8	134,8	144,1	165,2	183,4	207,0	237,1
	Unit starting current (LRA)	A	280	351	495	495	646	361	361	374
	EER (1)	kW/kW	4,75	4,76	4,74	4,76	4,72	4,72	4,73	4,73
	ESEER		5,33	5,32	5,32	5,36	5,36	5,33	5,35	5,36
	Sound power level [Lw] (2)	dB(A)	88,1	89,1	93,1	93,1	93,1	96,1	97,4	97,4
	Average sound pressure level [Lpm] (3)	dB(A)	71,0	72,0	76,0	76,0	76,0	79,0	80,0	80,0
	Net weight	kg	1399	1423	1465	1476	1689	1733	1750	2117
	Hydraulic connections									
	Evaporator / Condenser IN/OUT - OD (4)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	2x88,9	2x88,9
OPT	Compressor soundproof box									
	Sound power level [Lw] (2)	dB(A)	85,1	86,1	90,1	90,1	90,1	93,1	94,4	94,4
	Average sound pressure level [Lpm] (3)	dB(A)	68,0	69,0	73,0	73,0	73,0	76,0	77,0	77,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

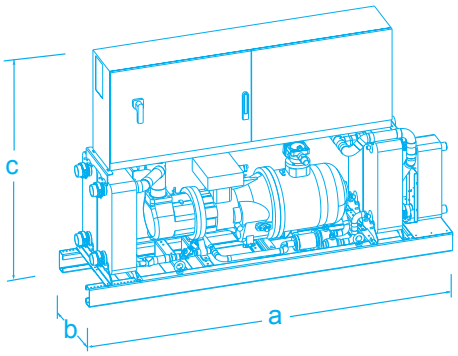
TECHNICAL DATA FRIGO SCREW K

	FRIGO SCREW K		470 V1	500 V1	530 V1	580 V1	660 V1
STANDARD	**Cooling capacity (1)**	**kW**	**464**	**492**	**526**	**580**	**656**
	Unit power input	kW	98,7	106,0	111,2	123,1	139,0
	Evaporator water flow rate	m³/h	79,6	84,4	90,3	99,5	113,0
	Evaporator pressure drop	kPa	35	32	31	28	19
	Condenser water flow rate	m³/h	95,0	103,0	110,0	121,0	137,0
	Condenser pressure drop	kPa	10	11	11	9	9
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	1	1	1	1	1
	Capacity control	%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%	50 ... 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	48	53	58	64	69
	Gas circuits	n.	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	267,9	283,7	307,7	354,8	398,8
	Unit starting current (LRA)	A	453	543	595	703	783
	EER (1)	kW/kW	4,70	4,64	4,73	4,71	4,72
	ESEER		5,36	5,35	5,43	5,45	5,53
	Sound power level [Lw] (2)	dB(A)	96,4	98,4	98,4	99,6	99,6
	Average sound pressure level [Lpm] (3)	dB(A)	79,0	81,0	81,0	82,0	82,0
	Net weight	kg	2151	2177	2233	2616	2663
	Hydraulic connections						
	Evaporator / Condenser IN/OUT - OD (4)	Ø mm	2x88,9	2x88,9	2x88,9	2x88,9	2x88,9
OPT	Compressor soundproof box						
	Sound power level [Lw] (2)	dB(A)	93,4	95,4	95,4	96,6	96,6
	Average sound pressure level [Lpm] (3)	dB(A)	76,0	78,0	78,0	79,0	79,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

FRIGO SCREW K	a	b	c
190 V1	2500	600	1790
210 V1	2500	600	1790
240 V1	2500	600	1790
250 V1	2500	600	1790
270 V1	2500	600	1790
310 V1	2500	600	1790
360 V1	2800	700	1790
410 V1	2800	700	1790
470 V1	2800	700	1790
500 V1	2800	700	1790
530 V1	2800	700	1790
580 V1	3100	700	1790
660 V1	3100	700	1790



FRIGO SCREW CLA: Packaged water cooled liquid chillers in "A" class energy efficiency for indoor installation, equipped with screw compressors and shall and tube heat exchangers
Cooling Capacity: **407 ÷ 1610 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

A-CLASS
RC Hi-Tech

frigo screw cla

rcgroupairconditioning

R134a SHELL

MAIN FEATURES
- Water cooled liquid chiller in A class energy efficiency.
- 14 models available, for a wide selection opportunity.
- Average step of 85kW.
- EER up to 5,12.
- ESEER up to 5,75.
- Twin-screw compressors.
- Double refrigerant circuit.
- R134a Refrigerant charge.
- Electronic expansion valve.
- Shell and tube heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- High EER and ESEER, A class energy efficiency.
- Availability of kit for the reduction of the noise.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

A CLASS ENERGY EFFICIENCY
The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -11÷15,5°C
Condenser outlet water temperature: 21÷49°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

COMPONENTS

FRAMEWORK
- Base and self supporting frame in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9005

COMPRESSORS
- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated overpressure valve.
- Replaceable cartridge type oil filter.
- Oil flow switch.
- Valves for oil filling and discharge.
- Sight glass
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting for models 410 V2 / 460 V2 / 510 V2 / 540 V2 / 610 V2
- 2-pole 3-phase electric motor with Star / Delta starting for all other machines.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Shell and tube evaporator optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSER

One condenser for each refrigerant circuit:
- Shell and tube condenser optimized for R134a refrigerant.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for each compressors.
- Contactors for each compressors (2 contactors for Part-Winding start system – 3 contactors for Star / Delta start system).
- Compressor Part-Winding start system for model 410 V2 / 460 V2 / 510 V2 / 540 V2 / 610 V2
- Compressor Star / Delta start system for all other machines.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO SCREW CLA	410 V2	460 V2	510 V2	540 V2	610 V2	700 V2	790 V2	940 V2	1050 V2	1110 V2	1140 V2	1310 V2	1460 V2	1610 V2
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	●	●	●	●
Condenser flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●	●	●	●
780 - Noise absorption box	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA FRIGO SCREW CLA

	FRIGO SCREW CLA		410 V2	460 V2	510 V2	540 V2	610 V2	700 V2	790 V2	940 V2
STANDARD	**Cooling capacity (1)**	**kW**	**407**	**457**	**507**	**540**	**608**	**702**	**791**	**934**
	Unit power input	kW	80,6	90,1	100,0	106,9	119,4	136,6	156,0	184,2
	Evaporator water flow rate	m³/h	69,8	78,5	86,9	92,6	104	121	136	160
	Evaporator pressure drop	kPa	7	15	15	18	21	16	13	19
	Condenser water flow rate	m³/h	84,2	94,6	105	112	126	145	163	193
	Condenser pressure drop	kPa	10	13	16	15	22	21	25	19
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	77,8	77,8	185,5	185,5	185,5	185,5	170,6	163,1
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	185,8	194,4	219,6	238,4	271,8	310,8	347,8	391,4
	Unit starting current (LRA)	A	354,9	377,2	460,8	614,2	359,9	435,4	453,9	549,7
	EER (1)	kW/kW	5,05	5,07	5,07	5,05	5,09	5,14	5,07	5,07
	ESEER		5,67	5,65	5,62	5,75	5,60	5,73	5,69	5,67
	Sound power level [Lw] (2)	dB(A)	91,8	91,8	91,8	96,8	96,8	97,6	100,6	100,6
	Average sound pressure level [Lpm] (3)	dB(A)	74,0	74,0	74,0	79,0	79,0	79,0	82,0	82,0
	Net weight	kg	3237	3268	3498	3590	3720	3967	4071	4835
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	168,3	168,3	168,3	168,3	168,3	219,1	219,1
OPTIONAL	Partial heat recovery (5)									
	Heating capacity	**kW**	**53,0**	**59,5**	**65,9**	**70,2**	**78,9**	**91,1**	**103,0**	**121,0**
	Compressor soundproof box									
	Sound power level [Lw] (2)	dB(A)	85,8	85,8	85,8	90,8	90,8	91,6	94,6	94,6
	Average sound pressure level [Lpm] (3)	dB(A)	68,0	68,0	68,0	73,0	73,0	73,0	76,0	76,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

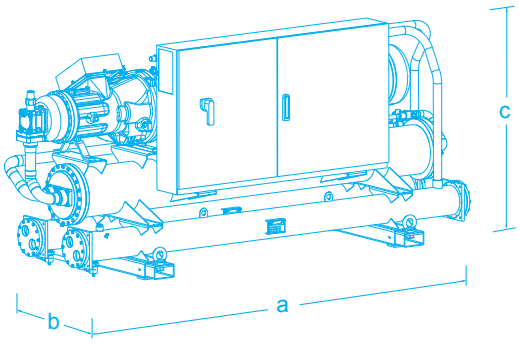
TECHNICAL DATA FRIGO SCREW CLA

	FRIGO SCREW CLA		1050 V2	1110 V2	1140 V2	1310 V2	1460 V2	1610 V2
STANDARD	**Cooling capacity (1)**	**kW**	**1044**	**1108**	**1142**	**1308**	**1457**	**1610**
	Unit power input	kW	206,3	216,8	223,5	256,0	286,2	316,9
	Evaporator water flow rate	m³/h	179	190	196	224	250	276
	Evaporator pressure drop	kPa	25	27	22	28	35	43
	Condenser water flow rate	m³/h	216	229	236	270	301	332
	Condenser pressure drop	kPa	21	25	23	19	19	22
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2
	Capacity control	%	25 … 100%	25 … 100%	25 … 100%	25 … 100%	25 … 100%	25 … 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	155,5	155,5	144,5	215,6	210,6	206,3
	Gas circuits	n.	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	441,8	466,2	497,2	569,6	640,6	713,6
	Unit starting current (LRA)	A	594,9	686,1	791,6	835,8	1023,3	1147,8
	EER (1)	kW/kW	5,06	5,11	5,11	5,11	5,09	5,08
	ESEER		5,61	5,64	5,65	5,66	5,61	5,54
	Sound power level [Lw] (2)	dB(A)	101,2	101,2	101,2	103,6	103,6	103,6
	Average sound pressure level [Lpm] (3)	dB(A)	82,0	82,0	82,0	84,0	84,0	84,0
	Net weight	kg	4949	5031	5549	6407	6537	6814
	Hydraulic connections							
	Evaporator IN/OUT - OD (4)	Ø mm	219,1	219,1	219,1	219,1	273	273
OPTIONAL	Partial heat recovery (5)							
	Heating capacity	**kW**	**135,0**	**144,0**	**148,0**	**170,0**	**189,0**	**209,0**
	Compressor soundproof box							
	Sound power level [Lw] (2)	dB(A)	95,2	95,2	95,2	97,6	97,6	97,6
	Average sound pressure level [Lpm] (3)	dB(A)	76,0	76,0	76,0	78,0	78,0	78,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)

FRIGO SCREW CLA	a	b	c
410 V2	3359	975	1498
460 V2	3359	975	1498
510 V2	3349	1013	1618
540 V2	3349	1013	1618
610 V2	3435	1007	1740
700 V2	3514	1060	1780
790 V2	3894	1210	1888
940 V2	3894	1210	1888
1050 V2	3894	1210	1888
1110 V2	3932	1218	1890
1140 V2	3874	1287	1975
1310 V2	4273	1284	2084
1460 V2	4273	1284	2084
1610 V2	4352	1284	2108



FRIGO SCREW CLA PLUS: Packaged water cooled liquid chillers in "A+" class energy efficiency for indoor installation, equipped with screw compressors and shall and tube heat exchangers
Cooling Capacity: **626 ÷ 1180 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

A+CLASS
RC Hi-Tech

frigo screw cla plus

rcgroupairconditioning

R134a SHELL

MAIN FEATURES
- Water cooled liquid chiller in A+ class energy efficiency.
- 7 models available, for a wide selection opportunity.
- Average step of 75kW.
- EER up to 5,50.
- ESEER up to 6,18.
- Twin-screw compressors.
- Double refrigerant circuit.
- R134a Refrigerant charge.
- Electronic expansion valve.
- Shell and tube heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- High EER and ESEER, A+ class energy efficiency.
- Availability of kit for the reduction of the noise.
- Availability of partial heat recovery system.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

A+ CLASS ENERGY EFFICIENCY
The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -11÷15,5°C
Condenser outlet water temperature: 21÷49°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

COMPONENTS

FRAMEWORK
- Base, self supporting frame and panelling in epoxy painted galvanized steel sheet.
- Colour: RAL 9002

COMPRESSORS
- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated overpressure valve.
- Replaceable cartridge type oil filter.
- Oil flow switch.
- Valves for oil filling and discharge.
- Sight glass
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting for model 620 V2
- 2-pole 3-phase electric motor with Star / Delta starting for all other machines.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Shell and tube evaporator optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSER

One condenser for each refrigerant circuit:
- Shell and tube condenser optimized for R134a refrigerant.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Economizer. The system includes:
  - Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
  - Anticondensate insulation made of polyurethane.
  - Intermediate electronic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for each compressors.
- Contactors for each compressors (2 contactors for Part-Winding start system – 3 contactors for Star / Delta start system).
- Compressor Part-Winding start system for model 620 V2
- Compressor Star / Delta start system for all other machines.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO SCREW CLA PLUS	620 V2	720 V2	820 V2	970 V2	1080 V2	1150 V2	1180 V2
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●
Condenser flexible joint with adapter for flange connection	-	-	-	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●
780 - Noise absorption box	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●

● available accessory; - not available accessory

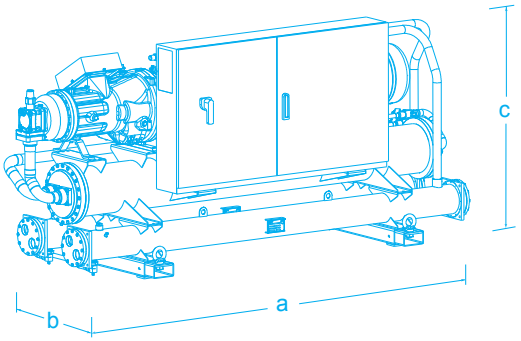
TECHNICAL DATA FRIGO SCREW CLA PLUS

	FRIGO SCREW CLA PLUS		620 V2	720 V2	820 V2	970 V2	1080 V2	1150 V2	1180 V2
STANDARD	**Cooling capacity (1)**	**kW**	**626**	**723**	**824**	**964**	**1080**	**1144**	**1180**
	Unit power input	kW	115,1	134,1	151,7	179,9	200,4	212,2	219,3
	Evaporator water flow rate	m³/h	108	124	141	165	185	196	203
	Evaporator pressure drop	kPa	11	37	25	12	14	15	19
	Condenser water flow rate	m³/h	128	148	168	197	221	234	242
	Condenser pressure drop	kPa	22	19	40	55	22	20	24
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2
	Capacity control	%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	171	171	156	216	216	211	211
	Gas circuits	n.	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	271,8	310,8	347,8	391,4	441,8	466,2	497,0
	Unit starting current (LRA)	A	359,9	435,4	453,9	549,7	594,9	686,1	791,6
	EER - Eurovent standard (1)	kW/kW	5,44	5,39	5,43	5,36	5,39	5,39	5,38
	ESEER		6,20	6,18	5,96	5,92	6,09	6,10	6,10
	Sound power level [Lw] (2)	dB(A)	96,8	96,8	97,6	97,6	97,6	101,2	101,2
	Average sound pressure level [Lpm] (3)	dB(A)	79,0	79,0	82,0	82,0	82,0	82,0	82,0
	Net weight	kg	4009	4051	4325	5439	5459	5565	5649
	Hydraulic connections								
	Evaporator IN/OUT - OD (4)	Ø mm	168,3	219,1	219,1	219,1	219,1	219,1	273
OPTIONAL	Partial heat recovery (5)								
	Heating capacity	**kW**	**81,1**	**93,2**	**106,0**	**125,0**	**138,0**	**146,0**	**151,0**
	Compressor soundproof box								
	Sound power level [Lw] (2)	dB(A)	93,8	93,8	94,6	94,6	94,6	98,2	98,2
	Average sound pressure level [Lpm] (3)	dB(A)	76,0	76,0	79,0	79,0	79,0	79,0	79,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
5. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

DIMENSIONS (mm)

FRIGO SCREW CLA PLUS	a	b	c
620 V2	3514	1060	1770
720 V2	3514	1060	1770
820 V2	3982	1057	1770
970 V2	3818	1269	1991
1080 V2	3818	1269	1991
1150 V2	3818	1269	1991
1180 V2	3818	1269	1991



FRIGO SCREW HR: Packaged water cooled liquid chillers for indoor installation, equipped with screw compressors, shall and tube heat exchangers and total heat recovery system (HR)
Cooling Capacity: **394 ÷ 1505 kW**
Heating Capacity: **443 ÷ 1755 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

frigo screw hr

rcgroupairconditioning

R134a SHELL

MAIN FEATURES
- Water cooled liquid chiller.
- 14 models available, for a wide selection opportunity.
- Average step of 80kW.
- EER up to 5,06.
- Twin-screw compressors.
- Double refrigerant circuit.
- R134a Refrigerant charge.
- Electronic expansion valve.
- Shell and tube heat exchangers.
- Total heat recovery system.
- Suitable for indoor installation.

MAIN BENEFITS
- High EER.
- Availability of kit for the reduction of the noise.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

ELECTRONIC EXPANSION VALVE
The electronic expansion valves are synonymous of an higher energy efficiency and stability of the system.

TOTAL HEAT RECOVERY SYSTEM
The condensers of the units are equipped with a double hydraulic circuit, the first circuit for the condensation of the refrigerant gas and the second for the total recovery of the condensing heat.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -11÷15,5°C
Condenser outlet water temperature: 21÷49°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

COMPONENTS

FRAMEWORK
- Base and self supporting frame in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9005

COMPRESSORS
- Twin screw semi-hermetic compressors with highly efficient screw profile and high peripheral speed, optimized for R134a refrigerant.
- Integrated discharge check valve.
- Flanged-on oil separator.
- Integrated overpressure valve.
- Replaceable cartridge type oil filter.
- Oil flow switch.
- Valves for oil filling and discharge.
- Sight glass
- Electronic protection device that includes:
  - Electric motor thermal protection via internal winding temperature sensors.
  - Phase sequence electronic relay
  - Sensor on refrigerant discharge for temperature monitoring,
- 2-pole 3-phase electric motor with Part-Winding starting for models 410 V2 / 460 V2 / 510 V2 / 540 V2 / 610 V2
- 2-pole 3-phase electric motor with Star / Delta starting for all other machines.
- Stepless capacity control, 50÷100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR
- Shell and tube evaporator optimized for R134a refrigerant.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Shell, header, tube sheets, made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSER

One condenser for each refrigerant circuit:
- Shell and tube condenser optimized for R134a refrigerant.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

TOTAL HEAT RECOVERY HEAT EXCHANGER

One heat exchanger for each refrigerant circuit:
- Shell and tube condenser optimized for R134a refrigerant.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Threaded hydraulic connections or with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Electronic expansion valve that allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
- Sight glass.
- Filter dryer on liquid line.
- Service valves on liquid line.
- Service valves on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure and oil pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for each compressors.
- Contactors for each compressors (2 contactors for Part-Winding start system – 3 contactors for Star / Delta start system).
- Compressor Part-Winding start system for model 410 V2 / 460 V2 / 510 V2 / 540 V2 / 610 V2
- Compressor Star / Delta start system for all other machines.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply: 400/3/50.

CONTROL SYSTEM
- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- Heat exchangers threaded hydraulic connections ISO 228/1 – G M, available up to a diameter of 3” included.
- Pipes threaded hydraulic connections ISO 7/1 – R, available up to a diameter of 3” included.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO SCREW HR	410 V2	460 V2	510 V2	540 V2	610 V2	700 V2	790 V2	940 V2	1050 V2	1110 V2	1140 V2	1310 V2	1460 V2	1610 V2
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	-	●	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	●	●	●	●	●
Condenser flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●	●	●	●	●
780 - Noise absorption box	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA FRIGO SCREW HR

	FRIGO SCREW HR		410 V2	460 V2	510 V2	540 V2	610 V2	700 V2	790 V2	940 V2
STANDARD	**Only Cooling (1)**									
	Cooling capacity	**kW**	**394**	**443**	**494**	**551**	**603**	**656**	**740**	**880**
	Unit power input	kW	82,4	92,5	102,9	108,9	134,0	143,9	163,0	196,0
	Evaporator water flow rate	m³/h	70,0	78,6	87,0	92,6	104,0	120,0	136,0	160,0
	Evaporator pressure drop	kPa	12	18	19	21	24	16	13	19
	Condenser water flow rate	m³/h	84,6	94,9	105,0	112,0	126,0	145,0	164,0	193,0
	Condenser pressure drop	kPa	10	13	16	19	22	21	25	19
	Cooling + Total Heat Recovery (2)									
	Cooling capacity	**kW**	**348**	**391**	**435**	**486**	**547**	**594**	**671**	**799**
	Heating capacity	**kW**	**443**	**496**	**552**	**611**	**701**	**761**	**859**	**1025**
	Unit power input	kW	94,2	105,0	117,0	125,0	155,0	167,0	188,0	226,0
	Max unit operating current (FLA)	A	154	180	197	205	253	279	307	342
	Heat recovery water flow rate	m³/h	76,9	86,3	96,0	106,0	122,0	132,0	149,0	178,0
	Heat recovery pressure drop	kPa	8	11	13	13	13	18	19	12
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity control	%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%	25 ... 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	77,8	77,8	185,2	185,2	185,2	185,2	170,6	163,1
	Gas circuits	n.	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	185,8	194,4	219,6	238,4	271,8	310,8	347,8	391,4
	Unit starting current (LRA)	A	372,6	396,1	483,8	644,9	377,9	457,2	476,6	577,2
	EER (1)	kW/kW	4,78	4,79	4,80	5,06	4,50	4,56	4,54	4,49
	Sound power level [Lw] (3)	dB(A)	91,8	91,8	91,8	96,8	96,8	97,6	100,6	100,6
	Average sound pressure level [Lpm] (4)	dB(A)	74,0	74,0	74,0	79,0	79,0	79,0	82,0	82,0
	Net weight	kg	3237	3268	3498	3498	3590	3720	3967	4071
	Hydraulic connections									
	Evaporator IN/OUT - OD (5)	Ø mm	168,3	168,3	168,3	168,3	168,3	168,3	219,1	219,1
OPT	Compressor soundproof box									
	Sound power level [Lw] (3)	dB(A)	85,8	85,8	85,8	90,8	90,8	91,6	94,6	94,6
	Average sound pressure level [Lpm] (4)	dB(A)	68,0	68,0	68,0	73,0	73,0	73,0	76,0	76,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Referred to chilled water temperature 12/7°C; condenser water temperature 40/45°C.
3. Sound power level [Lw] according to ISO EN 9614 - 2
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

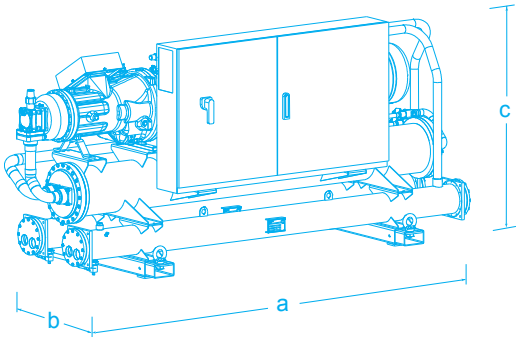
TECHNICAL DATA FRIGO SCREW HR

	FRIGO SCREW HR		1050 V2	1110 V2	1140 V2	1310 V2	1460 V2	1610 V2
STANDARD	**Only Cooling (1)**							
	Cooling capacity	**kW**	**973**	**1031**	**1073**	**1224**	**1365**	**1505**
	Unit power input	kW	218,2	228,1	235,8	269,0	296,7	335,2
	Evaporator water flow rate	m³/h	179,0	190,0	195,0	224,0	249,0	275,0
	Evaporator pressure drop	kPa	26	27	23	28	36	45
	Condenser water flow rate	m³/h	216,0	229,0	236,0	270,0	301,0	333,0
	Condenser pressure drop	kPa	21	25	23	19	19	22
	Cooling + Total Heat Recovery (2)							
	Cooling capacity	**kW**	**884**	**937**	**974**	**1112**	**1240**	**1369**
	Heating capacity	**kW**	**1135**	**1200**	**1246**	**1422**	**1582**	**1755**
	Unit power input	kW	251,0	263,0	272,0	310,0	342,0	386,0
	Max unit operating current (FLA)	A	395	412	436	524	578	640
	Heat recovery water flow rate	m³/h	197,0	209,0	217,0	247,0	275,0	305,0
	Heat recovery pressure drop	kPa	12	16	12	8	11	12
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2
	Capacity control	%	25 … 100%	25 … 100%	25 … 100%	25 … 100%	25 … 100%	25 … 100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	155,5	155,5	144,5	215,6	210,6	206,3
	Gas circuits	n.	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	441,8	466,2	497,2	569,6	640,6	713,6
	Unit starting current (LRA)	A	624,6	720,4	831,2	877,6	1074,5	1205,2
	EER (1)	kW/kW	4,46	4,52	4,55	4,55	4,60	4,49
	Sound power level [Lw] (3)	dB(A)	101,2	101,2	101,2	103,6	103,6	103,6
	Average sound pressure level [Lpm] (4)	dB(A)	82,0	82,0	82,0	84,0	84,0	84,0
	Net weight	kg	4835	4949	5031	5549	6407	6537
	Hydraulic connections							
	Evaporator IN/OUT - OD (5)	Ø mm	219,1	219,1	219,1	219,1	273	273
OPT	Compressor soundproof box							
	Sound power level [Lw] (3)	dB(A)	95,2	95,2	95,2	97,6	97,6	97,6
	Average sound pressure level [Lpm] (4)	dB(A)	76,0	76,0	76,0	78,0	78,0	78,0

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Referred to chilled water temperature 12/7°C; condenser water temperature 40/45°C.
3. Sound power level [Lw] according to ISO EN 9614 - 2
4. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

FRIGO SCREW HR	a	b	c
410 V2	3390	960	1670
460 V2	3390	960	1670
510 V2	3390	960	1670
540 V2	3390	960	1670
610 V2	3390	960	1670
700 V2	3390	960	1670
790 V2	3600	1170	2150
940 V2	3600	1170	2150
1050 V2	3600	1170	2150
1110 V2	4200	1500	2150
1140 V2	4200	1500	2150
1310 V2	4200	1500	2150
1460 V2	4900	1500	2250
1610 V2	4900	1500	2250



FRIGO TURBO FL: Packaged water cooled liquid chillers in “A” class energy efficiency for indoor installation, equipped with oil-free centrifugal compressors with magnetic levitation bearings, flooded evaporator and shall and tube condenser.
Cooling Capacity: **280 ÷ 1840 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

A-CLASS
RC Hi-Tech

LOW NOISE
RC Hi-Tech

INVERTER
RC Hi-Tech

frigo turbo FL

rcgroupairconditioning

A CLASS · INVERTER · OIL FREE · R134a · FLOODED

MAIN FEATURES
- Water cooled liquid chiller in A class energy efficiency.
- 11 models available, for a wide selection opportunity.
- Average step of 150kW.
- EER up to 5,24.
- ESEER up to 8,91.
- Oil-free centrifugal compressors with magnetic levitation bearings.
- Inverter driven.
- R134a Refrigerant charge.
- Single refrigerant circuit.
- Electronic expansion valve.
- Shell and tube condenser.
- Flooded evaporator.
- Suitable for indoor installation.

MAIN BENEFITS
- Up to four centrifugal compressors with magnetic levitation bearings on the refrigerant circuit for an high efficiency.
- No need of power factor correction.
- Minimum starting current (LRA)
- High EER and ESEER. A Class energy efficiency.
- Quiet operation.
- Microprocessor control system with 7” touch screen display.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

MAGNETIC LEVITATION CENTRIFUGAL COMPRESSOR
The TURBO FL liquid chillers are equipped with two-stage centrifugal compressor with variable speed, which is able to follow punctually plant demands, obtaining values of energy efficiency ratio (EER) growing in a narrowing of the cooling load. The compressors of the TURBO FL liquid chillers are equipped with magnetic levitation oil-free bearings which compared to traditional ball bearings, completely eliminate all the maintenance procedures of lubrication.

A CLASS ENERGY EFFICIENCY
The best and most accurate components applied to the chillers.

WORKING LIMITS IN COOLING MODE
Chilled water outlet temperature: 4÷18°C
Condenser outlet water temperature: 20÷52°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

COMPONENTS

FRAMEWORK
- Base and self supporting frame in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Twin-turbine centrifugal compressor, oil-free type, optimized for R134a refrigerant. The term “oil-free” refers to the total absence of lubricating oil within the compressor
- Magnetic levitation bearings.
- Manometric compression ratio: 1.5 ÷ 5.0
- Stepless capacity control trough integrated inverter.
- High efficiency permanent-magnet synchronous motor with integrated Soft-Start system (starting current limited to 5A).
- Power factor motor cosφ > 0.9 for a large part of the operating range
- Motor and electronic power section cooling by liquid refrigerant injection into the integrated cooling circuit.
- Electric motor thermal protection via internal winding temperature sensors.
- Electronic integrated control for operation and alarms status.
- Sensor on refrigerant discharge for temperature monitoring.
- Inner sensors for electronic components and inverter temperature control.
- Security system to protect the crankshaft and magnetic bearings in the event of failure of power supply.
- Degree of protection: IP54.

EVAPORATOR
- Flooded shell and tube evaporator, optimized for R134a refrigerant.
- Version two passes, characterized by low pressure losses on the water side.
- Water tubes with a helical rifled internal surface.
- Integrated liquid drop separator.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Water flow switch for water flow control.
- Large liquid level indicator

CONDENSER
- Shell and tube 2-passes condenser optimized for R134a refrigerant.
  - Machine type P4: 4-passes condenser.
- Shell, header, tube sheets made of carbon steel, tubes in Cu.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Capacitive level sensor connected to the driver of the expansion valve.
- Electronic expansion valve that allows high performance and system efficiency and for the refrigerant level control in the evaporator. Double electronic expansion valve from model 1140 T3 included up to model 1840 T4.
- Electronic by-pass valve for compressor start.
- Non return valve on by-pass line for compressor start.
- Sight glass.
- Filter dryer on liquid line.
- Service valve on liquid line.
- Service valve on gas discharge.
- Non return valve on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line for models 280 T1, 560 T2, 840 T3.
- Refrigerant circuit with steel tubing with anticondensate insulation of the suction line for models 380 T1, 460 T1, 760 T2, 920 T2, 1140 T3, 1380 T3, 1520 T4, 1840 T4..
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICALPANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for compressors.
- Contactors for compressors.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM
- Microprocessor system with “Touch Screen” graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO TURBO FL	280 T1	380 T1	460 T1	560 T2	760 T2	840 T3	920 T2	1140 T3	1380 T3	1520 T4	1840 T4
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
611 - Noise absorption cap	●	●	●	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA FRIGO TURBO FL (*)

	FRIGO TURBO FL		280 T1	380 T1	460 T1	560 T2	760 T2	840 T3	920 T2	1140 T3
STANDARD	**Cooling capacity (1)**	**kW**	**280**	**380**	**460**	**560**	**760**	**840**	**920**	**1140**
	Unit power input	kW	55,4	75,2	90,7	110,9	149,0	166,0	179,0	218,0
	Evaporator water flow rate	m³/h	48,2	65,4	79,1	96,3	131,0	144,0	158,0	196,0
	Evaporator pressure drop	kPa	37	29	27	31	27	32	57	35
	Condenser water flow rate	m³/h	57,7	78,3	94,7	115,0	156,0	173,0	189,0	234,0
	Condenser pressure drop	kPa	13	22	21	19	22	26	22	29
	Compressors		centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal	centrifugal
	Quantity	n.	1	1	1	2	2	3	2	3
	Capacity control	%	44...100%	42...100%	34...100%	22...100%	23...100%	20...100%	18...100%	13...100%
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	125	165	120	160	240	268	250	400
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	139	210	172	279	420	418	344	630
	Unit starting current (LRA)	A	5	5	5	10	10	15	10	15
	EER (1)	kW/kW	5,05	5,05	5,07	5,05	5,10	5,06	5,14	5,23
	ESEER		8,41	8,36	8,53	8,59	8,69	8,45	8,54	8,65
	Sound power level [Lw] (2)	dB(A)	92,5	92,9	94,7	94,7	94,9	95,7	96,8	96,6
	Average sound pressure level [Lpm] (3)	dB(A)	73,9	74,3	76,1	76,1	76,3	77,1	77,8	77,1
	Net weight	kg	1800	1871	2111	2573	2939	3771	3077	4628
	Hydraulic connections									
	Evaporator IN/OUT - OD (4)	Ø mm	114,3	168,3	168,3	168,3	168,3	168,3	168,3	219,1

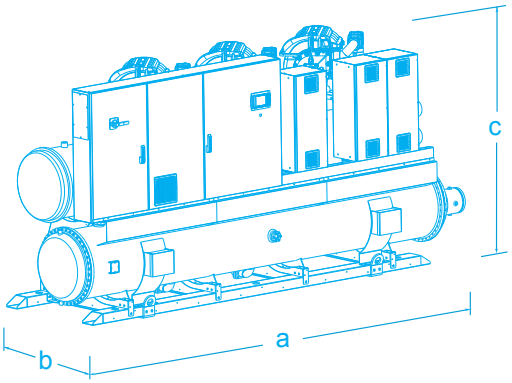
	FRIGO TURBO FL		1380 T3	1520 T4	1840 T4
STANDARD	**Cooling capacity (1)**	**kW**	**1380**	**1520**	**1840**
	Unit power input	kW	270,1	290,1	358,0
	Evaporator water flow rate	m³/h	237,0	261,0	316,0
	Evaporator pressure drop	kPa	38	28	36
	Condenser water flow rate	m³/h	284,0	311,0	378,0
	Condenser pressure drop	kPa	30	25	36
	Compressors		centrifugal	centrifugal	centrifugal
	Quantity	n.	3	4	4
	Capacity control	%	11...100%	11...100%	11...100%
	Refrigerant		R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	406	400	415
	Gas circuits	n.	1	1	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	517	840	689
	Unit starting current (LRA)	A	15	20	20
	EER (1)	kW/kW	5,11	5,24	5,14
	ESEER		8,54	8,91	8,72
	Sound power level [Lw] (2)	dB(A)	97,2	97,5	99,0
	Average sound pressure level [Lpm] (3)	dB(A)	77,7	78,0	79,5
	Net weight	kg	4749	5787	6674
	Hydraulic connections				
	Evaporator IN/OUT - OD (4)	Ø mm	219,1	219,1	219,1

1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovent standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

(*) Technical data refer to units equipped with 2-passes condenser.

DIMENSIONS (mm)

FRIGO TURBO FL	a	b	c
280 T1	3050	1320	1870
380 T1	3050	1320	1870
460 T1	3050	1320	1870
560 T2	3050	1320	2040
760 T2	3050	1355	2040
840 T3	4500	1406	2090
920 T2	3820	1406	2040
1140 T3	4500	1406	2090
1380 T3	4500	1406	2090
1520 T4	4990	1406	2090
1840 T4	4990	1406	2090



FRIGO TURBO K: Packaged water cooled liquid chillers for indoor installation, equipped with oil-free centrifugal compressors with magnetic levitation bearings and plate heat exchangers
Cooling Capacity: **270 kW**

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

LOW NOISE RC Hi-Tech

INVERTER RC Hi-Tech

frigo turbo K

rcgroupairconditioning

INVERTER · OIL FREE · R134a · PLATE

MAIN FEATURES

- Water cooled liquid chiller.
- 1 size designed for installation in parallel.
- EER 4,39.
- ESEER 7,16.
- Oil-free centrifugal compressors with magnetic levitation bearings.
- Inverter driven.
- R134a Refrigerant charge.
- Single refrigerant circuit.
- Electronic expansion valve.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS

- Compact version with plate heat exchangers. 270kW at just 1,3m^2.
- Installation in parallel of many units, to achieve high cooling capacity in reduced spaces.
- No need of power factor correction.
- Minimum starting current (LRA)
- High ESEER.
- Quiet operation.
- Microprocessor control system with 7" touch screen display.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

INDOOR INSTALLATION

The machines are designed for indoor installation.

DESIGNED FOR INSTALLATION IN PARALLEL

MAGNETIC LEVITATION CENTRIFUGAL COMPRESSOR

The TURBO FL liquid chillers are equipped with two-stage centrifugal compressor with variable speed, which is able to follow punctually plant demands, obtaining values of energy efficiency ratio (EER) growing in a narrowing of the cooling load. The compressors of the TURBO FL liquid chillers are equipped with magnetic levitation oil-free bearings which compared to traditional ball bearings, completely eliminate all the maintenance procedures of lubrication.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: 4÷18°C
Condenser outlet water temperature: 20÷52°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

COMPONENTS

FRAMEWORK
- Base and self supporting frame in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS
- Twin-turbine centrifugal compressor, oil-free type, optimized for R134a refrigerant. The term “oil-free” refers to the total absence of lubricating oil within the compressor
- Magnetic levitation bearings.
- Manometric compression ratio: 1.5 ÷ 5.0
- Stepless capacity control trough integrated inverter.
- High efficiency permanent-magnet synchronous motor with integrated Soft-Start system (starting current limited to 5A).
- Power factor motor cosφ > 0.9 for a large part of the operating range
- Motor and electronic power section cooling by liquid refrigerant injection into the integrated cooling circuit.
- Electric motor thermal protection via internal winding temperature sensors.
- Electronic integrated control for operation and alarms status.
- Sensor on refrigerant discharge for temperature monitoring.
- Inner sensors for electronic components and inverter temperature control.
- Security system to protect the crankshaft and magnetic bearings in the event of failure of power supply.
- Degree of protection: IP54.

EVAPORATOR
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

CONDENSER
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Hydraulic connections with grooved end arranged for flexible joint (the flexible joint and the adapter pipe are optional accessories).

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Capacitive level sensor connected to the driver of the expansion valve.
- Electronic expansion valve that allows high performance and system efficiency and for the refrigerant level control in the evaporator.
- Electronic by-pass valve for compressor start.
- Non return valve on by-pass line for compressor start.
- Sight glass.
- Filter dryer on liquid line.
- Service valve on liquid line.
- Service valve on gas discharge.
- Non return valve on gas discharge.
- Safety valve on low pressure side.
- Safety valve on high pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line
- Plastic capillary hoses for pressure sensors connection.
- R134a refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation, complete with:
- Main switch with door lock safety.
- Fuses for compressors.
- Contactors for compressors.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM
- Microprocessor system with “Touch Screen” graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Integrated “Data logger” function for the recording of events and alarms.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

FRIGO TURBO K	270 K T1
172 - Rubber support (kit)	●
611 - Noise absorption cap	●
Service valve on compressor group suction	●
923 - RC-Com MBUS/JBUS Serial board	●
926 - LON Serial board	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●
932 - BACnet MS/TP Serial board	●
942 - Serial card for GSM Modem	●
889 - Master plant SEQUENCER	●
962 - Kit modem GSM	●
957 - Plantwatch without modem	●
930 - Remote graphic terminal kit	●

● available accessory; - not available accessory

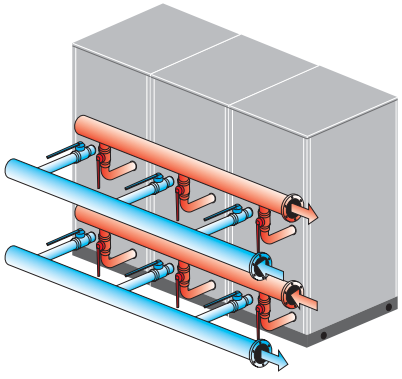
TECHNICAL DATA FRIGO TURBO K

	FRIGO TURBO K		270 T1
STANDARD	**Cooling capacity (1)**	**kW**	**270**
	Unit power input	kW	61,5
	Evaporator water flow rate	m³/h	46,4
	Evaporator pressure drop	kPa	23
	Condenser water flow rate	m³/h	56,7
	Condenser pressure drop	kPa	22
	Compressors		centrifugal
	Quantity	n.	1
	Capacity control	%	54...100%
	Refrigerant		R134a
	Total refrigerant charge (optional excluded)	kg	35
	Gas circuits	n.	1
	Power supply	V/Ph/Hz	400/3/50
	Max unit operating current (FLA)	A	139,3
	Unit starting current (LRA)	A	5
	EER (1)	kW/kW	4,39
	ESEER		7,16
	Sound power level [Lw] (2)	dB(A)	90,7
	Average sound pressure level [Lpm] (3)	dB(A)	72,0
	Net weight	kg	1120
	Hydraulic connections		
	Evaporator IN/OUT - OD (4)	Ø mm	88,9

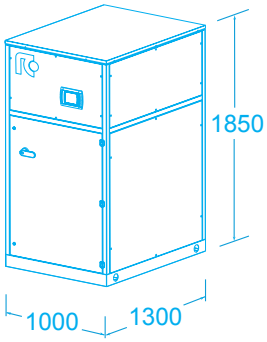
1. Referred to chilled water temperature 12/7°C and condenser water temperature 30/35°C according to Eurovwnt standard
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DESIGNED FOR INSTALLATION IN PARALLEL

The “K” version is designed for installation in parallel, to achieve high cooling capacity in reduced spaces with high silentness need.



DIMENSIONS (mm)



NEMO A: Motoevaporating units for indoor installation, equipped with scroll compressor and plate heat exchangers
Cooling Capacity: **5,4 ÷ 26,0 kW**

nemo a

rcgroupairconditioning

R410A PLATE SPLIT SYSTEM

MAIN FEATURES
- Motoevaporating unit.
- 13 models available, for a wide selection opportunity.
- Average step of 2,5kW.
- EER up to 3,02.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchanger.
- Suitable for indoor installation.

MAIN BENEFITS
- Availability of partial heat recovery system.
- Availability of kit for the reduction of the noise.
- Availability of remote condensers with axial fans (TEAM MATE series) and with plug fan (TEAM MATE PF series).
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

REMOTE CONDENSER
The units are designed to be matched with remote condensers with axial fans (TEAM MATE series) or plug-fan (TEAM MATE PF series).

COMPLETENESS OF EQUIPMENT AND OPTIONAL
The units are standardly equipped with 3-speed water pump.
On request is possible to install the system for the domestic hot water production and a chilled water tank.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002
- Insulation of the internal framework.

COMPRESSOR

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100%).
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.
- Electric motor:
  - Version M: single-phase electric motor with direct on line starting.
  - Version T: 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.
- 3-speed circulation pump.

REFRIGERANT CIRCUIT

- Thermostatic expansion valve.
- Service valves on liquid line and gas discharge.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- 0÷10V proportional signal to manage the condensing control system of the remote air cooled condenser.
- High pressure safety switch with manual reset.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch.
- Magnetothermic switch or fuses for compressor.
- Contactor for compressor.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply:
  - M: 230/3/50
  - T: 400/3/50+N

CONTROL SYSTEM

- Microprocessor control. The system includes:
  - Display for the visualization of the alarm codes, set values and temperature values.
  - Dynamic set point.
  - Compressor running hour meter.
  - Contact for general alarm remotization.
  - “Low Temperature” set for operation with ambient air temperature up to -10°C.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections correspond to ISO 228/1 – G M

TO BE MATCHED WITH REMOTE CONDENSER

The units are designed to be matched with remote condensers with axial fans (TEAM MATE series) or plug-fan (TEAM MATE PF series).

TEAM MATE

pg:193

TEAM MATE PF

pg:197

OPTIONAL ACCESSORIES

NEMO A MODEL	M 06 P1 J3	M 08 P1 J3	M 10 P1 J3	M 13 P1 J3	T 06 P1 J3	T 08 P1 J3	T 10 P1 J3	T 13 P1 J3	T 15 P1 J3	T 17 P1 J3	T 20 P1 J3	T 25 P1 J3	T 30 P1 J3
TEAM MATE remote condensers	●	●	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE PF remote condensers	●	●	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●
764 - Water tank	●	●	●	●	●	●	●	●	●	●	●	●	●
117 - Low water temperature set	●	●	●	●	●	●	●	●	●	●	●	●	●
920 - Remote control kit	●	●	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA NEMO A

	NEMO A SIZE		M 06 P1 J3	M 08 P1 J3	M 10 P1 J3	M 13 P1 J3	T 06 P1 J3	T 08 P1 J3	T 10 P1 J3	T 13 P1 J3
STANDARD	**Cooling capacity (1)**	**kW**	**5,4**	**7,1**	**9,2**	**12,1**	**5,4**	**6,9**	**9,2**	**12,0**
	Unit power input (*)	kW	2,0	2,7	3,5	4,2	2,0	2,6	3,3	4,4
	Evaporator water flow rate	m³/h	0,9	1,2	1,6	2,1	0,9	1,2	1,6	2,1
	Evaporator pressure drop	kPa	31	21	28	23	31	20	28	23
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1
	Pumping group									
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	4,7	4,8	5,1	5,4	4,7	4,8	5,1	5,4
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (*)	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0	12,3
	Unit starting current (LRA)	A	60,0	67,0	98,0	115,5	28,0	38,0	43,0	51,5
	EER (1) (*)	kW/kW	2,67	2,61	2,66	2,85	2,67	2,65	2,75	2,76
	Sound power level [Lw] (2)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2	58,2
	Average sound pressure level [Lpm] (3)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0	44,0
	Net weight	kg	51,0	51,0	54,5	66,0	51,0	51,0	54,5	66,0
	Hydraulic connections									
	Evaporator IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	Refrigerant connection									
	Liquid return	n x Ø	10	10	10	12	10	10	10	12
	Gas delivery	n x Ø	10	10	10	12	10	10	10	12
TEAM MATE	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE STD		M 11	M 11	M 14	M 17	M 11	M 11	M 14	M 17
	Nominal power inout	kW	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
	Max operating current	A	1,2	1,2	1,2	1,2	1,2	1,2	1,2	1,2
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
OPT	**Partial heat recovery - Heating Capacity (4)**	**kW**	**2,0**	**2,6**	**3,4**	**4,4**	**2,0**	**2,5**	**3,4**	**4,4**
	Water tank - volume	l	40	40	40	40	40	40	40	40
TEAM MATE LNO	**NEMO A + TEAM MATE LNO**									
	Cooling capacity (1)	**kW**	**5,4**	**7,0**	**9,0**	**12,1**	**5,3**	**6,8**	**9,0**	**12,1**
	Unit power input	kW	1,7	2,4	3,2	3,8	1,7	2,3	3,1	4,0
	EER (1) (*)	kW/kW	2,86	2,68	2,67	2,90	2,86	2,74	2,76	2,83
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE LNO	Mod.	M 11	M 11	M 14	M 20	M 11	M 11	M 14	M 20
	Nominal power inout	kW	0,2	0,2	0,2	0,3	0,2	0,2	0,2	0,3
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE ELN	**NEMO A + TEAM MATE ELN**									
	Cooling capacity (1)	**kW**	**5,3**	**6,8**	**8,7**	**11,7**	**5,3**	**6,6**	**8,7**	**11,7**
	Unit power input	kW	1,7	2,5	3,3	4,0	1,7	2,4	3,2	4,1
	EER (1) (*)	kW/kW	2,77	2,54	2,50	2,73	2,78	2,61	2,59	2,65
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE ELN	Mod.	M 11	M 11	M 14	M 20	M 11	M 11	M 14	M 20
	Nominal power inout	kW	0,2	0,2	0,2	0,3	0,2	0,2	0,2	0,3
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE PF STD	**NEMO A + TEAM MATE PF STD**									
	Cooling capacity (1)	**kW**	**5,4**	**7,1**	**8,8**	**11,7**	**5,4**	**6,9**	**8,9**	**10,9**
	Unit power input	kW	1,6	2,3	3,3	4,0	1,6	2,2	3,1	4,6
	EER (1) (*)	kW/kW	2,69	2,63	2,43	2,62	2,70	2,67	2,52	2,17
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE PF STD	Mod.	T 11	T 11	T 11	T 14	T 11	T 11	T 11	T 11
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Nominal power inout	kW	0,4	0,4	0,4	0,4	0,4	0,4	0,4	0,4
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF LNO	**NEMO A + TEAM MATE PF LNO**									
	Cooling capacity (1)	**kW**	**5,5**	**7,3**	**9,1**	**11,8**	**5,5**	**7,1**	**9,1**	**11,8**
	Unit power input	kW	1,6	2,2	3,1	4,0	1,6	2,1	3,0	4,1
	EER (1) (*)	kW/kW	2,96	2,90	2,69	2,74	2,97	2,93	2,79	2,67
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE PF LNO	Mod.	T 14	T 14	T 14	T 17	T 14	T 14	T 14	T 17
	External static pressure	Pa	36	36	36	36	36	36	36	36
	Nominal power inout	kW	0,3	0,3	0,3	0,3	0,3	0,3	0,3	0,3
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF ELN	**NEMO A + TEAM MATE PF ELN**									
	Cooling capacity (1)	**kW**	**5,4**	**7,1**	**8,9**	**11,4**	**5,4**	**6,9**	**8,9**	**11,4**
	Unit power input	kW	1,6	2,3	3,2	4,2	1,6	2,2	3,1	4,4
	EER (1) (*)	kW/kW	3,03	2,87	2,60	2,59	3,04	2,92	2,68	2,51
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	1	1	1
	Series TEAM MATE PF ELN	Mod.	T 14	T 14	T 14	T 17	T 14	T 14	T 14	T 17
	External static pressure	Pa	25	25	25	25	25	25	25	25
	Nominal power inout	kW	0,2	0,2	0,2	0,2	0,2	0,2	0,2	0,2
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply

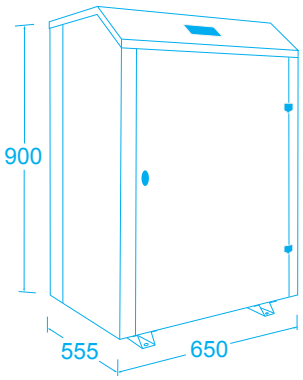
TECHNICAL DATA NEMO A

	NEMO A SIZE		T 15 P1 J3	T 17 P1 J3	T 20 P1 J3	T 25 P1 J3	T 30 P1 J3
STANDARD	**Cooling capacity (1)**	**kW**	**13,6**	**16,2**	**17,7**	**21,5**	**26,0**
	Unit power input (*)	kW	4,7	5,4	6,3	7,4	8,8
	Evaporator water flow rate	m³/h	2,3	2,8	3,0	3,7	4,5
	Evaporator pressure drop	kPa	30	25	30	32	29
	Compressors		scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1
	Pumping group						
	3-speed water pump	kW	0,4	0,4	0,4	0,4	0,4
	Refrigerant		R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,4	5,8	5,8	6,5	7,1
	Gas circuits	n.	1	1	1	1	1
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (*)	A	13,8	17,0	17,0	23,0	24,0
	Unit starting current (LRA)	A	64,0	75,0	101,0	111,0	118,0
	EER (1) (*)	kW/kW	2,88	3,02	2,81	2,91	2,97
	Sound power level [Lw] (2)	dB(A)	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (3)	dB(A)	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	72,0	102,0	102,0	111,0	120,0
	Hydraulic connections						
	Evaporator IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
	Refrigerant connection						
	Liquid return	n x Ø	12	12	12	16	16
	Gas delivery	n x Ø	12	12	12	16	16
TEAM MATE	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE STD		M 20	M 25	M 25	M 30	M 35
	Nominal power inout	kW	0,4	0,5	0,5	0,5	0,5
	Max operating current	A	1,8	2,9	2,9	2,9	2,9
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
OPT	**Partial heat recovery - Heating Capacity (4)**	**kW**	**5,0**	**5,9**	**6,5**	**7,9**	**9,6**
	Water tank - volume	l	40	40	40	40	40
TEAM MATE LNO	**NEMO A + TEAM MATE LNO**						
	Cooling capacity (1)	**kW**	**13,8**	**16,6**	**18,2**	**22,4**	**26,6**
	Unit power input	kW	4,2	4,8	5,6	6,6	8,1
	EER (1) (*)	kW/kW	2,94	3,19	2,99	3,10	3,05
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE LNO	Mod.	M 25	M 30	M 30	M 45	M 45
	Nominal power inout	kW	0,5	0,5	0,5	0,7	0,7
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE ELN	**NEMO A + TEAM MATE ELN**						
	Cooling capacity (1)	**kW**	**13,4**	**16,3**	**17,7**	**21,9**	**25,8**
	Unit power input	kW	4,4	4,9	5,9	6,8	8,5
	EER (1) (*)	kW/kW	2,82	3,08	2,84	2,97	2,87
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE ELN	Mod.	M 25	M 30	M 30	M 45	M 45
	Nominal power inout	kW	0,4	0,4	0,4	0,6	0,6
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE PF STD	**NEMO A + TEAM MATE PF STD**						
	Cooling capacity (1)	**kW**	**13,3**	**15,8**	**17,7**	**21,8**	**25,7**
	Unit power input	kW	4,5	5,1	5,9	6,9	8,5
	EER (1) (*)	kW/kW	2,71	2,79	2,72	2,67	2,62
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE PF STD	Mod.	T 17	T 21	T 24	T 33	T 33
	External static pressure	Pa	50	50	50	50	50
	Nominal power inout	kW	0,5	0,5	0,6	1,3	1,3
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF LNO	**NEMO A + TEAM MATE PF LNO**						
	Cooling capacity (1)	**kW**	**13,4**	**15,9**	**18,4**	**21,8**	**25,7**
	Unit power input	kW	4,4	5,1	5,5	6,9	8,5
	EER (1) (*)	kW/kW	2,82	2,88	2,90	2,87	2,78
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE PF LNO	Mod.	T 21	T 24	T 33	T 38	T 38
	External static pressure	Pa	36	36	36	36	36
	Nominal power inout	kW	0,3	0,4	0,8	0,7	0,7
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF ELN	**NEMO A + TEAM MATE PF ELN**						
	Cooling capacity (1)	**kW**	**12,9**	**15,4**	**17,9**	**21,2**	**24,8**
	Unit power input	kW	4,6	5,4	5,8	7,2	9,0
	EER (1) (*)	kW/kW	2,66	2,73	2,85	2,77	2,62
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1
	Series TEAM MATE PF ELN	Mod.	T 21	T 24	T 33	T 38	T 38
	External static pressure	Pa	25	25	25	25	25
	Nominal power inout	kW	0,2	0,3	0,5	0,5	0,5
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply

DIMENSIONS (mm)



MANTA A: Motoevaporating units for indoor installation, equipped with scroll compressors and plate evaporator
Cooling Capacity: **24,2÷ 617,0 kW**

manta a

rcgroupairconditioning

R410A PLATE SPLIT SYSTEM

MAIN FEATURES
- Motoevaporating unit.
- 33 models available, for a wide selection opportunity.
- Average step of 25kW.
- EER up to 3,21
- Scroll compressors.
- R410A Refrigerant charge.
- Plate type heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- Units equipped with two, three scroll compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Availability of partial and total heat recovery system.
- Easily of maintenance.
- Eurovent Certification.

INDOOR INSTALLATION
The machines are designed for indoor installation.

REMOTE CONDENSER
The units are designed to be matched with remote condensers with axial fans (TEAM MATE series) or plug-fan (TEAM MATE PF series).

REDUCED NOISE EMISSION
The machines are characterized by a low sound level guaranteed by the containing structure.

DOMESTIC HOT WATER
On request is possible to install the system for the domestic hot water production.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -12÷20°C
Ambient temperature: -10÷45°C

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

COMPRESSORS

- Orbiting spiral (SCROLL) hermetic compressors with spiral profile optimized for R410A refrigerant.
- ON / OFF capacity control (0 / 100% each compressor).
- 2-pole 3-phase electric motor with direct on line starting.
- Phase sequence electronic relay.
- Crankcase heater.
- Electric motor thermal protection via internal winding temperature sensors.
- Rubber supports.

EVAPORATOR

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Differential water pressure switch for water flow control.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Thermostatic expansion valve up to model T 150 P2 included.
- Electronic expansion valve from model T 170 P4 included. The valve allows high performance and system efficiency thanks to a timely and accurate response to changes in temperature and pressure.
  The expansion valve is equipped with energy reserve to allow the closure of the valve in the event of lack of power supply.
- Sight glass.
- Electromagnetic valve on liquid line up to model T 150 P2 included. The electromagnetic valve is not installed when the electronic expansion valve is present.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Safety valves on high and low pressure side.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Liquid receiver with safety valve and service valve.
- Valves on gas delivery and liquid return for coupling to remote air cooled condenser.
- 0÷10V proportional signal to manage the condensing control system of the remote air cooled condenser.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for indoor installation complete with:

- Main switch with door lock safety.
- Magnetothermic switch or fuses for each compressor.
- Contactors for each load.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Power supply 400/3/50.

CONTROL SYSTEM

- MP.COM microprocessor system with graphic display for control and monitor of operating and alarms status. The system includes:
  - Voltage free contact for remote general alarm.
  - Main components hour-meter.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS

- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 3 “ included, and correspond to ISO 7/1 – R.
- The hydraulic connections with flange (FL) are not supplied with counter flange.
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

TO BE MATCHED WITH REMOTE CONDENSER

The units are designed to be matched with remote condensers with axial fans (TEAM MATE series) or plug-fan (TEAM MATE PF series).

TEAM MATE

pg:193

TEAM MATE PF

pg:197

OPTIONAL ACCESSORIES

MANTA A	T 27 P1 S	T 30 P1 S	T 33 P1 S	T 40 P1 S	T 40 P2 S	T 40 P2 D	T 48 P2 S	T 48 P2 D	T 54 P2 S	T 54 P2 D	T 60 P2 S
SIZE	J4	J4	J4	J4	J7	J7	J7	J7	J7	J7	J7
TEAM MATE remote condensers	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE PF remote condensers	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Evaporator flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Total heat recovery flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

MANTA A	T 60 P2 D	T 70 P2 S	T 70 P2 D	T 90 P2 S	T 90 P2 D	T 120 P2 S	T 120 P2 D	T 150 P2 S	T 150 P2 D	T 170 P4 D	T 175 P3 S
SIZE	J7	J7	J7	J7	J7	J7	J7	J8	J8	J8	J8
TEAM MATE remote condensers	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE PF remote condensers	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	-	●	-	●	-	●	-	●	●	●	●
450 - Desuperheater	-	●	-	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	-
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

MANTA A	T 190 P4	T 200 P2	T 200 P2	T 220 P3	T 240 P4	T 290 P3	T 300 P4	T 340 P4	T 380 P4	T 460 P6	T 570 P6
	D	S	D	S	D	S	D	D	D	D	D
SIZE	J9	J9	J9	J9	J9	J9	J9	J10	J10	J10	J10
TEAM MATE remote condensers	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE PF remote condensers	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Evaporator flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
451 - 100% heat recovery	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	-	-	-	-	-	-	-	-	-	-	-
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●
923 - RC-Com MBUS/JBUS Serial board	●	●	●	●	●	●	●	●	●	●	●
926 - LON Serial board	●	●	●	●	●	●	●	●	●	●	●
931 - BACnet Ethernet - SNMP - TCP/IP Serial board	●	●	●	●	●	●	●	●	●	●	●
932 - BACnet MS/TP Serial board	●	●	●	●	●	●	●	●	●	●	●
942 - Serial card for GSM Modem	●	●	●	●	●	●	●	●	●	●	●
943 - Data Logger	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA MANTA A

	MANTA A		T 27 P1 S	T 30 P1 S	T 33 P1 S	T 40 P1 S	T 40 P2 S	T 40 P2 D	T 48 P2 S	T 48 P2 D
	SIZE		J4	J4	J4	J4	J7	J7	J7	J7
STANDARD	**Cooling capacity (1)**	**kW**	**24,2**	**26,5**	**31,0**	**36,0**	**41,6**	**41,3**	**48,7**	**48,4**
	Unit power input (*)	kW	8,4	9,9	10,6	12,3	14,4	14,2	16,7	16,7
	Evaporator water flow rate	m³/h	4,2	4,6	5,3	6,2	7,2	7,1	8,4	8,3
	Evaporator pressure drop	kPa	42	39	38	30	37	22	37	22
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	2	2	2	2
	Capacity steps	n.	1	1	1	1	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,2	5,2	5,3	5,6	6,0	10,1	8,7	10,4
	Gas circuits	n.	1	1	1	1	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	22	25	31	34	42	42	44	44
	Unit starting current (LRA)	A	118	118	140	173	132	132	140	140
	EER (1) (*)	kW/kW	2,89	2,68	2,92	2,93	2,89	2,91	2,92	2,90
	Sound power level [Lw] (2)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9
	Average sound pressure level [Lpm] (3)	dB(A)	50,0	51,0	52,0	53,0	53,0	53,0	53,0	53,0
	Net weight	kg	240	245	250	285	410	420	415	425
	Hydraulic connections									
	Evaporator IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"
	Evaporator IN/OUT - OD	Ø mm	--	--	--	--	--	--	--	--
	Refrigerant connection									
	Liquid return - ODS	n x Ø	1 x 16	1 x 16	1 x 16	1 x 16	1 x 16	2 x 16	1 x 22	2 x 16
	Gas delivery - ODS	n x Ø	1 x 18	1 x 18	1 x 18	1 x 18	1 x 18	2 x 18	1 x 22	2 x 18
TEAM MATE	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	M 35	M 35	M 45	M 50	M 60	M 30	M 70	M 35
	Nominal power inout	kW	0,5	0,5	0,8	1,1	1,1	0,5	1,1	0,5
	Max operating current	A	2,9	2,9	3,6	5,7	5,7	2,9	5,7	2,9
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
OPTIONAL	Partial heat recovery (4)									
	Heating capacity	**kW**	**8,9**	**9,7**	**11,4**	**13,2**	**15,3**	**--**	**17,9**	**--**
	Total heat recovery (5)									
	Heating capacity	**kW**	**32,9**	**37,1**	**42,0**	**48,6**	**55,3**	**54,9**	**65,0**	**64,4**
TEAM MATE LNO	**MANTA A + TEAM MATE LNO**									
	Cooling capacity (1)	**kW**	**24,7**	**27,2**	**31,3**	**36,9**	**41,9**	**41,4**	**50,3**	**49,4**
	Unit power input	kW	8,1	9,5	10,5	11,8	14,2	14,2	15,9	16,1
	EER (1) (*)	kW/kW	2,83	2,68	2,74	2,90	2,77	2,74	2,92	2,84
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	M 45	M 45	M 50	M 70	M 70	M 35	M 95	M 45
	Nominal power input	kW	0,7	0,7	0,9	0,9	0,9	0,5	1,4	0,7
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE ELN	**MANTA A + TEAM MATE ELN**									
	Cooling capacity (1)	**kW**	**24,0**	**26,3**	**30,4**	**36,0**	**40,6**	**40,1**	**49,0**	**48,1**
	Unit power input	kW	8,5	10,0	10,9	12,4	14,9	14,9	16,5	16,9
	EER (1) (*)	kW/kW	2,66	2,49	2,61	2,74	2,59	2,56	2,78	2,67
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	M 45	M 45	M 50	M 70	M 70	M 35	M 95	M 45
	Nominal power input	kW	0,6	0,6	0,8	0,8	0,8	0,4	1,1	0,6
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
TEAM MATE PF STD	**MANTA A + TEAM MATE PF STD**									
	Cooling capacity (1)	**kW**	**23,9**	**26,9**	**30,9**	**34,8**	**41,6**	**41,9**	**48,7**	**47,9**
	Unit power input	kW	8,5	9,6	10,7	13,1	14,4	13,9	16,7	16,9
	EER (1) (*)	kW/kW	2,43	2,50	2,59	2,43	2,51	2,54	2,55	2,46
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	T 33	T 38	T 44	T 44	T 58	T 33	T 69	T 33
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Nominal power input	kW	1,3	1,1	1,2	1,2	2,2	1,3	2,4	1,3
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF LNO	**MANTA A + TEAM MATE PF LNO**									
	Cooling capacity (1)	**kW**	**24,6**	**28,5**	**31,8**	**35,9**	**41,8**	**41,9**	**49,6**	**49,2**
	Unit power input	kW	8,1	8,8	10,2	12,4	14,3	13,9	16,2	16,2
	EER (1) (*)	kW/kW	2,75	2,80	2,74	2,60	2,64	2,72	2,70	2,76
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	T 44	T 58	T 58	T 58	T 69	T 38	T 86	T 44
	External static pressure	Pa	36	36	36	36	36	36	36	36
	Nominal power input	kW	0,8	1,4	1,4	1,4	1,5	0,7	2,2	0,8
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF ELN	**MANTA A + TEAM MATE PF ELN**									
	Cooling capacity (1)	**kW**	**23,8**	**27,8**	**31,0**	**34,9**	**40,4**	**40,8**	**48,2**	**47,6**
	Unit power input	kW	8,6	9,1	10,6	13,0	15,1	14,5	17,0	17,1
	EER (1) (*)	kW/kW	2,62	2,79	2,71	2,52	2,52	2,64	2,64	2,64
	REMOTE CONDENSER - Quantity	n.	1	1	1	1	1	2	1	2
	Series TEAM MATE STD	Mod.	T 44	T 58	T 58	T 58	T 69	T 38	T 86	T 44
	External static pressure	Pa	25	25	25	25	25	25	25	25
	Nominal power input	kW	0,5	0,8	0,8	0,8	0,9	0,5	1,3	0,5
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.
5. Referred to chilled water temperature 12/7°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply
(***) Remote condensers not available for this model. Value are referred to 45°C condensation temperature

TECHNICAL DATA MANTA A

	MANTA A		T 54 P2 S	T 54 P2 D	T 60 P2 S	T 60 P2 D	T 70 P2 S	T 70 P2 D	T 90 P2 S	T 90 P2 D
	SIZE		J7	J7	J7	J7	J7	J7	J7	J7
STANDARD	**Cooling capacity (1)**	**kW**	**57,7**	**53,2**	**61,3**	**60,7**	**71,2**	**73,3**	**92,5**	**94,3**
	Unit power input (*)	kW	18,0	19,7	20,9	21,1	25,5	24,6	32,6	31,6
	Evaporator water flow rate	m³/h	9,9	9,2	10,5	10,4	12,2	12,6	15,9	16,2
	Evaporator pressure drop	kPa	41	20	35	22	40	23	36	23
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	9,7	10,4	9,7	10,4	10,1	11,4	14,6	18,9
	Gas circuits	n.	1	2	1	2	1	2	1	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	50	50	62	62	68	68	80	80
	Unit starting current (LRA)	A	143	143	171	171	207	207	265	265
	EER (1) (*)	kW/kW	3,21	2,70	2,93	2,88	2,79	2,98	2,84	2,98
	Sound power level [Lw] (2)	dB(A)	69,9	69,9	70,9	70,9	71,9	71,9	76,9	76,9
	Average sound pressure level [Lpm] (3)	dB(A)	54,0	54,0	55,0	55,0	56,0	56,0	61,0	61,0
	Net weight	kg	420	430	420	440	425	450	666	695
	Hydraulic connections									
	Evaporator IN/OUT - ISO228/1-G M	Ø	2"	2"	2"	2"	2"	2"	--	--
	Evaporator IN/OUT - OD	Ø mm	--	--	--	--	--	--	76,1	76,1
	Refrigerant connection									
	Liquid return - ODS	n x Ø	1 x 22	2 x 16	1 x 22	2 x 16	1 x 22	2 x 16	1 x 22	2 x 22
	Gas delivery - ODS	n x Ø	1 x 22	2 x 18	1 x 22	2 x 18	1 x 22	2 x 18	1 x 28	2 x 22
TEAM MATE	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	M 95	M 35	M 95	M 45	M 95	M 50	M 130	M 70
	Nominal power inout	kW	1,6	0,5	1,6	0,8	1,6	1,1	2,1	1,1
	Max operating current	A	8,5	2,9	8,5	3,6	8,5	5,7	11,4	5,7
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
OPTIONAL	Partial heat recovery (4)									
	Heating capacity	**kW**	**21,2**	**--**	**22,5**	**--**	**26,1**	**--**	**33,9**	**--**
	Total heat recovery (5)									
	Heating capacity	**kW**	**74,0**	**72,9**	**82,3**	**82,5**	**95,9**	**96,9**	**124,0**	**123,0**
TEAM MATE LNO	**MANTA A + TEAM MATE LNO**									
	Cooling capacity (1)	**kW**	**56,6**	**54,6**	**61,1**	**61,3**	**73,4**	**73,1**	**96,9**	**96,9**
	Unit power input	kW	18,6	18,9	21,0	20,9	24,2	24,7	30,2	30,3
	EER (1) (*)	kW/kW	2,84	2,70	2,73	2,70	2,82	2,75	2,95	2,94
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	M 95	M 45	M 110	M 50	M 130	M 60	T 185	M 95
	Nominal power input	kW	1,4	0,7	1,4	0,9	1,8	0,9	2,7	1,4
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400-3-50+N	230/1/50
TEAM MATE ELN	**MANTA A + TEAM MATE ELN**									
	Cooling capacity (1)	**kW**	**54,9**	**52,8**	**59,3**	**59,7**	**71,6**	**70,9**	**94,9**	**94,8**
	Unit power input	kW	19,5	19,9	22,0	21,7	25,3	25,9	31,3	31,4
	EER (1) (*)	kW/kW	2,66	2,51	2,57	2,57	2,67	2,59	2,83	2,82
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	M 95	M 45	M 110	M 50	M 130	M 60	T 185	M 95
	Nominal power input	kW	1,1	0,6	1,1	0,8	1,5	0,8	2,2	1,1
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400-3-50+N	230/1/50
TEAM MATE PF STD	**MANTA A + TEAM MATE PF STD**									
	Cooling capacity (1)	**kW**	**57,0**	**54,1**	**60,5**	**60,5**	**76,2**	**70,7**	**95,0**	**94,3**
	Unit power input	kW	18,4	19,2	21,4	21,2	22,6	26,1	31,2	31,7
	EER (1) (*)	kW/kW	2,62	2,52	2,45	2,55	2,54	2,47	2,46	2,58
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	T 86	T 38	T 86	T 44	T 144	T 44	T 144	T 69
	External static pressure	Pa	50	50	50	50	50	50	50	50
	Nominal power input	kW	3,3	1,1	3,3	1,2	7,4	1,2	7,4	2,4
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF LNO	**MANTA A + TEAM MATE PF LNO**									
	Cooling capacity (1)	**kW**	**59,4**	**57,2**	**63,2**	**62,3**	**75,0**	**73,1**	**92,9**	**95,8**
	Unit power input	kW	17,1	17,5	19,9	20,3	23,3	24,7	32,4	30,9
	EER (1) (*)	kW/kW	2,87	2,82	2,69	2,70	2,68	2,66	2,50	2,72
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	T 114	T 58	T 114	T 58	T 144	T 58	T 144	T 86
	External static pressure	Pa	36	36	36	36	36	36	36	36
	Nominal power input	kW	3,6	1,4	3,6	1,4	4,7	1,4	4,7	2,2
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
TEAM MATE PF ELN	**MANTA A + TEAM MATE PF ELN**									
	Cooling capacity (1)	**kW**	**58,1**	**55,9**	**61,7**	**60,7**	**73,2**	**70,9**	**89,8**	**93,4**
	Unit power input	kW	17,8	18,2	20,7	21,2	24,3	25,9	34,1	32,1
	EER (1) (*)	kW/kW	2,92	2,81	2,71	2,65	2,71	2,57	2,44	2,69
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	1	2	1	2
	Series TEAM MATE STD	Mod.	T 114	T 58	T 114	T 58	T 144	T 58	T 144	T 86
	External static pressure	Pa	25	25	25	25	25	25	25	25
	Nominal power input	kW	2,1	0,8	2,1	0,8	2,8	0,8	2,8	1,3
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.
5. Referred to chilled water temperature 12/7°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply
(***) Remote condensers not available for this model. Value are referred to 45°C condensation temperature

TECHNICAL DATA MANTA A

	MANTA A		T 120 P2 S	T 120 P2 D	T 150 P2 S	T 150 P2 D	T 170 P4 D	T 175 P3 S	T 190 P4 D	T 200 P2 S
	SIZE		J7	J7	J8	J8	J8	J8	J9	J9
STANDARD	**Cooling capacity (1)**	**kW**	**120,0**	**118,0**	**152,0**	**149,0**	**176,0**	**175,0**	**194,0**	**192,0**
	Unit power input (*)	kW	39,2	39,1	51,4	51,9	56,9	59,8	66,3	66,6
	Evaporator water flow rate	m³/h	20,5	20,3	26,1	25,6	30,3	30,1	33,4	33,0
	Evaporator pressure drop	kPa	40	31	37	33	33	44	25	34
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	4	2	4	2
	Capacity steps	n.	2	2	2	2	4	3	4	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	22,0	26,6	22,8	28,3	22,7	24,9	29,0	27,0
	Gas circuits	n.	1	2	1	2	2	1	2	1
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	97	97	131	131	148	146	160	164
	Unit starting current (LRA)	A	321	321	375	375	333	369	345	466
	EER (1) (*)	kW/kW	3,06	3,02	2,96	2,87	3,09	2,93	2,93	2,88
	Sound power level [Lw] (2)	dB(A)	80,1	80,1	81,0	81,0	81,0	82,8	81,0	81,0
	Average sound pressure level [Lpm] (3)	dB(A)	64,0	64,0	64,0	64,0	64,0	65,8	64,0	64,0
	Net weight	kg	715	725	940	955	1055	1070	1215	990
	Hydraulic connections									
	Evaporator IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9
	Refrigerant connection									
	Liquid return - ODS	n x Ø	1 x 28	2 x 22	1 x 35	2 x 22	2 x 28	1 x 35	2 x 28	1 x 35
	Gas delivery - ODS	n x Ø	1 x 28	2 x 22	1 x 35	2 x 22	2 x 28	1 x 35	2 x 28	1 x 35
TEAM MATE	REMOTE CONDENSER - Quantity	n.	1	2	1	2	2	1	2	1
	Series TEAM MATE STD	Mod.	T 185	M 95	T 210	M 110	M 130	T 250	M 130	T 250
	Nominal power inout	kW	3,2	1,6	3,2	1,6	2,1	4,2	2,1	4,2
	Max operating current	A	17,1	8,5	17,1	8,5	11,4	22,8	11,4	22,8
	Power supply (**)	V/Ph/Hz	400/3/50+N	230/1/50	400/3/50+N	230/1/50	230/1/50	400/3/50+N	230/1/50	400/3/50+N
OPTIONAL	Partial heat recovery (4)									
	Heating capacity	**kW**	**43,9**	**--**	**55,8**	**54,7**	**64,7**	**64,2**	**71,4**	**70,5**
	Total heat recovery (5)									
	Heating capacity	**kW**	**156,0**	**155,0**	**204,0**	**202,0**	**233,0**	**235,0**	**265,0**	**262,0**
TEAM MATE LNO	**MANTA A + TEAM MATE LNO**									
	Cooling capacity (1)	**kW**	**120,0**	**118,0**	**153,0**	**154,0**	**176,0**	**174,0**	**205,0**	**191,0**
	Unit power input	kW	39,0	39,3	50,7	49,4	56,9	60,2	61,3	67,1
	EER (1) (*)	kW/kW	2,88	2,81	2,82	2,91	2,91	2,73	3,07	2,70
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	2	1	2	1
	Series TEAM MATE STD	Mod.	T 210	M 110	T 250	M 140	M 140	T 280	T 185	T 280
	Nominal power input	kW	2,7	1,4	3,6	1,8	1,8	3,6	2,7	3,6
	Power supply (**)	V/Ph/Hz	400/3/50+N	230/1/50	400/3/50+N	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N
TEAM MATE ELN	**MANTA A + TEAM MATE ELN**									
	Cooling capacity (1)	**kW**	**117,0**	**115,0**	**150,0**	**150,0**	**171,0**	**169,0**	**200,0**	**185,0**
	Unit power input	kW	40,6	40,9	52,8	51,6	59,6	63,0	63,5	70,8
	EER (1) (*)	kW/kW	2,73	2,67	2,69	2,75	2,73	2,56	2,94	2,51
	REMOTE CONDENSER - Quantity	n.	1	2	1	2	2	1	2	1
	Series TEAM MATE STD	Mod.	T 210	M 110	T 250	M 140	M 140	T 280	T 185	T 280
	Nominal power input	kW	2,2	1,1	3,0	1,5	1,5	3,0	2,2	3,0
	Power supply (**)	V/Ph/Hz	400/3/50+N	230/1/50	400/3/50+N	230/1/50	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N
TEAM MATE PF STD	**MANTA A + TEAM MATE PF STD**									
	Cooling capacity (1)	**kW**	**114,0**	**117,0**	**163,0**	**154,0**	**177,0**	**186,0**	**200,0**	**209,0**
	Unit power input	kW	42,1	39,9	46,0	49,1	56,4	54,0	63,4	58,5
	EER (1) (*)	kW/kW	2,30	2,51	3,54	2,55	2,62	3,44	2,56	3,57
	REMOTE CONDENSER - Quantity	n.	1	2	-- (***)	2	2	-- (***)	2	-- (***)
	Series TEAM MATE STD	Mod.	T 144	T 86	-- (***)	T 114	T 114	-- (***)	T 144	-- (***)
	External static pressure	Pa	50	50	-- (***)	50	50	-- (***)	50	-- (***)
	Nominal power input	kW	7,4	3,3	-- (***)	5,6	5,6	-- (***)	7,4	-- (***)
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	-- (***)	380-480/3/50-60	380-480/3/50-60	-- (***)	380-480/3/50-60	-- (***)
TEAM MATE PF LNO	**MANTA A + TEAM MATE PF LNO**									
	Cooling capacity (1)	**kW**	**126,0**	**121,0**	**163,0**	**154,0**	**177,0**	**186,0**	**195,0**	**209,0**
	Unit power input	kW	36,0	37,5	46,0	49,2	56,5	54,0	65,8	58,5
	EER (1) (*)	kW/kW	3,50	2,71	3,54	2,63	2,69	3,44	2,59	3,57
	REMOTE CONDENSER - Quantity	n.	-- (***)	2	-- (***)	2	2	-- (***)	2	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)	T 114	-- (***)	T 144	T 144	-- (***)	T 144	-- (***)
	External static pressure	Pa	-- (***)	36	-- (***)	36	36	-- (***)	36	-- (***)
	Nominal power input	kW	-- (***)	3,6	-- (***)	4,7	4,7	-- (***)	4,7	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)	380-480/3/50-60	-- (***)	380-480/3/50-60	380-480/3/50-60	-- (***)	380-480/3/50-60	-- (***)
TEAM MATE PF ELN	**MANTA A + TEAM MATE PF ELN**									
	Cooling capacity (1)	**kW**	**126,0**	**119,0**	**163,0**	**150,0**	**172,0**	**186,0**	**188,0**	**209,0**
	Unit power input	kW	36,0	38,8	46,0	51,2	59,1	54,0	69,5	58,5
	EER (1) (*)	kW/kW	3,50	2,77	3,54	2,64	2,66	3,44	2,51	3,57
	REMOTE CONDENSER - Quantity	n.	-- (***)	2	-- (***)	2	2	-- (***)	2	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)	T 114	-- (***)	T 144	T 144	-- (***)	T 144	-- (***)
	External static pressure	Pa	-- (***)		-- (***)			-- (***)		-- (***)
	Nominal power input	kW	-- (***)	2,1	-- (***)	2,8	2,8	-- (***)	2,8	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)	380-480/3/50-60	-- (***)	380-480/3/50-60	380-480/3/50-60	-- (***)	380-480/3/50-60	-- (***)

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.
5. Referred to chilled water temperature 12/7°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply
(***) Remote condensers not available for this model. Value are referred to 45°C condensation temperature

TECHNICAL DATA MANTA A

	MANTA A		T 200 P2 D	T 220 P3 S	T 240 P4 D	T 290 P3 S	T 300 P4 D	T 340 P4 D	T 380 P4 D	T 460 P6 D
	SIZE		J9	J9	J9	J9	J9	J10	J10	J10
STANDARD	**Cooling capacity (1)**	**kW**	**192,0**	**228,0**	**242,0**	**311,0**	**299,0**	**349,0**	**378,0**	**491,0**
	Unit power input (*)	kW	67,4	80,3	78,5	87,7	103,0	115,0	133,0	138,0
	Evaporator water flow rate	m³/h	32,9	39,1	41,5	53,4	51,3	60,0	65,0	84,3
	Evaporator pressure drop	kPa	39	39	49	43	54	55	48	55
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	3	4	3	4	4	4	6
	Capacity steps	n.	2	3	4	3	4	4	4	6
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	30,9	27,7	32,7	31,4	48,3	49,4	55,3	56,7
	Gas circuits	n.	2	1	2	1	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	164	197	246	194	262	295	328	393
	Unit starting current (LRA)	A	466	441	584	418	507	597	630	637
	EER (1) (*)	kW/kW	2,85	2,84	3,08	3,55	2,90	3,03	2,84	3,56
	Sound power level [Lw] (2)	dB(A)	81,0	82,8	84,1	82,8	84,1	84,5	84,5	86,3
	Average sound pressure level [Lpm] (3)	dB(A)	64,0	65,8	67,0	65,8	67,0	67,0	67,0	68,8
	Net weight	kg	1015	1205	1430	1265	1455	1515	1580	2027
	Hydraulic connections									
	Evaporator IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--
	Evaporator IN/OUT - OD	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
	Refrigerant connection									
	Liquid return - ODS	n x Ø	2 x 28	1 x 35	2 x 28	1 x 42	2 x 35	2 x 35	2 x 35	2 x 35
	Gas delivery - ODS	n x Ø	2 x 28	1 x 42	2 x 28	1 x 42	2 x 35	2 x 35	2 x 35	2 x 42
TEAM MATE	REMOTE CONDENSER - Quantity	n.	2	1	2	-- (***)	2	2	2	-- (***)
	Series TEAM MATE STD	Mod.	M 130	T 280	T 185	-- (***)	T 210	T 250	T 250	-- (***)
	Nominal power inout	kW	2,1	4,2	3,2	-- (***)	3,2	4,2	4,2	-- (***)
	Max operating current	A	11,4	22,8	17,1	-- (***)	17,1	22,8	22,8	-- (***)
	Power supply (**)	V/Ph/Hz	230/1/50	400/3/50+N	400/3/50+N	-- (***)	400/3/50+N	400/3/50+N	400/3/50+N	-- (***)
OPTIONAL	Partial heat recovery (4)									
	Heating capacity	**kW**	**70,3**	**83,5**	**88,7**	**114,0**	**110,0**	**128,0**	**139,0**	**180,0**
	Total heat recovery (5)									
	Heating capacity	**kW**	**263,0**	**302,0**	**320,0**	**391,0**	**404,0**	**465,0**	**517,0**	**618,0**
TEAM MATE LNO	**MANTA A + TEAM MATE LNO**									
	Cooling capacity (1)	**kW**	**201,0**	**250,0**	**242,0**	**311,0**	**306,0**	**348,0**	**376,0**	**491,0**
	Unit power input	kW	62,4	69,0	78,1	87,7	99,0	116,0	134,0	138,0
	EER (1) (*)	kW/kW	2,96	3,62	2,90	3,55	2,88	2,82	2,66	3,56
	REMOTE CONDENSER - Quantity	n.	2	-- (***)	2	-- (***)	2	2	2	-- (***)
	Series TEAM MATE STD	Mod.	T 185	-- (***)	T 210	-- (***)	T 280	T 280	T 280	-- (***)
	Nominal power input	kW	2,7	-- (***)	2,7	-- (***)	3,6	3,6	3,6	-- (***)
	Power supply (**)	V/Ph/Hz	400/3/50+N	-- (***)	400/3/50+N	-- (***)	400/3/50+N	400/3/50+N	400/3/50+N	-- (***)
TEAM MATE ELN	**MANTA A + TEAM MATE ELN**									
	Cooling capacity (1)	**kW**	**197,0**	**250,0**	**236,0**	**311,0**	**298,0**	**337,0**	**363,0**	**491,0**
	Unit power input	kW	64,5	69,0	81,4	87,7	103,0	121,0	141,0	138,0
	EER (1) (*)	kW/kW	2,86	3,62	2,75	3,55	2,74	2,65	2,47	3,56
	REMOTE CONDENSER - Quantity	n.	2	-- (***)	2	-- (***)	2	2	2	-- (***)
	Series TEAM MATE STD	Mod.	T 185	-- (***)	T 210	-- (***)	T 280	T 280	T 280	-- (***)
	Nominal power input	kW	2,2	-- (***)	2,2	-- (***)	3,0	3,0	3,0	-- (***)
	Power supply (**)	V/Ph/Hz	400/3/50+N	-- (***)	400/3/50+N	-- (***)	400/3/50+N	400/3/50+N	400/3/50+N	-- (***)
TEAM MATE PF STD	**MANTA A + TEAM MATE PF STD**									
	Cooling capacity (1)	**kW**	**197,0**	**250,0**	**254,0**	**311,0**	**320,0**	**370,0**	**410,0**	**491,0**
	Unit power input	kW	64,5	69,0	72,1	87,7	91,9	104,0	117,0	138,0
	EER (1) (*)	kW/kW	2,48	3,62	3,52	3,55	3,48	3,56	3,50	3,56
	REMOTE CONDENSER - Quantity	n.	2	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Series TEAM MATE STD	Mod.	T 144	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	External static pressure	Pa	50	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Nominal power input	kW	7,4	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Power supply (**)	V/Ph/Hz	380-480/3/50-60	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
TEAM MATE PF LNO	**MANTA A + TEAM MATE PF LNO**									
	Cooling capacity (1)	**kW**	**210,0**	**250,0**	**254,0**	**311,0**	**320,0**	**370,0**	**410,0**	**491,0**
	Unit power input	kW	58,5	69,0	72,1	87,7	91,9	104,0	117,0	138,0
	EER (1) (*)	kW/kW	3,59	3,62	3,52	3,55	3,48	3,56	3,50	3,56
	REMOTE CONDENSER - Quantity	n.	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	External static pressure	Pa	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Nominal power input	kW	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
TEAM MATE PF ELN	**MANTA A + TEAM MATE PF ELN**									
	Cooling capacity (1)	**kW**	**210,0**	**250,0**	**254,0**	**311,0**	**320,0**	**370,0**	**410,0**	**491,0**
	Unit power input	kW	58,5	69,0	72,1	87,7	91,9	104,0	117,0	138,0
	EER (1) (*)	kW/kW	3,59	3,62	3,52	3,55	3,48	3,56	3,50	3,56
	REMOTE CONDENSER - Quantity	n.	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	External static pressure	Pa	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Nominal power input	kW	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)	-- (***)

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.
5. Referred to chilled water temperature 12/7°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply
(***) Remote condensers not available for this model. Value are referred to 45°C condensation temperature

TECHNICAL DATA MANTA A

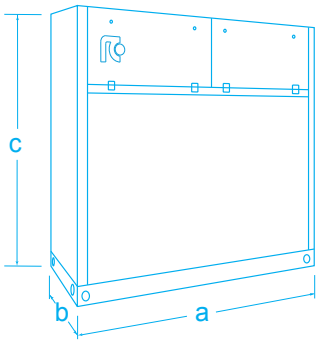
	MANTA A		T 570 P6 D
	SIZE		J10
STANDARD	**Cooling capacity (1)**	**kW**	**617,0**
	Unit power input (*)	kW	175,0
	Evaporator water flow rate	m³/h	106,0
	Evaporator pressure drop	kPa	75
	Compressors		scroll
	Quantity	n.	6
	Capacity steps	n.	6
	Refrigerant		R410A
	Total refrigerant charge (optional excluded)	kg	62,6
	Gas circuits	n.	2
	Power supply	V/Ph/Hz	400/3/50
	Max unit operating current (FLA)	A	492
	Unit starting current (LRA)	A	794
	EER (1) (*)	kW/kW	3,53
	Sound power level [Lw] (2)	dB(A)	86,3
	Average sound pressure level [Lpm] (3)	dB(A)	68,8
	Net weight	kg	2053
	Hydraulic connections		
	Evaporator IN/OUT - ISO228/1-G M	Ø	--
	Evaporator IN/OUT - OD	Ø mm	88,9
	Refrigerant connection		
	Liquid return - ODS	n x Ø	2 x 42
	Gas delivery - ODS	n x Ø	2 x 42
TEAM MATE	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	Nominal power inout	kW	-- (***)
	Max operating current	A	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)
OPTIONAL	Partial heat recovery (4)		
	Heating capacity	**kW**	**227,0**
	Total heat recovery (5)		
	Heating capacity	**kW**	**776,0**
TEAM MATE LNO	**MANTA A + TEAM MATE LNO**		
	Cooling capacity (1)	**kW**	**617,0**
	Unit power input	kW	175,0
	EER (1) (*)	kW/kW	3,53
	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	Nominal power input	kW	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)
TEAM MATE ELN	**MANTA A + TEAM MATE ELN**		
	Cooling capacity (1)	**kW**	**617,0**
	Unit power input	kW	175,0
	EER (1) (*)	kW/kW	3,53
	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	Nominal power input	kW	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)
TEAM MATE PF STD	**MANTA A + TEAM MATE PF STD**		
	Cooling capacity (1)	**kW**	**617,0**
	Unit power input	kW	175,0
	EER (1) (*)	kW/kW	3,53
	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	External static pressure	Pa	-- (***)
	Nominal power input	kW	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)
TEAM MATE PF LNO	**MANTA A + TEAM MATE PF LNO**		
	Cooling capacity (1)	**kW**	**617,0**
	Unit power input	kW	175,0
	EER (1) (*)	kW/kW	3,53
	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	External static pressure	Pa	-- (***)
	Nominal power input	kW	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)
TEAM MATE PF ELN	**MANTA A + TEAM MATE PF ELN**		
	Cooling capacity (1)	**kW**	**617,0**
	Unit power input	kW	175,0
	EER (1) (*)	kW/kW	3,53
	REMOTE CONDENSER - Quantity	n.	-- (***)
	Series TEAM MATE STD	Mod.	-- (***)
	External static pressure	Pa	-- (***)
	Nominal power input	kW	-- (***)
	Power supply (**)	V/Ph/Hz	-- (***)

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.
4. Referred to chilled water temperature 12/7°C; ambient temperature 35°C and recovery hot water temperature 40/45°C.
5. Referred to chilled water temperature 12/7°C and recovery hot water temperature 40/45°C.

(*) The value includes the remote condenser
(**) The remote condenser has separated power supply
(***) Remote condensers not available for this model. Value are referred to 45°C condensation temperature

DIMENSIONS (mm)

	a	b	c
J4	1000	650	1400
J7	1200	750	1700
J8	1800	1200	1740
J9	1800	1200	1740
J10	1800	1800	1740



TEAM MATE: Air cooled condensers equipped with axial fans

Capacity: **11,7 ÷ 307,0 kW**

team mate

rcgroupairconditioning

R410A R407c R134a A/C SPLIT SYSTEM

MAIN FEATURES
- Air cooled condensers.
- 19 models available, for a wide selection opportunity.
- Average step of 15kW.
- Multi-refrigerant charge.
- Supplied with seal charge.
- AC Axial fans.
- Horizontal air flow.
- Suitable for outdoor installation.

MAIN BENEFITS
- Designed for the perfect match with RC Group motoevaporating units.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of support leg for vertical air flow.
- Easily of maintenance.

OUTDOOR INSTALLATION
The machines are made with weather resistant materials and suitable for outdoor installation.

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

FANS SECTION – TEAM MATE

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor electric motor, AC type, with stepless variable speed for condensing pressure control.
  The motor rotation control is obtained according to the 0÷10V proportional signal coming from the internal unit microprocessor control.
- IP54 enclosure class.

AIR/GAS HEAT EXCHANGERS

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

REFRIGERANT CIRCUIT

- Valves on gas and liquid line for coupling to refrigerant pipe. The valves are supplied not installed. The condenser is supplied with nitrogen seal.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, IP54 enclosure class, complete with:

- Terminals for power supply (from network).
  - 400/3/50+N for models "T"
  - 230/1/50 for models "M".
- Terminals for 0÷10V signal for condensing control system (connect to indoor machine).
- Terminals for alarm signal (connect to indoor machine).
- Fans speed regulator for condensing control.

OPTIONAL ACCESSORY

- Support legs for vertical air flow.

TECHNICAL DATA TEAM MATE

	TEAM MATE		M 11	M 14	M 17	M 20	M 25	M 30	M 35	M 45
STANDARD	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**12,1**	**14,7**	**18,4**	**20,7**	**24,2**	**32,7**	**37,4**	**47,6**
	With refrigerant charge R407C	**kW**	**12,0**	**14,7**	**18,2**	**20,4**	**24,2**	**32,3**	**37,1**	**47,1**
	With refrigerant charge R134a	**kW**	**11,7**	**14,4**	**17,9**	**20,0**	**23,7**	**31,7**	**36,6**	**46,5**
	Unit power input	kW	0,3	0,3	0,3	0,4	0,5	0,5	0,5	0,8
	Axial fans	n.	1	1	1	1	1	1	1	2
	Total air flow	m³/h	4900	4500	5200	6400	9600	9500	9100	12000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Total refrigerant charge (optional excluded)	kg	0,8	1,2	1,7	1,7	2,0	3,0	4,0	4,7
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
	Max unit operating current (FLA)	A	1,2	1,2	1,2	1,8	2,9	2,9	2,9	3,6
	Sound power level [Lw] (2)	dB(A)	76,8	76,8	77,1	79,1	81,8	81,8	81,8	82,4
	Average sound pressure level [Lpm] (3)	dB(A)	63,0	63,0	63,0	65,0	67,0	67,0	67,0	67,4
	Net weight	kg	51	55	66	72	102	111	120	153
	Refrigerant connections									
	Liquid line – ODS	Ø mm	12	12	12	12	16	16	16	16
	Gas line – ODS	Ø mm	16	16	16	16	18	18	18	18
TEAM MATE LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**10,9**	**13,1**	**16,4**	**18,5**	**21,8**	**29,1**	**32,9**	**42,0**
	With refrigerant charge R407C	**kW**	**10,8**	**13,1**	**16,2**	**18,2**	**21,8**	**28,7**	**32,6**	**41,6**
	With refrigerant charge R134a	**kW**	**10,6**	**12,9**	**15,9**	**17,9**	**21,3**	**28,3**	**32,3**	**41,1**
	Unit power input	kW	0,2	0,2	0,2	0,3	0,5	0,5	0,5	0,7
	Total air flow	m³/h	4165	3825	4420	5440	8160	8075	7735	10200
	Sound power level [Lw] (2)	dB(A)	72,9	72,9	73,2	75,2	77,9	77,9	77,9	78,5
	Average sound pressure level [Lpm] (3)	dB(A)	59,1	59,1	59,1	61,1	63,1	63,1	63,1	63,6
TEAM MATE ELN	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**9,6**	**11,4**	**14,1**	**16,1**	**19,2**	**25,2**	**28,2**	**36,1**
	With refrigerant charge R407C	**kW**	**9,5**	**11,4**	**14,0**	**15,8**	**19,2**	**24,9**	**27,9**	**35,7**
	With refrigerant charge R134a	**kW**	**9,3**	**11,2**	**13,8**	**15,6**	**18,8**	**24,5**	**27,6**	**35,3**
	Unit power input	kW	0,2	0,2	0,2	0,3	0,4	0,4	0,4	0,6
	Total air flow	m³/h	3430	3150	3640	4480	6720	6650	6370	8400
	Sound power level [Lw] (2)	dB(A)	68,2	68,2	68,6	70,6	73,3	73,3	73,3	73,9
	Average sound pressure level [Lpm] (3)	dB(A)	54,5	54,5	54,5	56,5	58,5	58,5	58,5	58,9

1. Referred to condensation temperature 50°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.

TECHNICAL DATA TEAM MATE

	TEAM MATE		M 50	M 60	M 70	M 95	M 110	M 130	M 140	T 185
STANDARD	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**56,1**	**62,6**	**74,0**	**99,4**	**111,0**	**133,0**	**151,0**	**201,0**
	With refrigerant charge R407C	**kW**	**55,5**	**62,0**	**73,3**	**98,3**	**110,0**	**132,0**	**150,0**	**198,0**
	With refrigerant charge R134a	**kW**	**54,8**	**61,2**	**72,4**	**97,0**	**109,0**	**130,0**	**149,0**	**195,0**
	Unit power input	kW	1,1	1,1	1,1	1,6	1,6	2,1	2,1	3,2
	Axial fans	n.	2	2	2	3	3	4	4	6
	Total air flow	m³/h	17000	16000	18000	28200	27200	37800	36000	56000
	Air circuits	n.	1	1	1	1	1	1	1	1
	Total refrigerant charge (optional excluded)	kg	4,1	5,5	7,7	8,7	11,6	11,6	15,4	20,8
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N
	Max unit operating current (FLA)	A	5,7	5,7	5,7	8,5	8,5	11,4	11,4	17,1
	Sound power level [Lw] (2)	dB(A)	84,5	84,5	85,0	86,9	86,9	88,1	88,1	88,8
	Average sound pressure level [Lpm] (3)	dB(A)	69,4	69,4	69,4	70,5	70,5	71,1	71,1	71,5
	Net weight	kg	175	188	214	240	270	320	350	470
	Refrigerant connections									
	Liquid line – ODS	Ø mm	18	18	18	22	22	28	28	35
	Gas line – ODS	Ø mm	22	22	22	35	35	35	35	42
TEAM MATE LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**50,1**	**55,3**	**65,1**	**88,3**	**97,7**	**118,0**	**133,0**	**179,0**
	With refrigerant charge R407C	**kW**	**49,6**	**54,8**	**64,6**	**87,4**	**97,3**	**117,0**	**132,0**	**176,0**
	With refrigerant charge R134a	**kW**	**48,9**	**54,2**	**63,8**	**86,3**	**96,2**	**116,0**	**131,0**	**174,0**
	Unit power input	kW	0,9	0,9	0,9	1,4	1,4	1,8	1,8	2,7
	Total air flow	m³/h	14450	13600	15300	23970	23120	32130	30600	47600
	Sound power level [Lw] (2)	dB(A)	80,7	80,7	81,1	83,0	83,0	84,2	84,2	84,9
	Average sound pressure level [Lpm] (3)	dB(A)	65,5	65,5	65,5	66,6	66,6	67,2	67,2	67,7
TEAM MATE ELN	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**43,5**	**47,6**	**55,8**	**76,4**	**83,7**	**102,0**	**114,0**	**155,0**
	With refrigerant charge R407C	**kW**	**43,1**	**47,2**	**55,3**	**75,7**	**83,3**	**101,0**	**113,0**	**153,0**
	With refrigerant charge R134a	**kW**	**42,6**	**46,7**	**54,7**	**74,8**	**82,5**	**100,0**	**112,0**	**151,0**
	Unit power input	kW	0,8	0,8	0,8	1,1	1,1	1,5	1,5	1,5
	Total air flow	m³/h	11900	11200	12600	19740	19040	26460	25200	39200
	Sound power level [Lw] (2)	dB(A)	76,0	76,0	76,5	78,4	78,4	79,6	79,6	80,3
	Average sound pressure level [Lpm] (3)	dB(A)	60,8	60,8	60,8	61,9	61,9	62,5	62,5	63,0

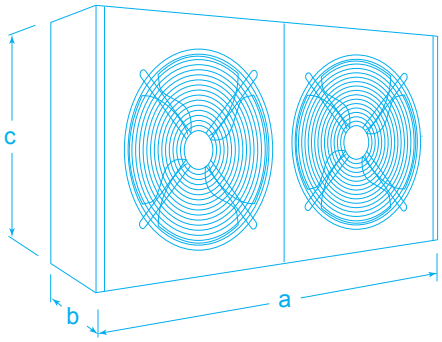
	TEAM MATE		T 210	T 250	T 280
STANDARD	**Capacity (1)**				
	With refrigerant charge R410A	**kW**	**232,0**	**276,0**	**307,0**
	With refrigerant charge R407C	**kW**	**231,0**	**273,0**	**304,0**
	With refrigerant charge R134a	**kW**	**228,0**	**270,0**	**301,0**
	Unit power input	kW	3,2	4,2	4,2
	Axial fans	n.	6	8	8
	Total air flow	m³/h	54000	74600	72000
	Air circuits	n.	1	1	1
	Total refrigerant charge (optional excluded)	kg	27,7	27,7	37,0
	Gas circuits	n.	1	1	1
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA)	A	17,1	22,8	22,8
	Sound power level [Lw] (2)	dB(A)	88,8	90,1	90,1
	Average sound pressure level [Lpm] (3)	dB(A)	71,5	72,2	72,2
	Net weight	kg	520	630	690
	Refrigerant connections				
	Liquid line – ODS	Ø mm	35	42	42
	Gas line – ODS	Ø mm	42	54	54
TEAM MATE LNO	**Capacity (1)**				
	With refrigerant charge R410A	**kW**	**205,0**	**245,0**	**270,0**
	With refrigerant charge R407C	**kW**	**203,0**	**243,0**	**268,0**
	With refrigerant charge R134a	**kW**	**201,0**	**240,0**	**265,0**
	Unit power input	kW	2,7	3,6	3,6
	Total air flow	m³/h	45900	63410	61200
	Sound power level [Lw] (2)	dB(A)	84,9	86,2	86,2
	Average sound pressure level [Lpm] (3)	dB(A)	67,7	68,3	68,3
TEAM MATE ELN	**Capacity (1)**				
	With refrigerant charge R410A	**kW**	**175,0**	**212,0**	**231,0**
	With refrigerant charge R407C	**kW**	**173,0**	**210,0**	**229,0**
	With refrigerant charge R134a	**kW**	**172,0**	**208,0**	**227,0**
	Unit power input	kW	2,2	2,2	3,0
	Total air flow	m³/h	37800	52220	50400
	Sound power level [Lw] (2)	dB(A)	80,3	81,5	81,5
	Average sound pressure level [Lpm] (3)	dB(A)	63,0	63,7	63,7

1. Referred to condensation temperature 50°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.

DIMENSIONS (mm)

TEAM MATE	a	b	c
M 11	875	540	727
M 14	875	540	727
M 17	1200	540	727
M 20	1200	540	727
M 25	1400	665	1027
M 30	1400	665	1027
M 35	1400	665	1027
M 45	1600	665	1027
M 50	1850	665	1027
M 60	1850	665	1027
M 70	2320	665	1140
M 95	3490	665	1150
M 110	3490	665	1150
M 130	4540	665	1150
M 140	4540	665	1150
T 185	3490	665	2200
T 210	3490	665	2200
T 250	4540	665	2200
T 280	4540	665	2200

(*) please refer to technical catalogues for further information about connections dimensions



TEAM MATE PF: Air cooled condensers equipped with plug fan

Capacity: **11,7 ÷ 154,0 kW**

team mate pf

R410A R407c R134a EC SPLIT SYSTEM

MAIN FEATURES
- Air cooled condensers.
- 14 models available, for a wide selection opportunity.
- Average step of 10kW.
- Multi-refrigerant charge.
- Supplied with seal charge.
- EC Plug-fan.
- Horizontal/Vertical air flow.
- Suitable for indoor installation.

MAIN BENEFITS
- Designed for the perfect match with RC Group motoevaporating units.
- EC Plug fan for a high efficiency.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of horizontal and vertical air delivery. To change air delivery mode it's simply required the change of position of a single panel.
- Easily of maintenance.

FANS WITH BRUSHLESS TYPE EC MOTOR
The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise

INDOOR INSTALLATION
The machines are designed for indoor installation and ducting for air suction and discharge.
For outdoor installation the use of the dedicated optional kit is mandatory.
The machine must be installed under a cover or anyway protected against atmospherics agent.

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

FANS SECTION – TEAM MATE

- Centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the internal unit microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

AIR/GAS HEAT EXCHANGERS

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Minimum charge of refrigerant.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

REFRIGERANT CIRCUIT

- Valves on gas and liquid line for coupling to refrigerant pipe. The valves are supplied not installed. The condenser is supplied with nitrogen seal.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, IP54 enclosure class, complete with:

- Terminals for power supply (from network).
  - 380-480/3/50-60 for models “T”
- Terminals for 0÷10V signal for condensing control system (connect to indoor machine).
- Terminals for alarm signal (connect to indoor machine).

TECHNICAL DATA TEAM MATE PF

	TEAM MATE PF		T 11	T 14	T 17	T 21	T 24	T 33	T 38	T 44
STANDARD	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**12,1**	**15,6**	**18,2**	**21,6**	**25,0**	**35,1**	**39,8**	**46,5**
	With refrigerant charge R407C	**kW**	**12,0**	**15,6**	**18,2**	**21,6**	**25,0**	**35,1**	**39,8**	**46,5**
	With refrigerant charge R134a	**kW**	**11,7**	**15,3**	**17,9**	**21,3**	**24,7**	**34,7**	**39,3**	**46,0**
	Unit power input	kW	0,4	0,4	0,5	0,5	0,6	1,3	1,1	1,2
	Plug-fans	n.	1	1	1	1	1	1	1	1
	Total air flow	m³/h	4900	4900	4900	4900	6400	8000	10000	10000
	Available static pressure	Pa	50	50	50	50	50	50	50	50
	Max available static pressure	Pa	375	350	332	290	748	474	298	268
	Air circuits	n.	1	1	1	1	1	1	1	1
	Total refrigerant charge (optional excluded)	kg	0,8	1,2	1,7	2,6	2,5	3,8	4,3	6,4
	Gas circuits	n.	1	1	1	1	1	1	1	1
	Power supply	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
	Max unit operating current (FLA)	A	1,6	1,6	1,6	1,6	4,3	4,3	3,6	3,6
	Sound power level [Lw] (2)	dB(A)	76,2	76,2	76,1	76,1	82,5	87,4	86,6	86,8
	Average sound pressure level [Lpm] (3)	dB(A)	61,6	61,6	61,5	61,5	67,1	72,0	71,1	71,3
	Net weight	kg	143	148	153	163	210	222	284	310
	Refrigerant connections									
	Liquid line – ODS	Ø mm	12	12	12	12	16	16	16	16
	Gas line – ODS	Ø mm	16	16	16	16	18	18	18	18
TEAM MATE PF LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**10,8**	**13,7**	**15,9**	**18,8**	**21,6**	**30,2**	**34,5**	**40,1**
	With refrigerant charge R407C	**kW**	**10,5**	**13,7**	**15,9**	**18,8**	**21,6**	**30,2**	**34,5**	**40,1**
	With refrigerant charge R134a	**kW**	**10,2**	**13,3**	**15,5**	**18,4**	**21,0**	**29,4**	**33,7**	**39,3**
	Unit power input	kW	0,3	0,3	0,3	0,3	0,4	0,8	0,7	0,8
	Total air flow	m³/h	4165	4165	4165	4165	5440	6800	8500	8500
	Available static pressure	Pa	36	36	36	36	36	36	36	36
	Sound power level [Lw] (2)	dB(A)	72,3	72,3	72,2	72,2	78,6	83,5	82,7	82,9
	Average sound pressure level [Lpm] (3)	dB(A)	57,7	57,7	57,6	57,6	63,2	68,1	67,2	67,4
TEAM MATE PF ELN	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**9,5**	**11,9**	**13,7**	**16,0**	**18,7**	**25,8**	**29,7**	**34,0**
	With refrigerant charge R407C	**kW**	**9,3**	**11,9**	**13,7**	**16,0**	**18,7**	**25,8**	**29,7**	**34,0**
	With refrigerant charge R134a	**kW**	**9,1**	**11,6**	**13,4**	**15,7**	**18,2**	**25,2**	**29,1**	**33,5**
	Unit power input	kW	0,2	0,2	0,2	0,2	0,3	0,5	0,5	0,5
	Total air flow	m³/h	3430	3430	3430	3430	4480	6800	8500	8500
	Available static pressure	Pa	25	25	25	25	25	25	25	25
	Sound power level [Lw] (2)	dB(A)	67,6	67,6	67,5	67,5	73,9	78,8	78,1	78,3
	Average sound pressure level [Lpm] (3)	dB(A)	53,1	53,1	53,0	53,0	58,6	63,5	62,6	62,8

1. Referred to condensation temperature 50°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.

TECHNICAL DATA TEAM MATE PF

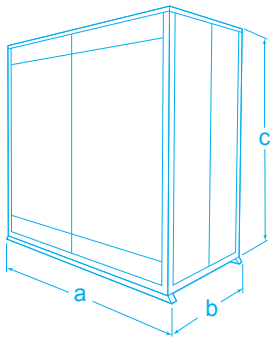
	TEAM MATE PF		T 58	T 69	T 86	T108	T114	T144
STANDARD	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**62,0**	**73,1**	**91,0**	**113,0**	**122,0**	**154,0**
	With refrigerant charge R407C	**kW**	**62,0**	**73,1**	**91,0**	**113,0**	**122,0**	**154,0**
	With refrigerant charge R134a	**kW**	**61,2**	**72,4**	**89,9**	**111,0**	**121,0**	**152,0**
	Unit power input	kW	2,2	2,4	3,3	4,7	5,6	7,4
	Plug-fans	n.	2	2	3	3	3	4
	Total air flow	m³/h	16000	16000	24000	32000	28000	36000
	Available static pressure	Pa	50	50	50	50	50	50
	Max available static pressure	Pa	552	512	542	515	204	237
	Air circuits	n.	1	1	1	1	1	1
	Total refrigerant charge (optional excluded)	kg	5,9	8,8	10,2	9,4	10,3	14
	Gas circuits	n.	1	1	1	1	1	1
	Power supply	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
	Max unit operating current (FLA)	A	8,6	8,6	12,9	17,2	12,9	17,2
	Sound power level [Lw] (2)	dB(A)	93,4	93,5	96,9	98,7	100,3	101,4
	Average sound pressure level [Lpm] (3)	dB(A)	77,3	77,4	80,3	81,8	83,7	84,5
	Net weight	kg	387	421	515	625	557	673
	Refrigerant connections							
	Liquid line – ODS	Ø mm	18	18	18	22	22	28
	Gas line – ODS	Ø mm	22	22	22	28	28	35
TEAM MATE PF LNO	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**53,4**	**62,7**	**78,6**	**98,9**	**105,0**	**131,0**
	With refrigerant charge R407C	**kW**	**53,4**	**62,7**	**78,6**	**98,9**	**105,0**	**131,0**
	With refrigerant charge R134a	**kW**	**51,8**	**61,3**	**76,2**	**96,2**	**102,0**	**127,0**
	Unit power input	kW	1,4	1,5	2,2	3,0	3,6	4,7
	Total air flow	m³/h	13600	13600	20400	27200	23800	30600
	Available static pressure	Pa	36	36	36	36	36	36
	Sound power level [Lw] (2)	dB(A)	89,5	89,6	93,0	94,8	96,4	97,5
	Average sound pressure level [Lpm] (3)	dB(A)	73,4	73,5	76,4	77,9	79,8	80,6
TEAM MATE PF ELN	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**46,2**	**53,4**	**68,1**	**85,9**	**89,8**	**113,0**
	With refrigerant charge R407C	**kW**	**46,2**	**53,4**	**68,1**	**85,9**	**89,8**	**113,0**
	With refrigerant charge R134a	**kW**	**45,0**	**52,4**	**66,4**	**83,8**	**87,9**	**110,0**
	Unit power input	kW	0,8	0,9	1,3	1,8	2,1	2,8
	Total air flow	m³/h	13600	13600	20400	27200	23800	30600
	Available static pressure	Pa	25	25	25	25	25	25
	Sound power level [Lw] (2)	dB(A)	84,8	84,9	88,3	90,2	91,7	92,9
	Average sound pressure level [Lpm] (3)	dB(A)	68,8	68,9	71,8	73,3	75,2	76,0

1. Referred to condensation temperature 50°C; ambient temperature 35°C.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.

DIMENSIONS (mm)

TEAM MATE PF	a	b	c
T 11	890	880	900
T 14	890	880	900
T 17	890	880	900
T 21	890	880	900
T 24	1190	880	900
T 33	1190	880	900
T 38	1390	880	1300
T 44	1390	880	1300
T 58	1840	880	1300
T 69	1840	880	1300
T 86	2290	880	1300
T108	1840	880	1800
T114	2290	880	1300
T144	1840	880	1800

(*) please refer to technical catalogues for further information about connections dimensions



DRY COOLER: Dry coolers equipped with axial fans

Capacity: **8,3 ÷ 172,0 kW**

dry cooler

rcgroupairconditioning

MAIN FEATURES

- Dry coolers.
- 10 models available, for a wide selection opportunity.
- Average step of 15kW.
- Water feeding.
- AC Axial fans.
- Horizontal air flow.
- Suitable for outdoor installation.

MAIN BENEFITS

- Designed for the perfect match with RC Group water cooled liquid chillers.
- Availability of kit for the reduction of the noise.
- Availability of support leg for vertical air flow.
- Easily of maintenance.

OUTDOOR INSTALLATION

The machines are made with weather resistant materials and suitable for outdoor installation.

rcgroup.it

1 9 6 3 2 0 1 3

fifty**cool**years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- External rotor electric motor, AC type, with stepless variable speed for condensing pressure control.
  The motor rotation control is obtained according to the 0÷10V proportional signal coming from the internal unit microprocessor control.
- IP54 enclosure class.

DISSIPATIVE COIL

- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops.
  The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, IP54 enclosure class, complete with:

- Terminals for power supply (from network).
  - 400/3/50+N for models "T"
  - 230/1/50 for models "M".
- Terminals for 0÷10V signal for fan speed control (connect to indoor machine).
- Terminals for alarm signal (connect to indoor machine).
- Fans speed regulator for fan speed control.

OPTIONAL ACCESSORY

- Support legs for vertical air flow

TECHNICAL DATA DRY COOLER

	DRY COOLER		M 14	M 20	M 35	M 45	M 60	M 70	M 110	M 140	T 210	T 280
STANDARD	**Capacity (1)**	**kW**	**8,3**	**11,7**	**22,6**	**26,4**	**31,8**	**40,2**	**62,2**	**86,1**	**124,0**	**172,0**
	Unit power input	kW	0,3	0,4	0,5	0,8	1,1	1,1	1,6	2,1	3,2	4,2
	Axial fans	n.	1	1	1	2	2	2	3	4	6	8
	Total air flow	m³/h	4500	6400	9100	12000	16000	18000	27200	36000	54000	72000
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1
	Water flow	m³/h	1,5	2,1	4,0	4,7	5,7	7,2	11,1	15,4	22,1	30,8
	Pressure drops	kPa	24	21	26	16	8	12	17	40	17	40
	Water content	l	4,0	5,7	15,7	15,2	17,9	25,1	37,7	72,8	75,3	100,4
	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N(*)	400/3/50+N(*)
	Max unit operating current (FLA)	A	0,7	1,8	2,9	3,6	5,7	5,7	8,5	11,4	17,1	22,8
	Sound power level [Lw] (2)	dB(A)	76,8	79,1	81,8	82,4	84,5	85,0	86,9	88,1	88,8	90,1
	Average sound pressure level [Lpm] (3)	dB(A)	63,0	65,0	67,0	67,4	69,4	69,4	70,5	71,1	71,5	72,2
	Net weight	kg	56	73	122	156	191	219	227	359	533	708
	Hydraulic connections											
	Inlet / Outlet – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/2"	1 1/2"	2"	2"	2"	2"	2 1/2"	3"
LNO 85%	**Capacity (1)**	**kW**	**7,3**	**10,4**	**19,8**	**23,3**	**28,0**	**35,3**	**54,8**	**75,9**	**109,0**	**152,0**
	Unit power input	kW	0,3	0,4	0,5	0,8	1,1	0,9	1,4	1,8	2,7	3,6
	Total air flow	m³/h	3825	5440	7735	10200	13600	18000	27200	36000	54000	72000
	Water flow	m³/h	1,3	1,9	3,5	4,2	5,0	6,3	9,8	13,6	19,5	27,1
	Pressure drops	kPa	19	17	21	13	6	10	14	32	14	32
	Sound power level [Lw] (2)	dB(A)	72,9	75,2	77,9	78,5	80,7	81,1	83,0	84,2	84,9	86,2
	Average sound pressure level [Lpm] (3)	dB(A)	59,1	61,1	63,1	63,6	65,5	65,5	66,6	67,2	67,7	68,3
LNO 70%	**Capacity (1)**	**kW**	**6,4**	**9,0**	**16,9**	**19,9**	**23,8**	**40,2**	**62,2**	**86,1**	**124,0**	**172,0**
	Unit power input	kW	0,2	0,3	0,4	0,6	0,8	0,8	1,1	1,5	2,2	3,0
	Total air flow	m³/h	3150	4480	6370	8400	11200	12600	19040	25200	37800	50400
	Water flow	m³/h	1,1	1,6	3,0	3,6	4,3	5,4	8,4	11,6	16,7	23,3
	Pressure drops	kPa	15	13	16	10	5	7	11	25	10	25
	Sound power level [Lw] (2)	dB(A)	68,2	70,6	73,3	73,9	76,0	76,5	78,4	79,6	80,3	81,5
	Average sound pressure level [Lpm] (3)	dB(A)	54,5	56,5	58,5	58,9	60,8	60,8	61,9	62,5	63,0	63,7

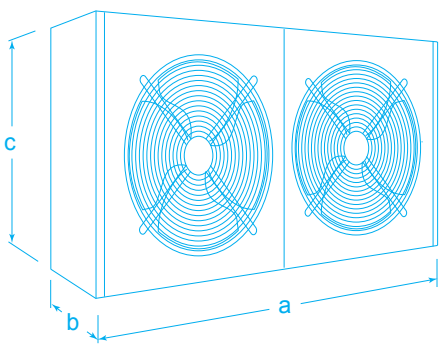
1. Characteristics referred to entering air at 35°C with hot water inlet temperature 45°C – 20% glycol.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.

(*) Available also with 230/1/50 power supply. Refer to the wiring diagram of the unit.

DIMENSIONS (mm)

DRY COOLER	a	b	c
M 14	875	540	727
M 20	1200	540	727
M 35	1400	665	1027
M 45	1600	665	1027
M 60	1850	665	1027
M 70	2320	665	1140
M 110	3490	665	1150
M 140	4540	665	1150
T 210	3490	665	2200
T 280	4540	665	2200

(*) please refer to technical catalogues for further information about connections dimensions



DRY COOLER PF: Dry coolers equipped with plug fan

Capacity: **8,8 ÷ 89,0 kW**

dry cooler pf

rcgroupairconditioning

MAIN FEATURES
- Dry coolers.
- 13 models available, for a wide selection opportunity.
- Average step of 6kW.
- Water feeding.
- EC Plug-fan.
- Horizontal/Vertical air flow.
- Suitable for indoor installation.

MAIN BENEFITS
- Designed for the perfect match with RC Group water cooled liquid chillers.
- EC Plug fan for a high efficiency.
- Availability of kit for the reduction of the noise.
- Availability of horizontal and vertical air delivery. To change air delivery mode it's simply required the change of position of a single panel.
- Easily of maintenance.

PLUG FANS WITH BRUSHLESS TYPE EC MOTOR
The fans electric motors are the brushless type with built-in electronic commutation system (EC) which yield high energy savings during operation in reduced air flow.
These electric motors are ensuring high performances, minimum energy consumption and total absence of electromagnetic noise

INDOOR INSTALLATION
The machines are designed for indoor installation and ducting for air suction and discharge.
For outdoor installation the use of the dedicated optional kit is mandatory.
The machine must be installed under a cover or anyway protected against atmospherics agent.

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base, self supporting frame and panelling in steel plate with protective surfaces treatment in compliance with UNI ISO 9227/ASTMB117 and ISO 7253, and painted with epoxy powders.
- Colour: RAL 9002

FANS SECTION – TEAM MATE

- Centrifugal fans with backward curved blades with wing profile, single suction and without scroll housings (Plug-fan).
- Brushless type synchronous EC motor with integrated electronic commutated system and continuous variation of the rotation speed. The motor rotation control is obtained with the EC system (Electronic Commutation) that manage the motor according to the 0÷10V proportional signal coming from the internal unit microprocessor control.
- Maintenance-free bearings
- IP54 enclosure class.

DISSIPATIVE COIL

- Heat exchanger coil with copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops. The combination of two factors, special tubes and fins, allow to optimally combine the following aspects:
  - Maximum capacity relative to the size of the exchanger.
  - Reduction of the air flow required for the heat exchange.
- Frame in galvanized steel.

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, IP54 enclosure class, complete with:

- Terminals for power supply (from network).
  - 380-480/3/50-60 for models “T”
- Terminals for 0÷10V signal for fan speed control (connect to indoor machine).
- Terminals for alarm signal (connect to indoor machine).

TECHNICAL DATA DRY COOLER PF

	DRY COOLER PF		T 14	T 17	T 21	T 24	T 33	T 38	T 44	T 58
STANDARD	**Capacity (1)**	**kW**	**8,8**	**10,5**	**12,6**	**13,7**	**20,6**	**24,3**	**28**	**31,8**
	Unit power input	kW	0,4	0,5	0,5	0,6	1,3	1,1	1,2	2,2
	Axial fans	n.	1	1	1	1	1	1	1	2
	Total air flow	m³/h	4900	4900	4900	6400	8000	10000	10000	16000
	Available static pressure	Pa	50	50	50	50	50	50	50	50
	Max available static pressure	Pa	350	332	290	748	474	298	268	552
	Air circuits	n.	1	1	1	1	1	1	1	1
	Water flow	m³/h	1,6	1,9	2,3	2,4	3,7	4,3	5,0	5,7
	Pressure drops	kPa	26	24	15	15	26	30	29	8
	Water content	l	3,9	5,2	7,8	7,4	11,1	12,7	19,1	17,5
	Power supply	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
	Max unit operating current (FLA)	A	1,6	1,6	1,6	4,3	4,3	3,6	3,6	8,6
	Sound power level [Lw] (2)	dB(A)	76,2	76,1	76,1	82,5	87,4	86,6	86,8	93,4
	Average sound pressure level [Lpm] (3)	dB(A)	61,6	61,5	61,5	67,1	72,0	71,1	71,3	77,3
	Net weight	kg	149	154	165	209	224	287	314	391
	Hydraulic connections									
	Inlet / Outlet – ISO 7/1 – R	Ø	1 1/4"	1 1/4"	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"
LNO 85%	**Capacity (1)**	**kW**	**7,8**	**9,2**	**11,0**	**12,1**	**18,0**	**24,3**	**28,0**	**31,8**
	Unit power input	kW	0,3	0,3	0,3	0,4	0,8	1,1	1,2	2,2
	Total air flow	m³/h	4165	4165	4165	5440	6800	10000	10000	16000
	Water flow	m³/h	1,4	1,7	2,0	2,2	3,2	3,8	4,4	5,0
	Pressure drops	kPa	21	19	11	12	21	24	23	6
	Sound power level [Lw] (2)	dB(A)	72,3	72,2	72,2	78,6	83,5	82,7	82,9	89,5
	Average sound pressure level [Lpm] (3)	dB(A)	57,7	57,6	57,6	63,2	68,1	67,2	67,4	73,4
LNO 70%	**Capacity (1)**	**kW**	**6,8**	**8,0**	**9,3**	**10,3**	**15,4**	**24,3**	**28,0**	**31,8**
	Unit power input	kW	0,2	0,2	0,2	0,3	0,5	0,5	0,5	0,8
	Total air flow	m³/h	3430	3430	3430	4480	5600	7000	7000	11200
	Water flow	m³/h	1,2	1,4	1,7	1,9	2,8	3,3	3,7	4,3
	Pressure drops	kPa	17	15	9	9	16	18	17	5
	Sound power level [Lw] (2)	dB(A)	67,6	67,5	67,5	73,9	78,8	78,1	78,3	84,8
	Average sound pressure level [Lpm] (3)	dB(A)	53,1	53,0	53,0	58,6	63,5	62,6	62,8	68,8

	DRY COOLER PF		T 69	T 86	T108	T114	T144
STANDARD	**Capacity (1)**	**kW**	**41,9**	**50**	**60,3**	**68,8**	**89**
	Unit power input	kW	2,4	3,3	4,7	5,6	7,4
	Axial fans	n.	2	3	4	3	4
	Total air flow	m³/h	16000	24000	32000	28000	36000
	Available static pressure	Pa	50	50	50	50	50
	Max available static pressure	Pa	512	542	515	204	237
	Air circuits	n.	1	1	1	1	1
	Water flow	m³/h	7,5	9,0	10,8	12,3	15,9
	Pressure drops	kPa	18	18	10	15	31
	Water content	l	26,2	24,5	28,0	36,7	41,9
	Power supply	V/Ph/Hz	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60	380-480/3/50-60
	Max unit operating current (FLA)	A	8,6	12,9	17,2	12,9	17,2
	Sound power level [Lw] (2)	dB(A)	93,5	96,9	98,7	100,3	101,4
	Average sound pressure level [Lpm] (3)	dB(A)	77,4	80,3	81,8	83,7	84,5
	Net weight	kg	427	520	631	565	682
	Hydraulic connections						
	Inlet / Outlet – ISO 7/1 – R	Ø	2"	2"	2"	2"	2"
LNO 85%	**Capacity (1)**	**kW**	**41,9**	**50,0**	**60,3**	**68,8**	**89,0**
	Unit power input	kW	2,4	3,3	4,7	5,6	7,4
	Total air flow	m³/h	16000	24000	32000	28000	36000
	Water flow	m³/h	6,6	7,9	9,5	10,8	14,0
	Pressure drops	kPa	14	14	8	12	24
	Sound power level [Lw] (2)	dB(A)	89,6	93,0	94,8	96,4	97,5
	Average sound pressure level [Lpm] (3)	dB(A)	73,5	76,4	77,9	79,8	80,6
LNO 70%	**Capacity (1)**	**kW**	**41,9**	**50,0**	**60,3**	**68,8**	**89,0**
	Unit power input	kW	0,9	1,3	1,8	2,1	2,8
	Total air flow	m³/h	11200	16800	22400	19600	25200
	Water flow	m³/h	5,6	6,8	8,2	9,2	12,0
	Pressure drops	kPa	11	11	6	9	19
	Sound power level [Lw] (2)	dB(A)	84,9	88,3	90,2	91,7	92,9
	Average sound pressure level [Lpm] (3)	dB(A)	68,9	71,8	73,3	75,2	76,0

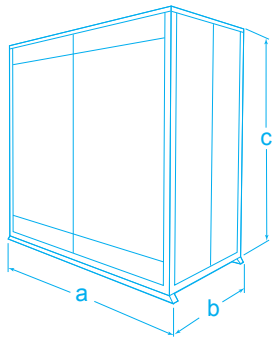
1. Characteristics referred to entering air at 35°C with hot water inlet temperature 45°C – 20% glycol.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.

(*) Available also with 230/1/50 power supply. Refer to the wiring diagram of the unit.

DIMENSIONS (mm)

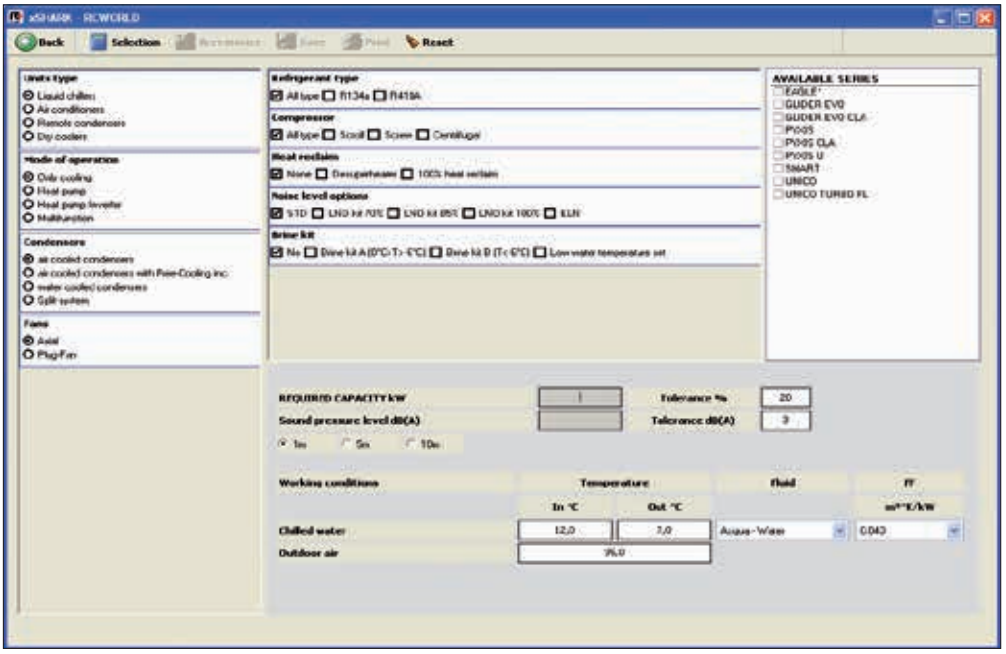
DRY COOLER PF	a	b	c
T 14	890	880	900
T 17	890	880	900
T 21	890	880	900
T 24	1190	880	900
T 33	1190	880	900
T 38	1390	880	1300
T 44	1390	880	1300
T 58	1840	880	1300
T 69	1840	880	1300
T 86	2290	880	1300
T108	1840	880	1800
T114	2290	880	1300
T144	1840	880	1800

(*) please refer to technical catalogues for further information about connections dimensions



RCWORLD
RC Hi-Tech

RC WORLD: RC Group products selection software



rc world

rcgroupairconditioning

MAIN FEATURES

5 applications:
- Products selection.
- Unit performances.
- Price list.
- Offer management.
- Orders management.

8 languages:
- Deutsch
- English
- Espanol
- Francais
- Italiano
- Norsk
- Polski
- Suomi

MAIN BENEFITS
- RC World calculate the performance of all the RC Group product range at every admitted working conditions.
- RC World shows the descriptions and the technical drawings of the units.
- RC World shows the optional accessory of the units.

RC WORLD 8.0 MAIN NEW FEATURES
- Introduction of the 2014 product range.
- Improved unit selection mode.

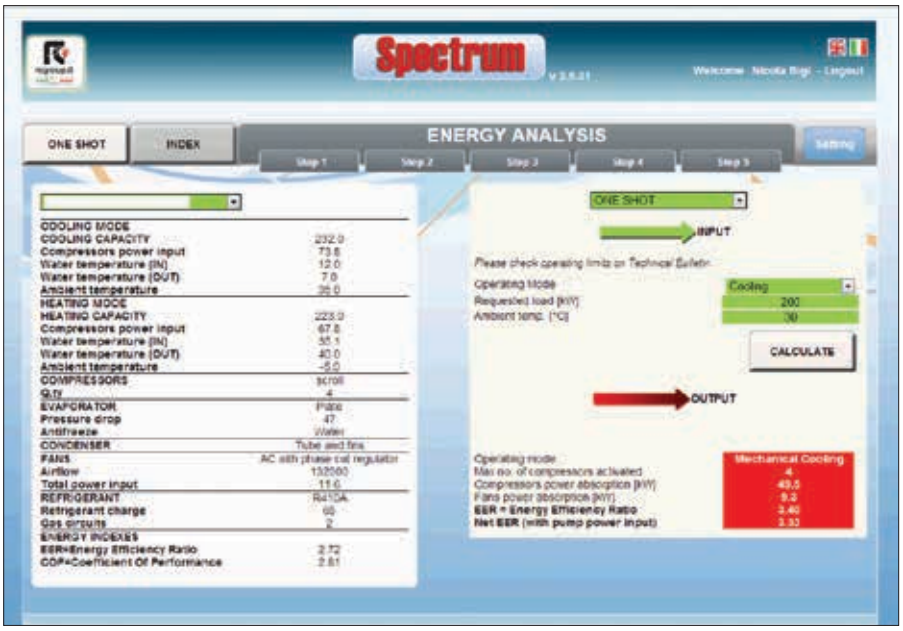
rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

SPECTRUM
RC Hi-Tech

SPECTRUM: Energy performance estimation software for chillers, heat pumps and multifunctions produced by RC Group

Free application, available at the website www.rcspectrum.it
Requires only:
- *RC WORLD (electronic catalogue)*
- *registration*

Allows:
- *step-by-step user friendly interface*
- *graphical outputs in PDF format and numerical outputs in XLSX format*
- *Periodic update of database and mathematical models*



spectrum

rcgroupairconditioning

MAIN FEATURES
WEB application able to predict the Energy performance of the units (chillers and heat pumps) and to conduct a comprehensive energy analysis.

Energy performance of whatever unit in a specific operating condition ("ONE SHOT" mode):
- gross and net EER (chillers)
- TER (chillers with heat recovery)
- gross and net COP (heat pumps, with estimation of defrost for air-to-water units)

Evaluation of standard indexes:
- ESEER, IPLV
- SEER
- SCOP

Energy analysis (one year-based estimation):
- single machine
- multiple configuration of a single model, with parallel or sequential mode of insertion
- comparison of different models on the same application
- complex layout, with machines of different models and size, with sequencing rules in accordance to SEQ functions

MAIN BENEFITS
For planners:
- aid in the choice of machines and their conduction.
- analysis of return on investment.
- easy integration of results into project documentation.

For Energy Managers:
- tool to verify predicted performances.
- integration with BMS/SEQ to optimise operational logic.

rcgroup.it
1 9 6 3 2 0 1 3
fifty**cool**years

SEQUENCER: Sequencer for chillers, heat pumps and multifunction units

SEQUENCER
RC Hi-Tech

sequencer

rcgroupairconditioning

MAIN FEATURES

The sequencer SEQ is designed as a master unit in a network of different machines connected in a single hydronic network for the production of chilled or heated water

- 2-pipes, 4-pipes, 6-pipes plants
- Machines different for type and size (with a maximum of 12 units)
- Management of units made by others

Designed to work alone or in combination with a supervisor (BMS)

MAIN BENEFITS

Active control:

- Automatic activation / deactivation of the units depending on changeover, alarms, temperature control, limit conditions, special events (e.g. restart after power failure)
- Plant temperature precision control
- Improvement and control of system energy efficiency
- Pumps control
- “plant management” functions:
- Acoustic limiting, by the definition of reduced thresholds for fan speed
- Demand limiting (limitation of electrical power absorption)
- Time scheduling
- Changeover, with the goal of equalize the working hours of all devices
- Antifreeze function integration

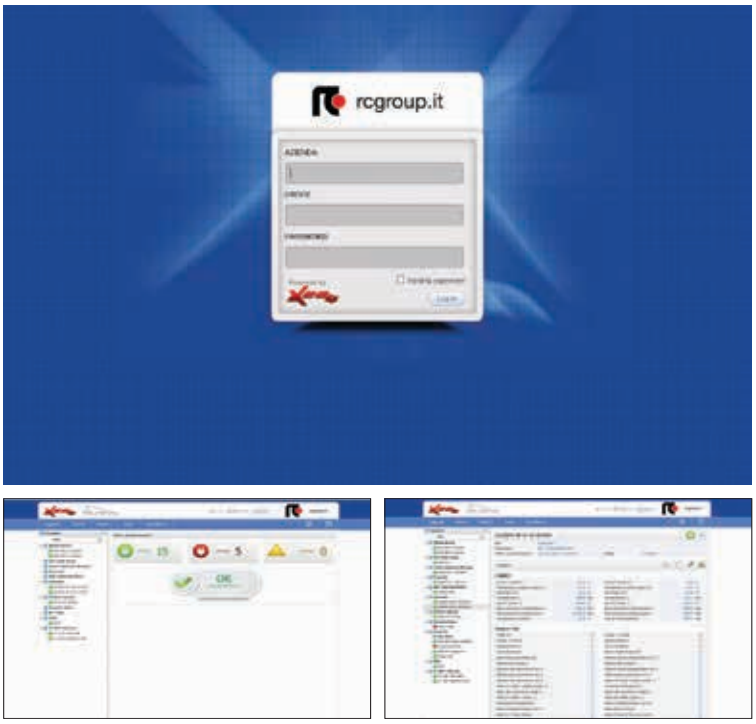
Passive control:

- Collection of all signal alarms coming from the units
- Report of faults and events
- Request of pre-programmed maintenance activities

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

Powered by

RILHEVA: Performance and quality remote monitoring.
GPRS solution for unattended monitoring.



rilheva

rcgroupairconditioning

MAIN FEATURES

RC Rilheva System is the most advanced solution in unattended monitoring and remote management for an air conditioning plant.
Rilheva is able to analyse any physical quantity variation through RTU Modbus protocol on RS485 network and transmits the data detected to a control server. Each device can manage up to 31 units (a/c units/chillers) for a total of 400 Modbus Registers
Thanks to a simple web access (PC, Tablet or Smartphone), has an interface available that allows him to directly operate on the field

MAIN FUNCTIONS

- Check of the plants status in real time
- Analysis in real time of each unit data
- Possibility to receive, for each single set parameter, specific warnings in the preferred technology: SMS, Mail, Speech Synthesis, FAX and push notification on APP (Android and iOS)
- Creation and export of charts with historical data
- Data monitoring directly on a geographical map
- Control transmission to the unit (start/stop, set point modification, alarms reset)
- Integration of different peripheral units in the system (pumps, movie camera, etc.)

MAIN BENEFITS FOR THE END USERS

- Constant monitoring of the plant
- The system has the function to prevent a possible unit stop.
- Reception of warning signal in case of crossing of some critical parameters

rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

Chillers 2014

rcgroup.it

1 9 6 3 2 0 1 3

fifty cool years

RC GROUP SpA

Via Roma 5, 27010 Valle Salimbene (PV) Italy · +39 0382 433811 · www.rcgroup.it · info@rcgroup.it

EUROVENT CERTIFIED PERFORMANCE www.eurovent-certification.com

ICIM CSQ IQNet ISO 9001 · Cert. 18/6 Factory based in ITALY

LRQA Business Assurance ISO 9001 · Cert. QAC6004599 ISO 14001 · Cert. QAC6004599/A Factory based in P.R.C.

CE

G_CHL_0114_GB

RC Group is a Company of

DEL CLIMA