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Heat Pumps & Multifunctions 2014

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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

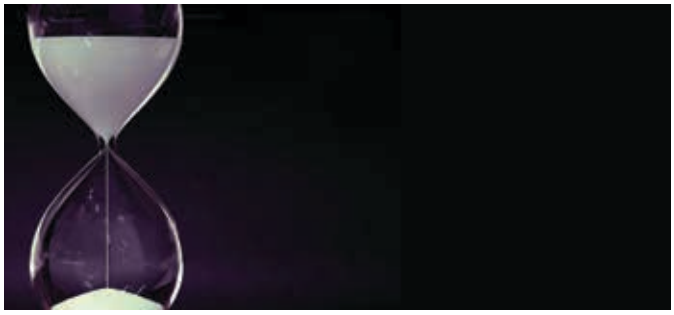
TIME

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.

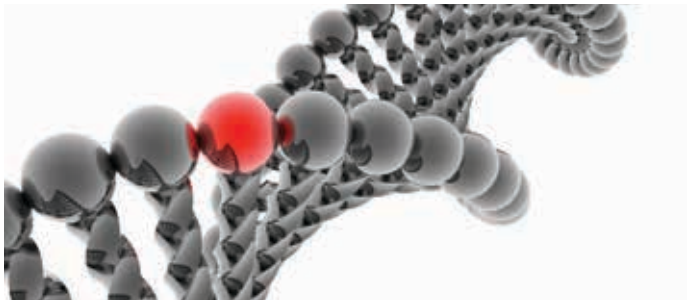
Nowadays, RC Group is facing the market as supplier of several products: air conditioners and liquid chillers, covering a range of cooling capacities from 5 to over 2000 kW per unit to satisfy any kind of needs.

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

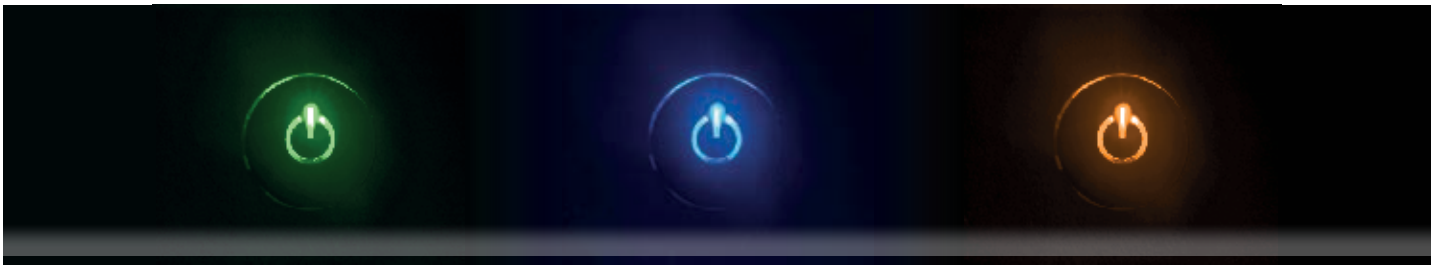
The character of the company and its philosophy of research and development, design and production, were quickly recognized and appreciated by the market, first in Italy and then in the World.

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 & Multifunction
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 high-tech content.

Symbols used
in the catalogue.

New product

Only cooling

Only heating

Cooling / Heating

Domestic hot water

Scroll type compressor

Screw type compressor

R410A Refrigerant charge

R134a Refrigerant charge

Axial fans
with brushless type EC motor

Axial fans
with AC electric motor

Plug fan with brushless type EC
electric motor

Plate type evaporator

Shell and tube type
evaporator

Indoor installation

Outdoor installation

Split-system machine

AIR COOLED HEAT PUMP LIQUID CHILLERS WITH AXIAL FANS

SMART HP

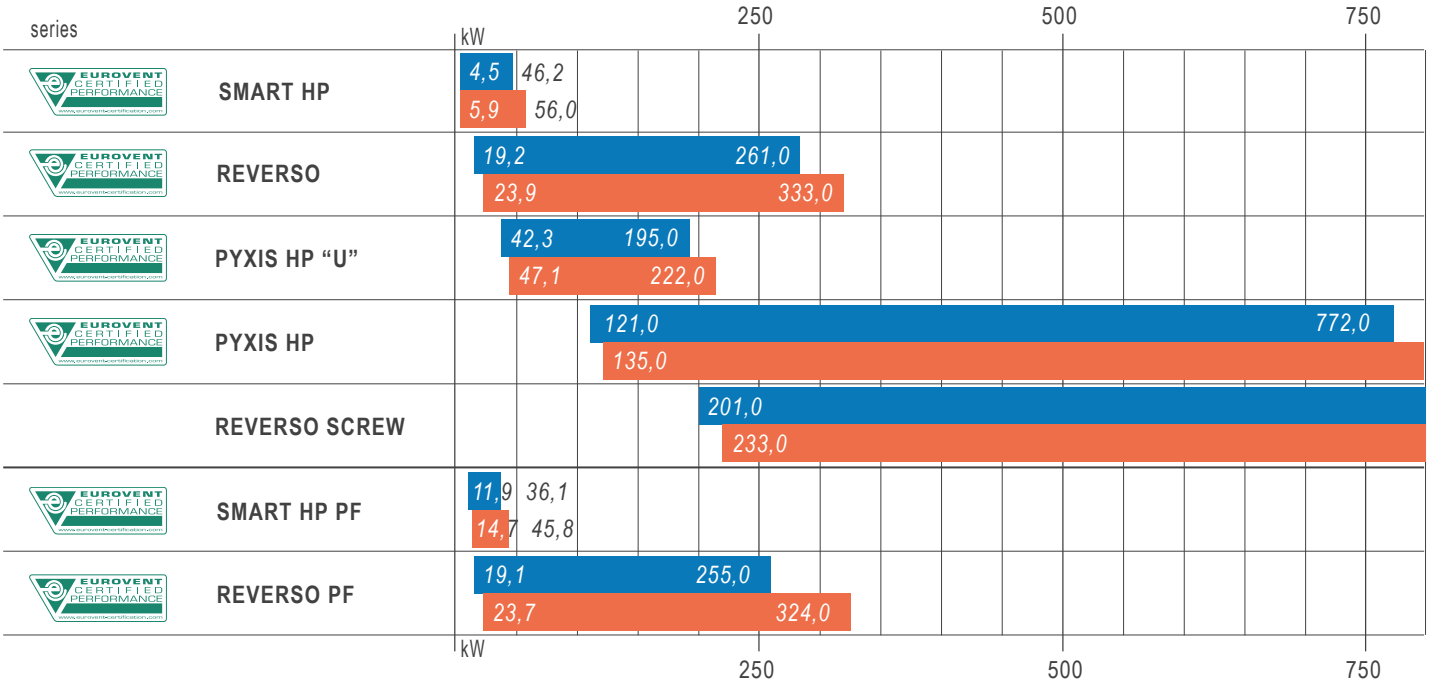
Air cooled heat pump liquid chillers equipped with scroll compressor and axial fans.

pg:21

REVERSO

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

pg:29



AIR COOLED HEAT PUMP LIQUID CHILLERS WITH PLUG FAN

SMART HP PF

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

pg:25

REVERSO PF

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

pg:37

AIR COOLED HEAT PUMP LIQUID CHILLERS WITH AXIAL FANS

PYXIS HP "U"

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

pg:45

PYXIS HP "VT"

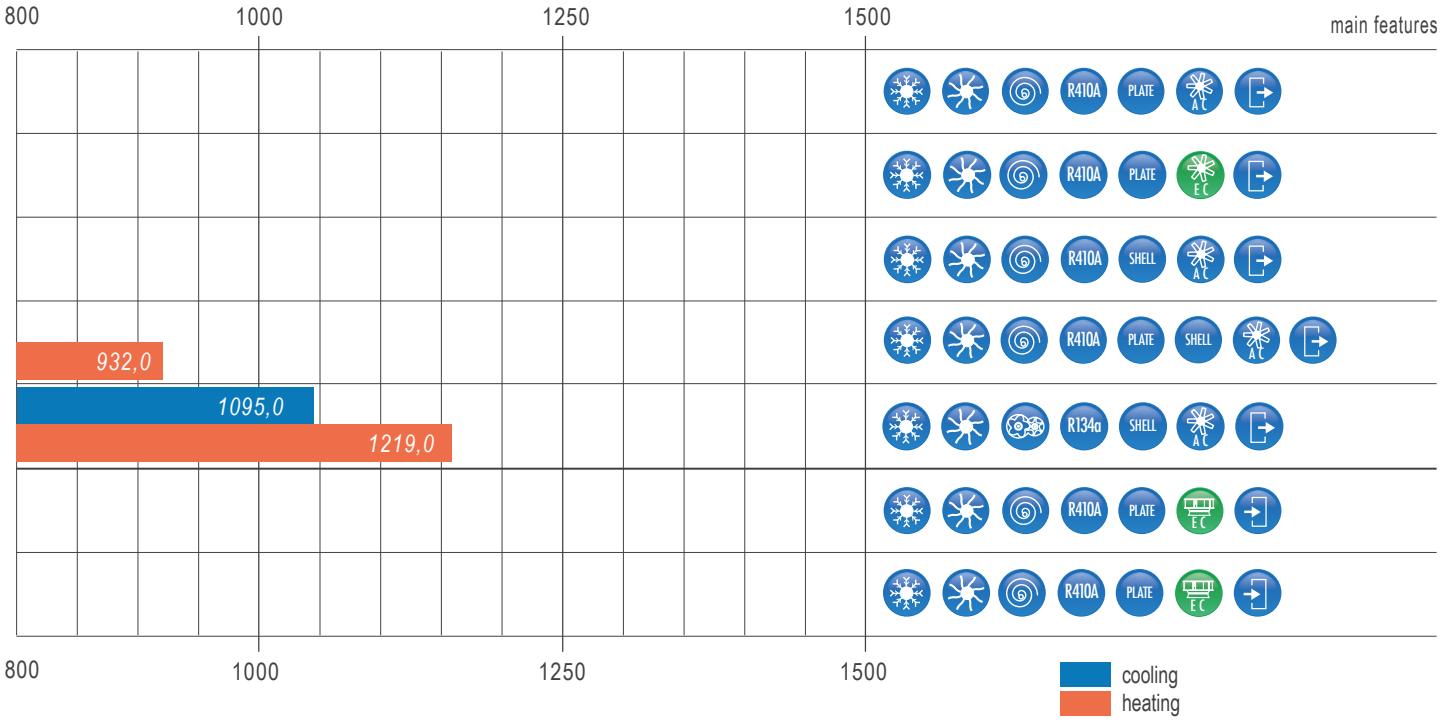
Air cooled heat pump liquid chillers equipped with scroll compressors and axial fans.

pg:55

REVERSO SCREW

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

pg:63



WATER COOLED HEAT PUMP LIQUID CHILLERS

NEMO HP

Water cooled heat pump liquid chillers equipped with scroll compressor and plate type heat exchangers.

pg:71

MANTA HP

Water cooled heat pump liquid chillers equipped with scroll compressors and plate type heat exchangers.

pg:75

MANTA WP

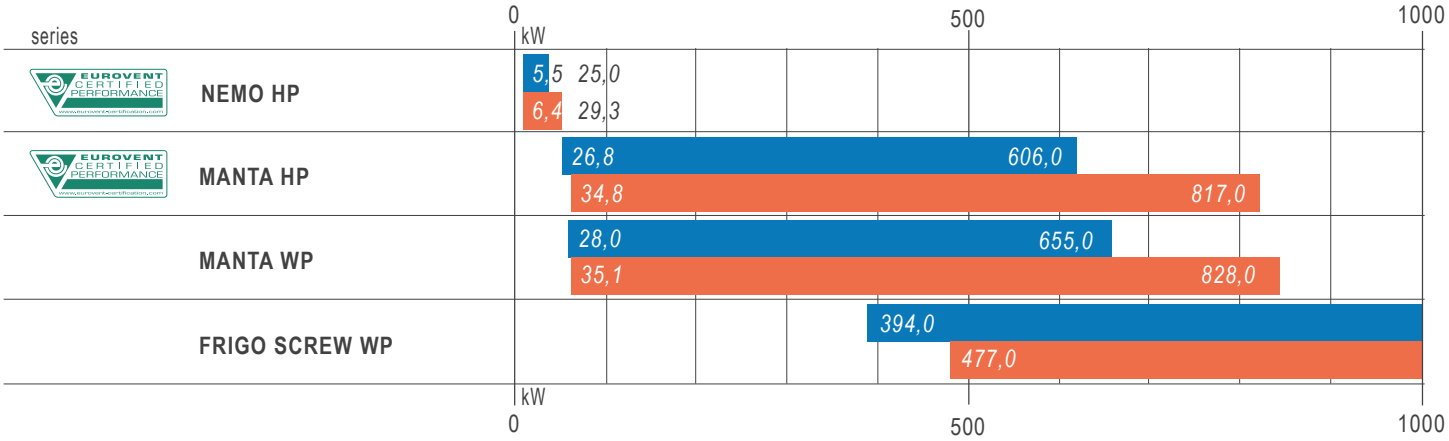
Water cooled heat pump liquid chillers equipped with scroll compressors and plate type heat exchangers. Inversion on hydraulic circuit.

pg:81

FRIGO SCREW WP

Water cooled heat pump liquid chillers equipped with screw compressors and shell and tube heat exchangers. Inversion on hydraulic circuit.

pg:87



AIR COOLED HEAT PUMP MOTOEVAPORATING UNITS

NEMO A HP

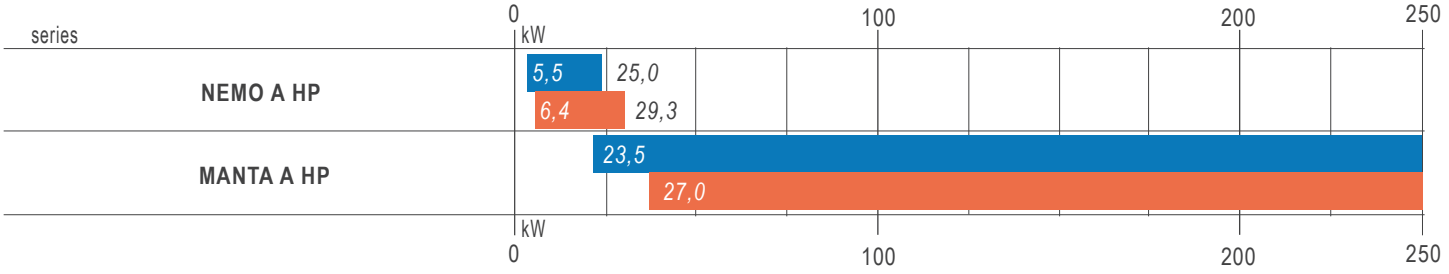
Air cooled heat pump motoevaporating units equipped with scroll compressors and plate type heat exchangers.

pg:91

MANTA A HP

Air cooled heat pump motoevaporating units equipped with scroll compressors and plate type heat exchanger.

pg:99



DRY COOLERS

DRY COOLER

8,3 ÷ 172,0 kW

Dry coolers equipped with axial fans

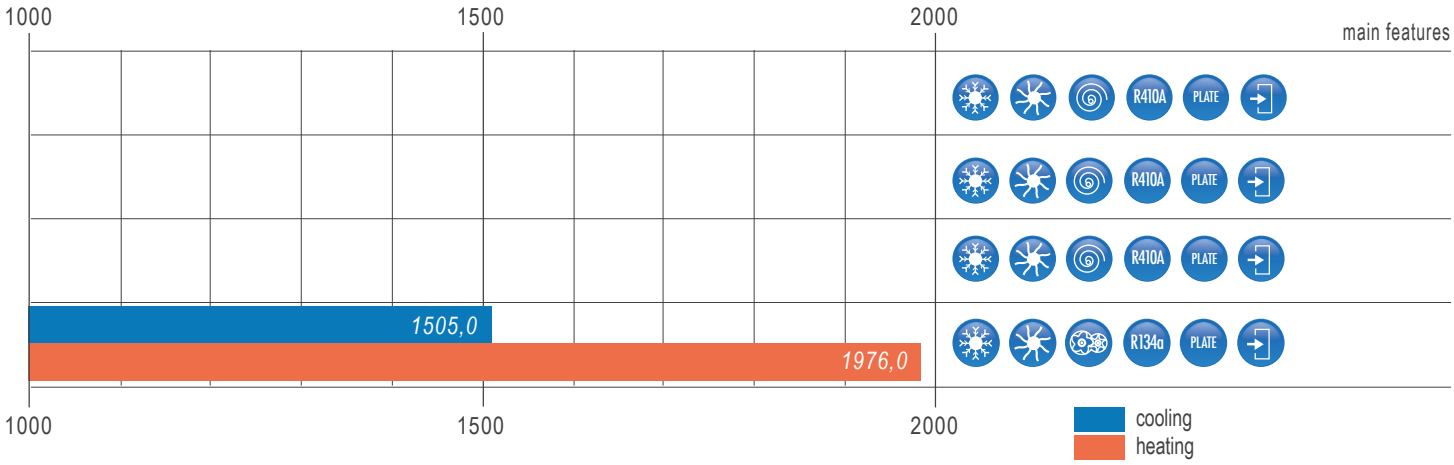
pg:163

DRY COOLER PF

8,8 ÷ 89,0 kW

Dry coolers equipped with plug fans

pg:165



AIR COOLED CONDENSERS

TEAM MATE HP

12,1 ÷ 307,0 kW

Remote air/gas heat exchanger equipped with axial fan.

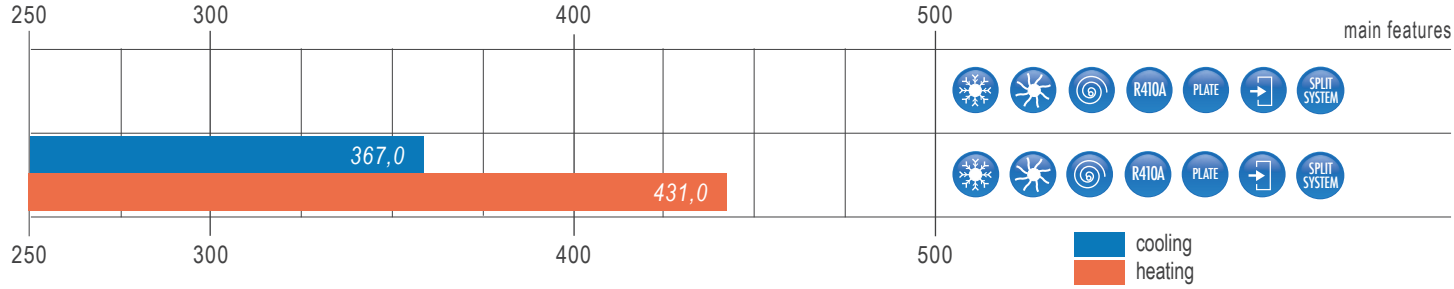
pg:155

TEAM MATE HP PF

12,1 ÷ 155,0 kW

Remote air/gas heat exchanger equipped with plug fan.

pg:159



AIR COOLED MULTIFUNCTION CHILLERS

MULTIPLO PF

Air cooled multifunction chillers equipped with scroll compressors and plug fans.

pg:109

MULTIPLO SCREW

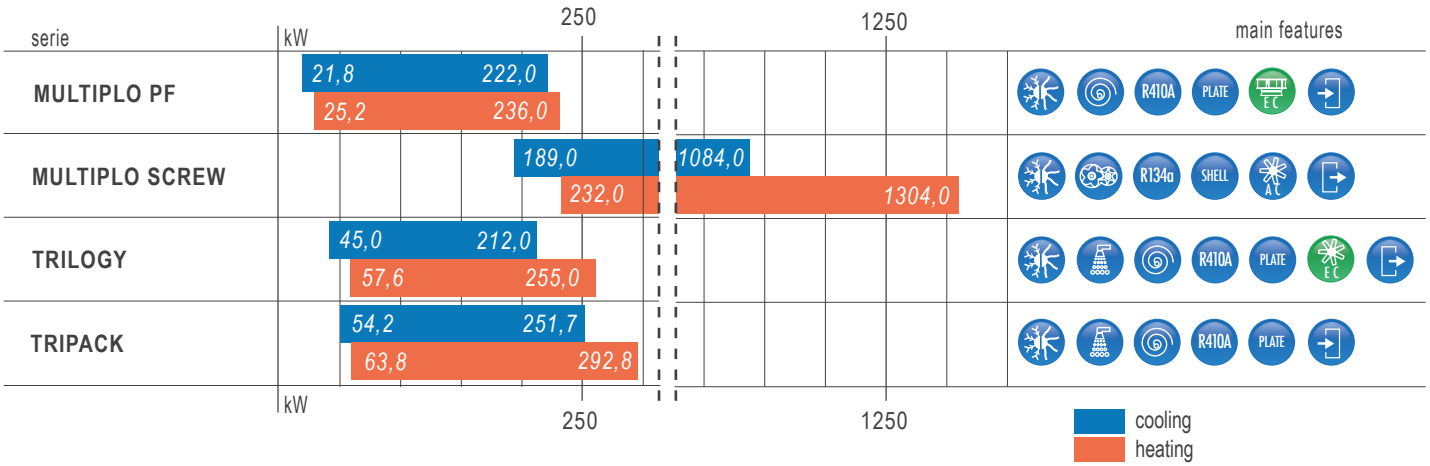
Air cooled multifunction chillers equipped with screw compressors and axial fans.

pg:115

TRILOGY

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

pg:123



WATER COOLED MULTIFUNCTION CHILLERS

TRIPACK

Water cooled multifunction chillers equipped with scroll compressors and plate type heat exchangers.

pg:135

AIR CONDITIONERS FOR COMFORT

NEXT P DX

Over version

Direct expansion heat pump air conditioners with upflow air delivery for matching with remote air/gas exhaustion heat exchanger

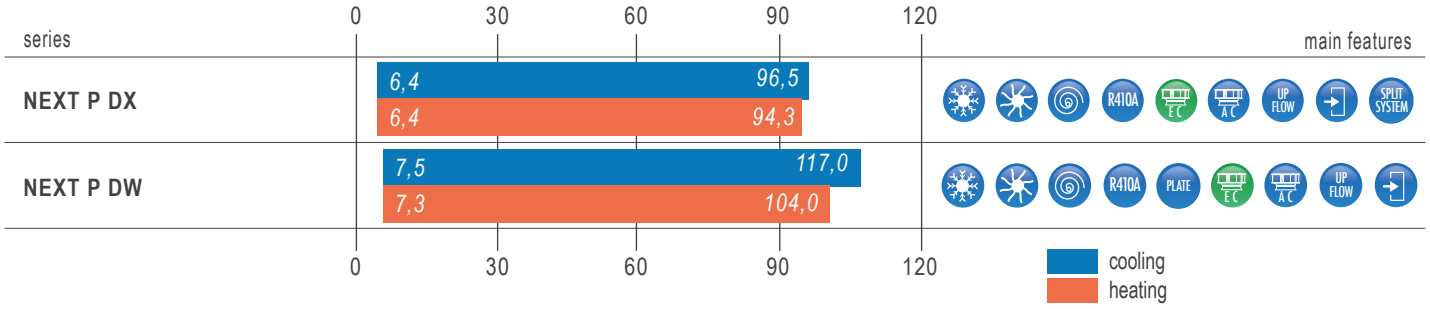
pg:155

NEXT P DW

Over version

Direct expansion heat pump air conditioners with built-in water/gas exhaustion heat exchanger

pg:159



DRY COOLERS

TEAM MATE HP

12,1 ÷ 307,0 kW

Remote air/gas heat exchanger equipped with axial fans.

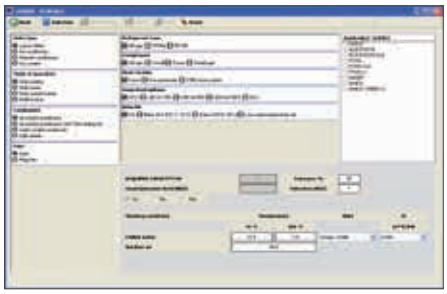
pg:155

TEAM MATE HP PF

12,1 ÷ 155,0 kW

Remote air/gas heat exchanger equipped with plug fan.

pg:159



RC WORLD

RC GROUP products selection software.

pg:169

SPECTRUM

RC GROUP energy performance estimation software for chillers and heat pumps

pg:170

SEQUENCER

Sequencer for chillers, heat pumps and multifunction units

pg:171

RILHEVA

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

pg:172

Web & Social Media

RC GROUP WEB

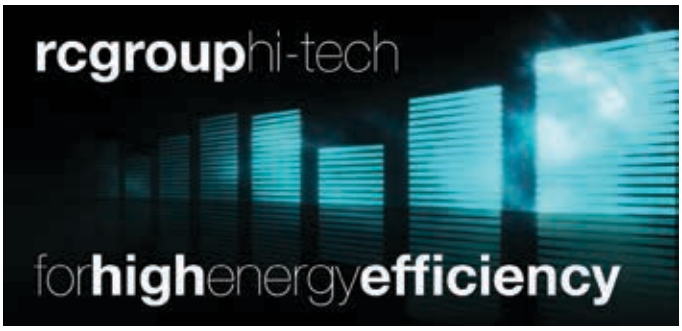
http://www.rcgroup.it/EN/

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

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.

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

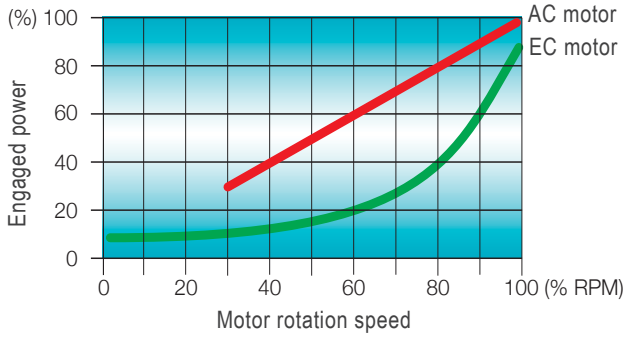
- Synchronous brushless motor
- Integrated electronic commutated system
- High efficiency (83-86%)
- Minimum power input
- Stepless rotation speed control with 0-10VDC proportional signal
- No electromagnetic noise

PLUG FAN FEATURES

- High prevalence centrifugal fans for indoor installation

AXIAL FANS FEATURES

- 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

IDEA®: DYNAMIC CONTROL SYSTEM OF DEFROSTING CYCLES

RC GROUP PATENTED the dynamic control system of defrosting cycles which is called IDEA® (Intelligent Defrosting system for Energy-saving Applications).

Unlike the traditional defrosting systems (fixed time or pressostatic at static reading), IDEA® is able to identify the actual ice presence on the evaporating coil in order to start the defrosting cycle only when it is necessary.
This allows an yearly energy saving ranging from 15% to 20%.

Moreover, the system is totally automatic, it does not demand the introduction of any limit control parameter and it conforms to all climatic conditions.

The advantages of the dynamic system can be easily summarised.
First of all, the heat pump starts defrosting cycles only when they are really necessary.

In this way undesired defrosting cycles are avoided and the temporal sequence is optimized, reducing or increasing it according to the thermo-hygrometric conditions of the outdoor air.

Another system's advantage is that it does not demand human intervention. The other systems demand the definition of limit values: as everyone knows, not always those who handle a chillers have the necessary skill to do it, therefore they can often make serious planning mistakes or they can tamper with the system while it is working.

Moreover, during plant working, the conditions of the evaporating coil can change because of the dirt which has formed: IDEA® dynamic system is able to conform to the changing conditions.

The IDEA® system does not demand any human intervention because it is only based on the dynamic reading of working parameters, which are absolutely objective data that are not subject to mistakes.

In short, the advantages are the following:
- the optimized heat pump working
- the optimized plant working
- the yearly working saving which ranges between 15% and 20%.
- the total absence of planning mistakes
- the reduced compressor wear, therefore an higher duration of the heat pump.

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

DESIGNED FOR COMFORT

RC GROUP produces air/water and water/water heat pumps and multifunction chillers for the contemporary and not contemporary production of chilled water, hot water and sanitary hot water.

COIL HEAT EXCHANGER WITH HYDROPHILIC TREATMENT

The coil heat exchanger with hydrophilic treatment (optional) assure the condensate water drop, high thermal conductivity and does not favour the growth of micro-organisms.

heat pumps & multifunction

SMART HP: Air / water reversible heat pumps
for outdoor installation, equipped with scroll compressor and axial fans
Cooling Capacity: **4,5 ÷ 46,2 kW**
Heating Capacity: **5,9 ÷ 56,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

smart hp

rcgroupairconditioning

R410A PLATE A/C

MAIN FEATURES
- Air / water reversible heat pump
- 18 models available, for a wide selection opportunity.
- Average step of 10kW.
- EER up to 2,75.
- COP up to 3,63.
- ESEER up to 3,40.
- 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 COP and 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

WORKING LIMITS IN HEATING MODE
Hot water outlet temperature: 25÷50°C
Ambient temperature: -7÷20°C

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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.

PLANT HEAT EXCHANGER
- 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.

AIR/GAS HEAT EXCHANGER
- 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
- Reversing valve for refrigerant circuit inversion.
- Double thermostatic expansion valve.
- Liquid receiver.
- Check 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 speed 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 -10°C.
  - Menu with protection password.

OPTIONAL ACCESSORIES

SMART HP	M5	M6	M7	M9	M11	T6	T7	T9	T11	T13	T15
1004 - Condensate collecting pan	-	-	-	-	-	-	-	-	-	-	-
1003 - Water mesh filter (kit)	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
924 - Serial board RS485 (kit)	-	-	-	-	-	-	-	-	-	-	-
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

SMART HP	T19	T22	T26	T33	T35	T40	T49
1004 - Condensate collecting pan	●	●	●	●	-	-	-
1003 - Water mesh filter (kit)	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●
924 - Serial board RS485 (kit)	-	-	-	-	●	●	●
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 HP

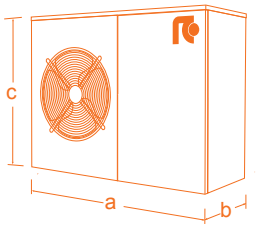
	SMART HP		M5	M6	M7	M9	M11	T6	T7	T9	T11
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**4,5**	**5,5**	**6,8**	**8,4**	**10,9**	**5,7**	**6,7**	**8,7**	**11,1**
	Unit power input	kW	2,3	2,1	2,6	3,3	4,6	2,1	2,6	3,3	4,4
	Plant exchanger water flow rate	m³/h	0,8	0,9	1,2	1,4	1,9	1,0	1,1	1,5	1,9
	Plant exchanger pressure drop	kPa	25	26	38	35	32	26	38	35	31
	Winter working mode - Thermal capacity (2)	**kW**	**5,9**	**7,0**	**8,5**	**10,7**	**13,3**	**6,9**	**8,4**	**10,5**	**13,8**
	Unit power input	kW	2,4	2,1	2,6	3,4	4,6	2,1	2,6	3,2	4,3
	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
	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	--	--	--	--	--	--	--	--	--
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	1,5	1,8	2,9	3,0	3,0	1,8	2,9	3,0	3,0
	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	17,0	17,0	20,0	24,0	32,0	6,5	7,0	9,0	12,0
	Unit starting current (LRA)	A	59,9	62,0	83,0	101,8	135,8	36,8	40,8	49,0	66,0
	EER (1)	kW/kW	1,97	2,56	2,62	2,56	2,36	2,63	2,57	2,65	2,51
	COP (2)	kW/kW	2,79	3,06	3,14	3,31	3,04	3,01	3,13	3,23	3,56
	ESEER		2,43	3,25	3,32	3,17	2,88	3,33	3,25	3,27	3,18
	Sound power level [Lw] (3)	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] (4)	dB(A)	50,1	55,1	55,1	55,1	58,0	55,1	55,1	55,1	58,0
	Net weight	kg	90	95	110	115	140	95	110	115	140
	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"
OPT	Additional 3-speed water pump	kW	--	--	--	--	0,22	--	--	--	0,22
	Water tank - volume	l	30	30	30	30	30	30	30	30	30

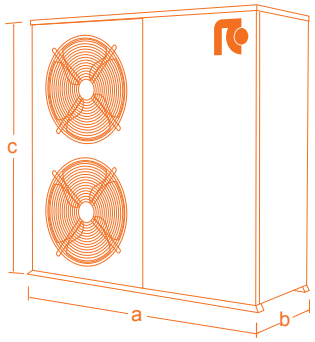
	SMART HP		T13	T15	T19	T22	T26	T33	T35	T40	T49
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**12,9**	**14,9**	**18,7**	**20,1**	**24,5**	**31,5**	**32,0**	**36,6**	**46,2**
	Unit power input	kW	4,8	5,7	7,1	8,4	9,2	12,3	11,6	14,0	17,9
	Plant exchanger water flow rate	m³/h	2,2	2,6	3,2	3,5	4,2	5,4	5,5	6,3	7,9
	Plant exchanger pressure drop	kPa	35	34	40	40	45	43	38	39	41
	Winter working mode - Thermal capacity (2)	**kW**	**15,6**	**18,1**	**23,0**	**24,8**	**30,0**	**38,9**	**38,4**	**44,3**	**56,0**
	Unit power input	kW	4,7	5,6	7,1	8,3	9,1	12,1	11,3	13,9	17,7
	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
	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
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	4,0	4,6	6,3	7,0	8,6	8,7	8,9	9,3	10,3
	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	13,8	17,0	18,0	23,0	24,9	29,9	32,6	39,6	45,6
	Unit starting current (LRA)	A	66,0	76,0	100,8	116,8	124,7	146,7	149,4	183,4	235,4
	EER - Eurovent standard (1)	kW/kW	2,70	2,61	2,62	2,38	2,66	2,57	2,75	2,61	2,58
	COP - Eurovent standard (2)	kW/kW	3,26	3,35	3,47	3,32	3,41	3,63	3,4	3,35	3,31
	ESEER		3,31	3,24	3,22	2,98	3,31	3,22	3,40	3,18	3,17
	Sound power level [Lw] (3)	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] (4)	dB(A)	58,0	58,2	63,0	63,1	62,1	62,1	64,3	65,1	69,1
	Net weight	kg	160	170	265	270	340	345	355	360	440
	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"
OPT	Additional 3-speed water pump	kW	0,22	0,22	--	--	--	--	--	--	--
	Water tank - volume	l	30	30	60	60	60	60	--	--	--

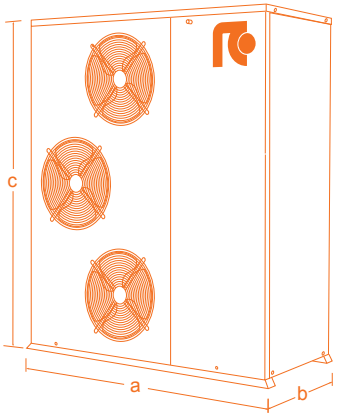
1. Referred to chiller water temperature 12/7°C; 35°C ambient temperature according to Eurovent standard.
2. Referred to hot water temperature 40/45°C; 7°C ambient temperature according to Eurovent standard.
3. Sound power level [Lw] according to ISO EN 9614 – 2.
4. Average sound pressure level [L_{Pm}]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

DIMENSIONS (mm)

SMART HP		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 HP PF: Air / water reversible heat pumps
for indoor installation, equipped with scroll compressors and plug fan
Cooling Capacity: **11,9 ÷ 36,1 kW**
Heating Capacity: **14,7 ÷ 45,8 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

smart hp pf

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES
- Air / water reversible heat pump.
- 9 models available, for a wide selection opportunity..
- Average step of 3kW.
- EER up to 2,63.
- COP up to 3,47.
- ESEER up to 3,23.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchanger.
- Plug fans 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 fans EC for an high efficiency.
- Easily of maintenance.
- Eurovent Certification.

FANS WITH BRUSHLESS TYPE EC MOTOR
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

WORKING LIMITS IN HEATING MODE
Hot water outlet temperature: 25÷50°C
Ambient temperature: -7÷20°C

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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
- Reversing valve for refrigerant circuit inversion.
- Double thermostatic expansion valve.
- Liquid receiver.
- Check 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, 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 -10°C.
  - Menu with protection password.

OPTIONAL ACCESSORIES

SMART HP 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

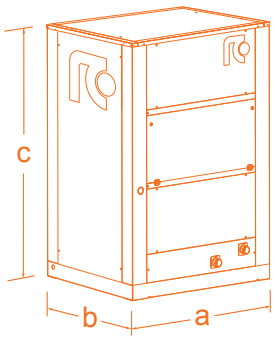
TECHNICAL DATA SMART HP PF

	SMART HP 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	**Summer working mode**										
	Cooling capacity (1)	**kW**	**11,9**	**13,9**	**16,0**	**18,9**	**21,5**	**25,1**	**28,5**	**31,7**	**36,1**
	Unit power input	kW	4,9	5,9	6,9	7,2	8,3	10,0	11,3	12,9	15,8
	Evaporator water flow rate	m³/h	2,0	2,4	2,8	3,3	3,7	4,3	4,9	5,5	6,2
	Evaporator pressure drop	kPa	25	37	27	27	35	37	29	36	36
	Winter working mode										
	Heating capacity (2)	**kW**	**14,7**	**17,2**	**19,5**	**23,8**	**27,3**	**31,8**	**35,6**	**40,0**	**45,8**
	Unit power input	kW	4,7	5,5	6,3	6,9	7,9	9,4	10,6	12,0	14,4
	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	6,0	6,0	6,2	10,3	10,4	10,4	10,6	10,7	10,7
	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	69,4	80,4	106,4	104,1	120,1	127,1	127,7	149,7	183,7
	EER (1)	kW/kW	2,41	2,36	2,33	2,63	2,58	2,50	2,53	2,46	2,29
	COP (2)	kW/kW	3,12	3,10	3,09	3,47	3,46	3,39	3,36	3,32	3,19
	ESEER		3,04	2,93	2,94	3,23	3,17	3,12	3,19	3,05	2,79
	Sound power level [Lw] (3)	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] (4)	dB(A)	69,5	73,4	76,4	70,6	72,1	76,3	75,6	77,6	79,4
	Net weight	kg	259,8	259,8	279,8	381,5	381,5	386,5	396,5	401,5	406,5
	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"
OPTION	Partial heat recovery (5)										
	Heating capacity	**kW**	**4,4**	**5,1**	**5,9**	**6,9**	**7,9**	**9,2**	**10,4**	**11,6**	**13,2**
	Pumping group										
	1 pump - 2 poles electric motor	kW	0,55	0,55	0,55	0,75	0,75	0,75	0,75	0,75	0,75
LNO KIT 100%	**Summer working mode**										
	Cooling capacity (1)	**kW**	**11,9**	**13,9**	**16,0**	**18,9**	**21,5**	**25,1**	**28,5**	**31,7**	**36,1**
	Unit power input	kW	4,9	5,9	6,9	7,2	8,3	10,0	11,3	12,9	15,8
	Winter working mode										
	Heating capacity (2)	**kW**	**14,7**	**17,2**	**19,5**	**23,8**	**27,3**	**31,8**	**35,6**	**40,0**	**45,8**
	Unit power input	kW	4,7	5,5	6,3	6,9	7,9	9,4	10,6	12,0	14,4
	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	2,41	2,36	2,33	2,63	2,58	2,50	2,53	2,46	2,29
	COP (2)	kW/kW	3,12	3,10	3,09	3,47	3,46	3,39	3,36	3,32	3,19
	Sound power level [Lw] (3)	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] (4)	dB(A)	69,4	73,4	76,4	70,5	72,1	76,2	75,5	77,5	79,4
LNO KIT 85%	**Summer working mode**										
	Cooling capacity (1)	**kW**	**11,6**	**13,5**	**15,5**	**18,4**	**20,9**	**24,3**	**27,6**	**30,8**	**35,0**
	Unit power input	kW	5,1	6,1	7,1	7,4	8,7	10,4	11,7	13,4	16,4
	Winter working mode										
	Heating capacity (2)	**kW**	**14,5**	**17,0**	**19,2**	**23,5**	**26,9**	**31,3**	**35,1**	**39,4**	**45,2**
	Unit power input	kW	4,7	5,6	6,3	6,9	7,9	9,4	10,6	12,0	14,3
	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	2,26	2,20	2,17	2,47	2,41	2,33	2,35	2,30	2,14
	COP (2)	kW/kW	3,08	3,06	3,04	3,42	3,41	3,33	3,31	3,27	3,15
	Sound power level [Lw] (3)	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] (4)	dB(A)	65,6	69,5	72,5	67,0	68,6	72,7	72,0	74,0	75,9
LNO KIT 70%	**Summer working mode**										
	Cooling capacity (1)	**kW**	**11,0**	**12,9**	**14,8**	**17,7**	**19,9**	**23,3**	**26,4**	**29,4**	**33,4**
	Unit power input	kW	5,4	6,5	7,6	7,9	9,2	11,0	12,3	14,0	17,1
	Winter working mode										
	Heating capacity (2)	**kW**	**14,2**	**16,6**	**18,8**	**23,0**	**26,2**	**30,6**	**34,4**	**38,6**	**44,1**
	Unit power input	kW	4,7	5,6	6,3	6,9	7,9	9,4	10,6	12,0	14,3
	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	2,03	1,98	1,96	2,25	2,17	2,12	2,14	2,10	1,95
	COP (2)	kW/kW	3,00	2,99	2,98	3,35	3,32	3,26	3,24	3,21	3,08
	Sound power level [Lw] (3)	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] (4)	dB(A)	61,0	64,9	67,9	62,8	64,4	68,5	67,8	69,8	71,7

1. Referred to chiller water temperature 12/7°C; 35°C ambient temperature according to Eurovent standard.
2. Referred to hot water temperature 40/45°C; 7°C ambient temperature according to Eurovent standard.
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. 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
C0	1108	760	1460
C1	1250	890	1950



REVERSO: Air / water reversible heat pumps
for outdoor installation, equipped with scroll compressors and axial fans
Cooling Capacity: **19,2 ÷ 261,0 kW**
Heating Capacity: **23,9 ÷ 333,0 kW**

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IDEA®
RC Hi-Tech

reverso

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES

- Air / water reversible heat pump.
- 29 models available, for a wide selection opportunity..
- Average step of 12kW.
- EER up to 3,00.
- COP up to 4,06.
- ESEER up to 4,12.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- Plate type heat exchanger.
- Axial fans EC.
- Electronic expansion valve.
- 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 single, double refrigerant circuit.
- Defrosting dynamics control system IDEA®.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Axial fans EC for an high efficiency.
- Easily of maintenance.
- Eurovent Certification.

FANS WITH BRUSHLESS TYPE EC MOTOR

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

IDEA® DEFROSTING SYSTEM

"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

WORKING LIMITS IN COOLING MODE

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

WORKING LIMITS IN HEATING MODE

Hot water outlet temperature: 30÷60°C
Ambient temperature: -10÷30°C

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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.

PLANT HEAT EXCHANGER
- 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.

EXHAUSTION HEAT EXCHANGER
- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- 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:
- Reversing valve for refrigeration cycle inversion.
- 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.
- Liquid receiver with service valve.
- Filter dryer on liquid line.
- Service valves on suction line and gas discharge.
- Non-return valve
- 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.
- Oil drainage and oil recovery systems.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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

REVERSO	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	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	●	●
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Coil in special execution	●	●	●	●	●	●	●	●	●	●	●
Silencing plenum on air discharge	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●

REVERSO	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	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●	●	●	●	●
Silencing plenum on air discharge	●	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
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

REVERSO 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	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●
Silencing plenum on air discharge	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●
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 REVERSO

	REVERSO		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
	SIZE		C1	C1	C1	C1	C2	C2	C2	C2	C2	C3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**19,2**	**21,6**	**25,5**	**27,7**	**32,7**	**37,6**	**46,8**	**47,7**	**47,7**	**54,3**
	Unit power input	kW	6,7	7,7	9,2	11,2	10,9	13,3	17,7	18,8	18,8	19,4
	Plant exchanger water flow rate	m³/h	3,3	3,7	4,4	4,8	5,6	6,5	8,1	8,2	8,2	9,3
	Plant exchanger pressure drop	kPa	26	33	36	27	35	36	31	32	32	32
	Winter working mode - Heating capacity (2)	**kW**	**23,9**	**27,2**	**31,8**	**32,1**	**41,0**	**47,2**	**60,0**	**61,7**	**61,5**	**70,7**
	Unit power input	kW	6,7	7,7	9,1	10,2	11,0	13,1	17,7	18,8	18,4	19,5
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	2	2	2
	Capacity steps	n.	1	1	1	1	1	1	1	2	2	2
	Axial fans EC	n.	1	1	1	1	2	2	2	2	2	3
	Total air flow	m³/h	8500	8500	11000	11000	13000	15000	20500	20500	20500	22000
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,5	10,6	10,6	10,8	12,9	12,9	14,3	18,1	14,6	19,6
	Gas circuits	n.	1	1	1	1	1	1	1	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	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	47,3	54,7
	Unit starting current (LRA)	A	96,6	112,6	119,6	119,6	143,2	177,2	228,3	143,3	143,3	147,7
	EER (1)	kW/kW	2,88	2,79	2,78	2,48	3,00	2,83	2,65	2,54	2,54	2,80
	COP (2)	kW/kW	3,56	3,54	3,51	3,14	3,74	3,59	3,39	3,28	3,34	3,62
	ESEER		3,52	3,44	3,47	3,15	3,71	3,45	3,27	3,25	3,30	4,12
	Sound power level [Lw] (3)	dB(A)	81,1	81,5	82,2	81,4	82,2	84,9	89,0	86,1	86,1	85,9
	Average sound pressure level [Lpm] (4)	dB(A)	64,6	64,9	65,6	64,8	64,9	67,7	71,8	68,9	68,9	68,0
	Net weight	kg	390	390	400	410	410	420	650	650	650	720
	Hydraulic connections											
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	1 1/2"	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	--
	Plant exchanger IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--	--	76,1
OPTIONAL	Partial heat recovery (6)											
	Heating capacity	**kW**	**7,0**	**7,9**	**9,4**	**10,2**	**12,0**	**13,8**	**17,2**	**17,5**	**17,5**	**19,9**
	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	1,5	2,2
	2 pump - 2 poles electric motor	kW	--	--	--	--	--	--	--	--	--	2,2
	1 pump - 4 poles electric motor	kW	0,37	0,37	0,37	0,37	0,55	0,55	0,55	0,55	0,55	1,5
	2 pump - 4 poles electric motor	kW	--	--	--	--	--	--	--	--	--	1,5
	Water tank - volume	l	130	130	130	130	210	210	210	210	210	360
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**19,2**	**21,6**	**25,5**	**27,7**	**32,7**	**37,6**	**46,8**	**47,7**	**47,7**	**54,3**
	Unit power input	kW	6,7	7,7	9,2	11,2	10,9	13,3	17,7	18,8	18,8	19,4
	Winter working mode - Heating capacity (2)	**kW**	**23,9**	**27,2**	**31,8**	**32,1**	**41,0**	**47,2**	**60,0**	**61,7**	**61,5**	**70,7**
	Unit power input	kW	6,7	7,7	9,1	10,2	11,0	13,1	17,7	18,8	18,4	19,5
	Total air flow	m³/h	8500	8500	11000	11000	13000	15000	20500	20500	20500	22000
	EER (1)	kW/kW	2,88	2,79	2,78	2,48	3,00	2,83	2,65	2,54	2,54	2,80
	COP (2)	kW/kW	3,56	3,54	3,51	3,14	3,74	3,59	3,39	3,28	3,34	3,62
	Sound power level [Lw] (3)	dB(A)	80,7	80,8	81,6	80,7	81,2	84,3	87,4	85,8	85,8	85,5
	Average sound pressure level [Lpm] (4)	dB(A)	64,1	64,2	65,0	64,1	64,0	67,1	70,2	68,6	68,6	67,6
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**18,8**	**21,1**	**24,9**	**27,0**	**32,0**	**36,8**	**45,9**	**46,6**	**46,6**	**53,0**
	Unit power input	kW	6,7	7,8	9,2	11,3	11,1	13,4	17,5	18,9	18,9	19,6
	Winter working mode - Heating capacity (2)	**kW**	**23,6**	**26,8**	**31,4**	**31,7**	**40,4**	**46,6**	**59,4**	**61,1**	**60,9**	**69,8**
	Unit power input	kW	6,5	7,5	8,7	10,0	10,8	12,8	17,1	18,2	17,8	19,1
	Total air flow	m³/h	7225	7225	9350	9350	11050	12750	17425	17425	17425	18700
	EER (1)	kW/kW	2,82	2,70	2,72	2,39	2,89	2,75	2,62	2,47	2,47	2,70
	COP (2)	kW/kW	3,61	3,57	3,59	3,18	3,75	3,63	3,48	3,36	3,43	3,66
	Sound power level [Lw] (3)	dB(A)	77,0	77,2	78,0	77,2	77,8	80,7	84,4	82,1	82,1	81,8
	Average sound pressure level [Lpm] (4)	dB(A)	60,4	60,7	61,4	60,6	60,6	63,5	67,2	64,9	64,9	63,9
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	**18,3**	**20,4**	**24,2**	**26,0**	**30,9**	**35,6**	**44,6**	**45,0**	**45,0**	**51,1**
	Unit power input	kW	6,8	8,1	9,3	11,7	11,4	13,6	17,8	19,1	19,3	20,5
	Winter working mode - Heating capacity (2)	**kW**	**23,2**	**26,4**	**30,9**	**31,1**	**39,7**	**45,8**	**58,4**	**60,0**	**59,8**	**68,5**
	Unit power input	kW	6,4	7,4	8,6	9,7	10,6	12,6	16,5	17,6	17,3	18,9
	Total air flow		5950	5950	7700	7700	9100	10500	14350	14350	14350	15400
	EER (1)	kW/kW	2,68	2,53	2,59	2,23	2,7	2,61	2,51	2,35	2,33	2,49
	COP (2)	kW/kW	3,61	3,57	3,61	3,19	3,74	3,63	3,53	3,41	3,45	3,62
	Sound power level [Lw] (3)	dB(A)	73,1	73,6	74,2	73,5	74,4	76,9	81,7	78,0	78,0	77,8
	Average sound pressure level [Lpm] (4)	dB(A)	56,5	57,0	57,7	57,0	57,2	59,7	64,5	60,7	60,7	59,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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 REVERSO

	REVERSO		58 P2	62 P1	65 P2	65 P2	76 P2	76 P2	98 P2	98 P2	124 P2	124 P2
			D	S	S	D	S	D	S	D	S	D
	SIZE		C3	C3	C3	C3	C3	C3	C4	C4	C4	C4
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**54,6**	**58,0**	**60,6**	**61,3**	**70,3**	**71,4**	**89,6**	**91,8**	**111,0**	**116,0**
	Unit power input	kW	20,3	21,6	22,4	22,5	27,2	27,1	33,8	33,9	43,2	43,6
	Plant exchanger water flow rate	m³/h	9,4	10,0	10,4	10,5	12,1	12,3	15,4	15,8	19,2	19,9
	Plant exchanger pressure drop	kPa	17	27	32	18	33	20	32	23	34	27
	Winter working mode - Heating capacity (2)	**kW**	**70,9**	**74,8**	**79,1**	**79,2**	**91,6**	**90,8**	**118,0**	**118,0**	**149,0**	**150,0**
	Unit power input	kW	19,7	21,5	22,2	22,5	26,9	27,2	34,5	34,6	44,5	44,2
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	1	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	1	2	2	2	2	2	2	2	2
	Axial fans EC	n.	3	3	3	3	3	3	4	4	4	4
	Total air flow	m³/h	22000	23000	24000	24000	30000	30000	40000	40000	46000	46000
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	17,9	22,9	18,3	23,3	21,6	24	32,3	35,4	36,7	39,8
	Gas circuits	n.	2	1	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	400/3/50	400/3/50
	Max unit operating current (FLA)	A	54,7	53,2	66,7	66,7	72,9	72,9	86,5	86,5	108,4	108,4
	Unit starting current (LRA)	A	147,7	276,7	175,7	175,7	212,9	212,9	271,5	271,5	331,9	331,9
	EER (1)	kW/kW	2,69	2,69	2,71	2,73	2,58	2,63	2,65	2,71	2,57	2,66
	COP (2)	kW/kW	3,59	3,48	3,56	3,52	3,40	3,34	3,42	3,41	3,35	3,39
	ESEER		3,56	3,82	3,91	3,56	3,61	3,34	3,73	3,46	3,59	3,39
	Sound power level [Lw] (3)	dB(A)	85,9	91,6	85,7	85,7	86,1	86,1	84,2	84,2	88,1	88,1
	Average sound pressure level [Lpm] (4)	dB(A)	68,0	73,8	67,8	67,8	68,2	68,2	65,6	65,6	69,5	69,5
	Net weight	kg	730	700	730	730	920	930	1120	1120	1510	1500
	Hydraulic connections											
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--	--	--
	Plant exchanger IN/OUT - OD (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)											
	Heating capacity	**kW**	**20,0**	**21,3**	**22,2**	**22,5**	**25,8**	**26,2**	**32,9**	**33,7**	**40,9**	**42,5**
	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	2,2	2,2
	2 pump - 2 poles electric motor	kW	2,2	2,2	2,2	2,2	2,2	2,2	3,0	3,0	3,0	3,0
	1 pump - 4 poles electric motor	kW	1,5	1,5	1,5	1,5	1,5	1,5	3,0	3,0	3,0	3,0
	2 pump - 4 poles electric motor	kW	1,5	1,5	1,5	1,5	1,5	1,5	3,0	3,0	3,0	3,0
	Water tank - volume	l	360	360	360	360	360	360	520	520	520	520
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**54,6**	**58,0**	**60,6**	**61,3**	**70,3**	**71,4**	**89,6**	**91,8**	**111,0**	**116,0**
	Unit power input	kW	20,3	21,6	22,4	22,5	27,2	27,1	33,8	33,9	43,2	43,6
	Winter working mode - Heating capacity (2)	**kW**	**70,9**	**74,8**	**79,1**	**79,2**	**91,6**	**90,8**	**118,0**	**118,0**	**149,0**	**150,0**
	Unit power input	kW	19,7	21,5	22,2	22,5	26,9	27,2	34,5	34,6	44,5	44,2
	Total air flow	m³/h	22000	23000	24000	24000	30000	30000	40000	40000	46000	46000
	EER (1)	kW/kW	2,69	2,69	2,71	2,73	2,58	2,63	2,65	2,71	2,57	2,66
	COP (2)	kW/kW	3,59	3,48	3,56	3,52	3,40	3,34	3,42	3,41	3,35	3,39
	Sound power level [Lw] (3)	dB(A)	85,5	89,4	85,4	85,4	85,7	85,7	83,2	83,2	87,3	87,3
	Average sound pressure level [Lpm] (4)	dB(A)	67,6	71,6	67,5	67,5	67,8	67,8	64,6	64,6	68,7	68,7
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**53,2**	**56,8**	**59,1**	**59,8**	**68,8**	**69,8**	**87,8**	**90,0**	**109,0**	**113,0**
	Unit power input	kW	20,5	21,8	22,6	22,7	27,1	26,9	33,9	34,0	43,3	43,6
	Winter working mode - Heating capacity (2)	**kW**	**70,0**	**73,9**	**78,1**	**78,3**	**90,5**	**89,7**	**117,0**	**117,0**	**147,0**	**149,0**
	Unit power input	kW	19,3	21,0	21,7	21,9	26,0	26,2	33,6	33,5	43,1	42,8
	Total air flow	m³/h	18700	19550	20400	20400	25500	25500	34000	34000	39100	39100
	EER (1)	kW/kW	2,59	2,61	2,62	2,64	2,54	2,59	2,59	2,65	2,52	2,59
	COP (2)	kW/kW	3,62	3,52	3,60	3,57	3,48	3,43	3,48	3,49	3,41	3,48
	Sound power level [Lw] (3)	dB(A)	81,8	86,8	81,7	81,7	82,0	82,0	79,9	79,9	83,8	83,8
	Average sound pressure level [Lpm] (4)	dB(A)	63,9	68,9	63,8	63,8	64,1	64,1	61,3	61,3	65,2	65,2
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	**51,3**	**54,9**	**57,0**	**57,7**	**66,6**	**67,6**	**85,2**	**87,5**	**106,0**	**110,0**
	Unit power input	kW	21,3	22,3	23,3	23,4	27,5	27,5	34,6	34,7	44,2	44,5
	Winter working mode - Heating capacity (2)	**kW**	**68,6**	**72,5**	**76,6**	**76,6**	**88,8**	**88,0**	**115,0**	**115,0**	**144,0**	**146,0**
	Unit power input	kW	19,0	20,5	21,3	21,5	25,4	25,5	32,9	32,9	42,1	41,7
	Total air flow		15400	16100	16800	16800	21000	21000	28000	28000	32200	32200
	EER (1)	kW/kW	2,41	2,46	2,45	2,47	2,42	2,46	2,46	2,52	2,4	2,47
	COP (2)	kW/kW	3,61	3,53	3,60	3,56	3,50	3,45	3,50	3,50	3,42	3,50
	Sound power level [Lw] (3)	dB(A)	77,8	84,6	77,6	77,6	77,9	77,9	76,6	76,6	80,3	80,3
	Average sound pressure level [Lpm] (4)	dB(A)	59,9	66,8	59,7	59,7	60,0	60,0	58,0	58,0	61,7	61,7

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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.

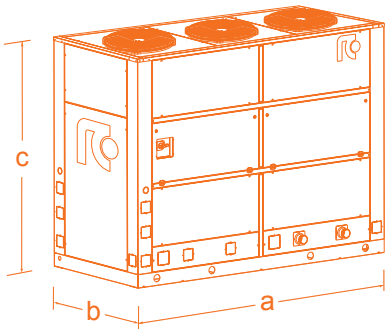
TECHNICAL DATA REVERSO

	REVERSO		158 P2 S	158 P2 D	180 P2 S	180 P2 D	197 P2 S	197 P2 D	230 P3 S	240 P4 D	260 P4 D
	SIZE		C4	C4	C5	C5	C5	C5	C5	C5	C5
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**150,0**	**155,0**	**170,0**	**176,0**	**188,0**	**194,0**	**227,0**	**223,0**	**261,0**
	Unit power input	kW	59,8	60,3	63,9	64,7	73,2	73,8	88,0	94,5	109,2
	Plant exchanger water flow rate	m³/h	25,8	26,6	29,1	30,3	32,4	33,4	39,0	38,4	45,0
	Plant exchanger pressure drop	kPa	32	26	34	33	41	32	41	36	33
	Winter working mode - Heating capacity (2)	**kW**	**182,0**	**195,0**	**215,0**	**215,0**	**238,0**	**238,0**	**280,0**	**288,0**	**333,0**
	Unit power input	kW	68,2	48,0	62,3	62,5	70,6	71,0	83,1	89,4	98,8
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	3	4	4
	Capacity steps	n.	2	2	2	2	2	2	3	4	4
	Axial fans EC	n.	4	4	5	5	5	5	5	5	5
	Total air flow	m³/h	55800	55800	60000	60000	66000	66000	69000	69000	69000
	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	37,7	40,4	60,6	63,7	78,8	95,6	79,5	106,8	106,7
	Gas circuits	n.	1	2	1	2	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	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	142,2	142,2	161,7	161,7	178,3	178,3	210,5	208,3	309,1
	Unit starting current (LRA)	A	386,8	386,8	453,7	453,7	470,3	470,3	455,1	431,8	601,1
	EER (1)	kW/kW	2,51	2,57	2,66	2,72	2,57	2,63	2,58	2,36	2,39
	COP (2)	kW/kW	2,67	4,06	3,45	3,44	3,37	3,35	3,37	3,22	3,37
	ESEER		3,53	3,26	3,81	3,46	3,66	3,35	4,02	3,66	3,88
	Sound power level [Lw] (3)	dB(A)	90,6	90,6	88,6	88,6	90,4	90,4	91,2	92,9	93,0
	Average sound pressure level [Lpm] (4)	dB(A)	72,0	72,0	69,3	69,3	71,1	71,1	71,9	73,6	73,8
	Net weight	kg	1600	1590	1650	1640	2050	2040	2220	2380	2430
	Hydraulic connections										
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--	--
	Plant exchanger IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)										
	Heating capacity	**kW**	**55,1**	**56,9**	**62,2**	**64,8**	**69,1**	**71,2**	**83,2**	**81,9**	**95,8**
	Pumping group										
	1 pump - 2 poles electric motor	kW	2,2	2,2	4,0	4,0	4,0	4,0	4,0	4,0	4,0
	2 pump - 2 poles electric motor	kW	3,0	3,0	5,5	5,5	5,5	5,5	5,5	5,5	5,5
	1 pump - 4 poles electric motor	kW	3,0	3,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
	2 pump - 4 poles electric motor	kW	3,0	3,0	4,0	4,0	4,0	4,0	4,0	4,0	4,0
	Water tank - volume	l	520	520	720	720	720	720	720	720	720
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**150,0**	**155,0**	**170,0**	**176,0**	**188,0**	**194,0**	**227,0**	**223,0**	**261,0**
	Unit power input	kW	59,8	60,3	63,9	64,7	73,2	73,8	88,0	94,5	109,2
	Winter working mode - Heating capacity (2)	**kW**	**182,0**	**195,0**	**215,0**	**215,0**	**238,0**	**238,0**	**280,0**	**288,0**	**333,0**
	Unit power input	kW	68,2	48,0	62,3	62,5	70,6	71,0	83,1	89,4	98,8
	Total air flow	m³/h	55800	55800	60000	60000	66000	66000	69000	69000	69000
	EER (1)	kW/kW	2,51	2,57	2,66	2,72	2,57	2,63	2,58	2,36	2,39
	COP (2)	kW/kW	2,67	4,06	3,45	3,44	3,37	3,35	3,37	3,22	3,37
	Sound power level [Lw] (3)	dB(A)	90,3	90,3	88,0	88,0	90,0	90,0	90,8	92,5	92,6
	Average sound pressure level [Lpm] (4)	dB(A)	71,7	71,7	68,7	68,7	70,7	70,7	71,6	73,3	73,3
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**146,0**	**151,0**	**165,0**	**172,0**	**183,0**	**189,0**	**220,0**	**216,0**	**252,0**
	Unit power input	kW	59,1	59,7	64,5	65,2	73,5	74,1	88,7	94,7	111,0
	Winter working mode - Heating capacity (2)	**kW**	**179,0**	**192,0**	**213,0**	**213,0**	**234,0**	**234,0**	**275,0**	**283,0**	**327,0**
	Unit power input	kW	65,6	45,6	60,5	60,7	68,2	68,6	80,2	86,3	95,6
	Total air flow	m³/h	47430	47430	51000	51000	56100	56100	58650	58650	58650
	EER (1)	kW/kW	2,47	2,53	2,56	2,64	2,49	2,55	2,48	2,28	2,27
	COP (2)	kW/kW	2,73	4,21	3,52	3,51	3,43	3,41	3,43	3,28	3,42
	Sound power level [Lw] (3)	dB(A)	86,6	86,6	84,4	84,4	86,3	86,3	87,1	88,8	88,9
	Average sound pressure level [Lpm] (4)	dB(A)	68,0	68,0	65,1	65,1	67,0	67,0	67,9	69,6	69,7
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	**141,0**	**146,0**	**159,0**	**166,0**	**176,0**	**182,0**	**210,0**	**207,0**	**238,0**
	Unit power input	kW	60,3	60,8	66,5	67,5	75,9	76,5	91,7	98,1	116,7
	Winter working mode - Heating capacity (2)	**kW**	**175,0**	**188,0**	**208,0**	**208,0**	**229,0**	**229,0**	**269,0**	**276,0**	**318,0**
	Unit power input	kW	63,9	43,8	59,3	59,4	66,4	67,0	78,4	83,9	93,5
	Total air flow		39060	39060	42000	42000	46200	46200	48300	48300	48300
	EER (1)	kW/kW	2,34	2,4	2,39	2,46	2,32	2,38	2,29	2,11	2,04
	COP (2)	kW/kW	2,74	4,29	3,51	3,50	3,45	3,42	3,43	3,29	3,40
	Sound power level [Lw] (3)	dB(A)	82,4	82,4	80,7	80,7	82,3	82,3	83,0	84,7	85,0
	Average sound pressure level [Lpm] (4)	dB(A)	63,8	63,8	61,4	61,4	63,0	63,0	63,7	65,4	65,7

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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



REVERSO PF: Air / water reversible heat pumps
for indoor installation, equipped with scroll compressors and plug-fan
Cooling Capacity: **19,1 ÷ 255,0 kW**
Heating Capacity: **23,7 ÷ 324,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

IDEA®
RC Hi-Tech

reverso pf

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES

- Air / water reversible heat pump.
- 29 models available, for a wide selection opportunity..
- Average step of 12kW.
- EER up to 2,68.
- COP up to 3,47.
- ESEER up to 3,88.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- Plate type heat exchanger.
- Plug fan EC.
- Electronic expansion valve.
- 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 single, double refrigerant circuit.
- Defrosting dynamics control system IDEA®.
- High COP.
- 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.

IDEA® DEFROSTING SYSTEM

"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

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

WORKING LIMITS IN HEATING MODE

Hot water outlet temperature: 30÷60°C
Ambient temperature: -10÷30°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.

PLANT HEAT EXCHANGER

- 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.

EXHAUSTION HEAT EXCHANGER

- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- 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:

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve.
  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 with service valve.
- Filter dryer on liquid line.
- Service valves on suction line and gas discharge.
- Non-return valve
- 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.
- Oil drainage and oil recovery systems.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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

REVERSO 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	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Exhaustion 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	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
460 - Kit for outdoor installation	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●

REVERSO 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	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
Exhaustion 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	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
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

REVERSO 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	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Exhaustion 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	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●
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 REVERSO PF

	REVERSO PF		22 P1	24 P1	28 P1	32 P1	36 P1	42 P1	53 P1	67 P1	55 P2	55 P2
			S	S	S	S	S	S	S	S	S	D
	SIZE		C1	C1	C1	C1	C1	C1	C2	C2	C2	C2
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**19,1**	**20,7**	**24,2**	**28,8**	**32**	**36,5**	**46,2**	**58,4**	**48,7**	**48,4**
	Unit power input	kW	7,1	8,3	10,1	11,3	12,9	15,8	19,0	23,7	19,6	19,4
	Plant exchanger water flow rate	m³/h	3,3	3,6	4,2	5,0	5,5	6,3	7,9	10,0	8,4	8,3
	Plant exchanger pressure drop	kPa	27	35	37	29	35	36	32	29	36	21
	Winter working mode - Heating capacity (2)	**kW**	**23,7**	**25,1**	**29,3**	**35,5**	**39,8**	**45,6**	**58,2**	**73,1**	**61,5**	**62,0**
	Unit power input	kW	6,8	7,8	9,4	10,6	12,1	14,3	18,3	22,5	19,1	18,8
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n.	1	1	1	1	1	1	1	1	2	2
	Plug fans EC	n.	1	1	1	1	1	1	2	2	2	2
	Total air flow	m³/h	6500	7000	8500	10000	11000	12000	16000	21000	18000	18000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,5	10,6	10,6	10,8	10,8	10,8	14,3	14,8	14,6	19,6
	Gas circuits	n.	1	1	1	1	1	1	1	1	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	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	53,8	53,8
	Unit starting current (LRA)	A	99,3	115,3	122,3	122,9	144,9	178,9	233,6	280,4	149,8	149,8
	EER (1)	kW/kW	2,68	2,49	2,40	2,54	2,48	2,31	2,43	2,46	2,49	2,49
	COP (2)	kW/kW	3,47	3,22	3,12	3,35	3,30	3,18	3,18	3,25	3,22	3,29
	ESEER		3,29	3,07	3,00	3,20	3,07	2,81	3,00	3,04	3,65	3,24
	Sound power level [Lw] (3)	dB(A)	87,1	88,7	92,9	92,1	94,2	96	94,8	96,7	93,1	93,1
	Average sound pressure level [Lpm] (4)	dB(A)	70,6	72,1	76,3	75,6	77,6	79,4	77,6	79,5	75,9	75,9
	Net weight	kg	390	390	400	410	410	420	650	700	650	650
	Hydraulic connections											
	Plant exchanger 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"	2"	2"
	Plant exchanger IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--	--	--
OPTIONAL	Partial heat recovery (6)											
	Heating capacity	**kW**	**7,0**	**7,6**	**8,9**	**10,6**	**11,8**	**13,4**	**17,0**	**21,4**	**17,9**	**17,7**
	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	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	0,55	0,55
	2 pump - 4 poles electric motor	kW	--	--	--	--	--	--	--	--	--	--
	Water tank - volume	l	130	130	130	130	130	130	210	210	210	210
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**19,1**	**20,7**	**24,2**	**28,8**	**32,0**	**36,5**	**46,2**	**58,4**	**48,7**	**48,4**
	Unit power input	kW	7,1	8,3	10,1	11,3	12,9	15,8	19,0	23,7	19,6	19,4
	Winter working mode - Heating capacity (2)	**kW**	**23,7**	**25,1**	**29,3**	**35,5**	**39,8**	**45,6**	**58,2**	**73,1**	**61,5**	**62,0**
	Unit power input	kW	6,8	7,8	9,4	10,6	12,1	14,3	18,3	22,5	19,1	18,8
	Total air flow	m³/h	6500	7000	8500	10000	11000	12000	16000	21000	18000	18000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,68	2,49	2,40	2,54	2,48	2,31	2,43	2,46	2,49	2,49
	COP(2)	kW/kW	3,47	3,22	3,12	3,35	3,30	3,18	3,18	3,25	3,22	3,29
	Sound power level [Lw] (3)	dB(A)	87,1	88,7	92,8	92,1	94,1	96,0	94,6	96,4	93,1	93,1
	Average sound pressure level [Lpm] (4)	dB(A)	70,5	72,1	76,2	75,5	77,5	79,4	77,4	79,2	75,9	75,9
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**18,6**	**20,1**	**23,5**	**27,9**	**31,1**	**35,4**	**44,9**	**56,8**	**47,3**	**47,0**
	Unit power input	kW	7,2	8,4	10,0	11,3	12,6	15,5	18,9	24,3	19,5	19,4
	Winter working mode - Heating capacity (2)	**kW**	**23,5**	**24,7**	**28,8**	**35,0**	**39,2**	**44,9**	**57,3**	**72,1**	**60,7**	**61,1**
	Unit power input	kW	6,6	7,6	8,9	10,1	11,4	13,5	17,5	22,1	18,4	18,1
	Total air flow	m³/h	5525	5950	7225	8500	9350	10200	13600	17850	15300	15300
	External static pressure	Pa	36	36	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,59	2,40	2,34	2,47	2,46	2,29	2,38	2,34	2,42	2,42
	COP(2)	kW/kW	3,54	3,27	3,22	3,45	3,43	3,32	3,27	3,26	3,29	3,38
	Sound power level [Lw] (3)	dB(A)	83,6	85,2	89,3	88,6	90,6	92,5	91,2	93,0	89,6	89,6
	Average sound pressure level [Lpm] (4)	dB(A)	67,0	68,6	72,7	72,0	74,0	75,9	74,0	75,8	72,4	72,4
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**17,8**	**19,2**	**22,5**	**26,7**	**29,7**	**33,8**	**43,1**	**54,6**	**45,4**	**45,0**
	Unit power input	kW	7,4	8,7	10,3	11,6	12,9	15,7	19,4	24,6	20,1	19,9
	Winter working mode - Heating capacity (2)	**kW**	**23,0**	**24,1**	**28,2**	**34,2**	**38,4**	**43,8**	**56,0**	**70,5**	**59,4**	**59,8**
	Unit power input	kW	6,5	7,4	8,7	9,8	11,0	13,0	16,9	21,2	17,9	17,5
	Total air flow		4550	4900	5950	7000	7700	8400	11200	14700	12600	12600
	External static pressure	Pa	25	25	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,39	2,21	2,18	2,31	2,30	2,15	2,22	2,22	2,26	2,26
	COP(2)	kW/kW	3,55	3,27	3,25	3,48	3,50	3,38	3,32	3,32	3,32	3,41
	Sound power level [Lw] (3)	dB(A)	80,4	82,0	86,1	85,4	87,4	89,3	88,2	90,1	86,4	86,4
	Average sound pressure level [Lpm] (4)	dB(A)	63,8	65,4	69,5	68,8	70,8	72,7	71,0	72,9	69,2	69,2

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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 REVERSO PF

	REVERSO PF		62 P2 S	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
	SIZE		C2	C2	C2	C2	C3	C3	C3	C3	C4	C4
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**54,8**	**54,8**	**62,0**	**61,5**	**72,8**	**71,9**	**93,1**	**91,0**	**115,0**	**112,0**
	Unit power input	kW	22,2	22,0	25,2	25,0	28,5	28,3	38,2	37,8	46,2	45,9
	Plant exchanger water flow rate	m³/h	9,4	9,4	10,7	10,5	12,5	12,4	16,0	15,7	19,8	19,3
	Plant exchanger pressure drop	kPa	35	18	34	20	37	23	35	26	36	30
	Winter working mode - Heating capacity (2)	**kW**	**69,5**	**69,3**	**77,7**	**77,4**	**85,7**	**92,4**	**117,0**	**117,0**	**147,0**	**147,0**
	Unit power input	kW	21,5	21,0	23,9	23,7	27,3	27,3	37,3	36,8	44,4	44,0
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2
	Plug fans EC	n.	2	2	2	2	3	3	3	3	4	4
	Total air flow	m³/h	20500	20500	23000	23000	25500	25500	32000	32000	40000	40000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	14,5	19,6	15,0	19,9	21,6	24,0	30,1	33,1	33,2	36,4
	Gas circuits	n.	1	2	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	400/3/50	400/3/50
	Max unit operating current (FLA)	A	58,4	58,4	70,4	70,4	82,7	82,7	94,7	94,7	113,8	113,8
	Unit starting current (LRA)	A	151,4	151,4	179,4	179,4	222,7	222,7	279,7	279,7	337,3	337,3
	EER (1)	kW/kW	2,47	2,49	2,46	2,46	2,55	2,54	2,44	2,41	2,49	2,44
	COP (2)	kW/kW	3,24	3,30	3,25	3,27	3,14	3,39	3,14	3,18	3,31	3,34
	ESEER		3,67	3,26	3,55	3,17	3,20	3,61	3,04	3,39	3,10	3,61
	Sound power level [Lw] (3)	dB(A)	86,8	86,8	89,2	89,2	93,9	93,9	98,7	98,7	92,6	92,6
	Average sound pressure level [Lpm] (4)	dB(A)	69,6	69,6	72	72	76	76	80,8	80,8	74	74
	Net weight	kg	720	730	730	740	920	930	1120	1120	1510	1500
	Hydraulic connections											
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	2"	--	--	--	--	--	--
	Plant exchanger IN/OUT - OD (5)	Ø mm	--	--	--	--	76,1	76,1	76,1	76,1	88,9	88,9
OPTIONAL	Partial heat recovery (6)											
	Heating capacity	**kW**	**20,1**	**20,1**	**22,8**	**22,6**	**26,7**	**26,4**	**34,2**	**33,4**	**42,3**	**41,1**
	Pumping group											
	1 pump - 2 poles electric motor	kW	1,5	1,5	1,5	1,5	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	3,0	3,0
	1 pump - 4 poles electric motor	kW	0,55	0,55	0,55	0,55	1,5	1,5	1,5	1,5	3,0	3,0
	2 pump - 4 poles electric motor	kW	--	--	--	--	1,5	1,5	1,5	1,5	3,0	3,0
	Water tank - volume	l	210	210	210	210	360	360	360	360	520	520
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**54,8**	**54,8**	**62,0**	**61,5**	**72,8**	**71,9**	**93,1**	**91,0**	**115,0**	**112,0**
	Unit power input	kW	22,2	22,0	25,2	25,0	28,5	28,3	38,2	37,8	46,2	45,9
	Winter working mode - Heating capacity (2)	**kW**	**69,5**	**69,3**	**77,7**	**77,4**	**85,7**	**92,4**	**117,0**	**117,0**	**147,0**	**147,0**
	Unit power input	kW	21,5	21,0	23,9	23,7	27,3	27,3	37,3	36,8	44,4	44,0
	Total air flow	m³/h	20500	20500	23000	23000	25500	25500	32000	32000	40000	40000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,47	2,49	2,46	2,46	2,55	2,54	2,44	2,41	2,49	2,44
	COP(2)	kW/kW	3,24	3,30	3,25	3,27	3,14	3,39	3,14	3,18	3,31	3,34
	Sound power level [Lw] (3)	dB(A)	86,5	86,5	89,0	89,0	93,7	93,7	98,5	98,5	90,2	90,2
	Average sound pressure level [Lpm] (4)	dB(A)	69,3	69,3	71,8	71,8	75,8	75,8	80,6	80,6	71,6	71,6
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**53,2**	**53,2**	**60,1**	**59,7**	**70,8**	**70,0**	**90,6**	**88,7**	**112,0**	**109,0**
	Unit power input	kW	22,2	22,0	24,9	24,8	28,5	28,3	37,6	37,3	46,5	46,2
	Winter working mode - Heating capacity (2)	**kW**	**68,5**	**68,3**	**76,6**	**76,4**	**84,3**	**90,9**	**115,0**	**115,0**	**144,0**	**144,0**
	Unit power input	kW	20,6	20,1	22,8	22,5	26,2	26,1	35,3	34,8	43,0	42,6
	Total air flow	m³/h	17425	17425	19550	19550	21675	21675	27200	27200	34000	34000
	External static pressure	Pa	36	36	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,40	2,42	2,41	2,41	2,48	2,47	2,41	2,38	2,41	2,36
	COP(2)	kW/kW	3,32	3,39	3,36	3,39	3,22	3,48	3,26	3,30	3,35	3,38
	Sound power level [Lw] (3)	dB(A)	83,1	83,1	85,5	85,5	90,3	90,3	95,1	95,1	87,8	87,8
	Average sound pressure level [Lpm] (4)	dB(A)	65,9	65,9	68,3	68,3	72,4	72,4	77,2	77,2	69,2	69,2
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**50,9**	**50,9**	**57,6**	**57,1**	**67,9**	**67,2**	**87,1**	**85,3**	**107,0**	**105,0**
	Unit power input	kW	22,8	22,7	25,4	25,3	29,1	29,0	38,4	37,9	48,0	47,7
	Winter working mode - Heating capacity (2)	**kW**	**67,1**	**66,9**	**75,0**	**74,8**	**82,4**	**88,8**	**113,0**	**113,0**	**141,0**	**141,0**
	Unit power input	kW	20,0	19,6	22,0	21,7	25,4	25,4	33,9	33,5	42,0	41,6
	Total air flow		14350	14350	16100	16100	17850	17850	22400	22400	28000	28000
	External static pressure	Pa	25	25	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,23	2,24	2,27	2,26	2,33	2,32	2,27	2,25	2,23	2,20
	COP(2)	kW/kW	3,35	3,42	3,41	3,44	3,24	3,50	3,33	3,37	3,36	3,39
	Sound power level [Lw] (3)	dB(A)	80,2	80,2	82,5	82,5	87,2	87,2	92,0	92,0	86,9	86,9
	Average sound pressure level [Lpm] (4)	dB(A)	63,0	63,0	65,3	65,3	69,3	69,3	74,1	74,1	68,3	68,3

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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.

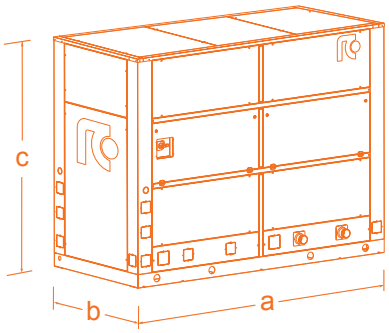
TECHNICAL DATA REVERSO PF

	REVERSO PF		170 P2 S	170 P2 D	195 P2 S	195 P2 D	220 P2 S	220 P2 D	250 P3 S	265 P4 D	290 P4 D
	SIZE		C4	C4	C4	C4	C5	C5	C5	C5	C5
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**150,0**	**146,0**	**175,0**	**170,0**	**201,0**	**195,0**	**230,0**	**231,0**	**255,0**
	Unit power input	kW	61,5	61,1	72,6	71,7	77,3	76,8	94,7	96,7	113,3
	Plant exchanger water flow rate	m³/h	25,8	25,1	30,2	29,3	34,6	33,6	39,6	39,8	44,0
	Plant exchanger pressure drop	kPa	35	33	41	35	42	36	40	41	44
	Winter working mode - Heating capacity (2)	**kW**	**189,0**	**189,0**	**211,0**	**198,0**	**241,0**	**241,0**	**273,0**	**291,0**	**324,0**
	Unit power input	kW	59,4	59,4	66,6	65,6	73,0	72,4	85,3	90,1	101,6
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	3	4	4
	Capacity steps	n.	2	2	2	2	2	2	3	4	4
	Plug fans EC	n.	4	4	4	4	5	5	5	5	5
	Total air flow	m³/h	52000	52000	54000	54000	62500	62500	64000	66000	66000
	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	37,7	40,4	38,8	41,8	78,8	95,6	79,5	106,8	106,7
	Gas circuits	n.	1	2	1	2	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	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	147,6	147,6	164,2	164,2	185,0	185,0	217,2	215,0	315,8
	Unit starting current (LRA)	A	392,2	392,2	456,2	456,2	477,0	477,0	461,8	438,5	607,8
	EER (1)	kW/kW	2,44	2,39	2,41	2,37	2,60	2,54	2,43	2,39	2,25
	COP (2)	kW/kW	3,18	3,18	3,17	3,02	3,30	3,33	3,20	3,23	3,19
	ESEER		3,03	3,43	3,47	3,01	3,69	3,22	3,88	3,68	3,64
	Sound power level [Lw] (3)	dB(A)	95,9	95,9	96,6	96,6	96,6	96,6	96,9	97,4	97,4
	Average sound pressure level [Lpm] (4)	dB(A)	77,3	77,3	78	78	77,3	77,3	77,7	78,1	78,1
	Net weight	kg	1600	1590	1650	1640	2050	2040	2220	2380	2430
	Hydraulic connections										
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	--	--	--	--	--	--	--	--	--
	Plant exchanger IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPTIONAL	Partial heat recovery (6)										
	Heating capacity	**kW**	**55,0**	**53,5**	**64,4**	**62,5**	**73,9**	**71,7**	**84,5**	**84,9**	**93,6**
	Pumping group										
	1 pump - 2 poles electric motor	kW	2,2	2,2	2,2	2,2	4,0	4,0	4,0	4,0	4,0
	2 pump - 2 poles electric motor	kW	3,0	3,0	3,0	3,0	5,5	5,5	5,5	5,5	5,5
	1 pump - 4 poles electric motor	kW	3,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	4,0
	2 pump - 4 poles electric motor	kW	3,0	3,0	3,0	3,0	4,0	4,0	4,0	4,0	4,0
	Water tank - volume	l	520	520	520	520	720	720	720	720	720
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**150,0**	**146,0**	**175,0**	**170,0**	**201,0**	**195,0**	**230,0**	**231,0**	**255,0**
	Unit power input	kW	61,5	61,1	72,6	71,7	77,3	76,8	94,7	96,7	113,3
	Winter working mode - Heating capacity (2)	**kW**	**189,0**	**189,0**	**211,0**	**198,0**	**241,0**	**241,0**	**273,0**	**291,0**	**324,0**
	Unit power input	kW	59,4	59,4	66,6	65,6	73,0	72,4	85,3	90,1	101,6
	Total air flow	m³/h	52000	52000	54000	54000	62500	62500	64000	66000	66000
	External static pressure	Pa	50	50	50	50	50	50	50	50	50
	EER (1)	kW/kW	2,44	2,39	2,41	2,37	2,60	2,54	2,43	2,39	2,25
	COP(2)	kW/kW	3,18	3,18	3,17	3,02	3,30	3,33	3,20	3,23	3,19
	Sound power level [Lw] (3)	dB(A)	95,0	95,0	95,7	95,7	95,3	95,3	95,8	96,4	96,4
	Average sound pressure level [Lpm] (4)	dB(A)	76,4	76,4	77,1	77,1	76,1	76,1	76,5	77,1	77,1
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**146,0**	**142,0**	**170,0**	**165,0**	**196,0**	**190,0**	**223,0**	**224,0**	**245,0**
	Unit power input	kW	60,6	60,2	72,3	71,4	77,2	76,3	95,3	97,0	115,6
	Winter working mode - Heating capacity (2)	**kW**	**186,0**	**186,0**	**208,0**	**194,0**	**237,0**	**237,0**	**268,0**	**286,0**	**317,0**
	Unit power input	kW	56,5	56,5	63,2	62,4	69,7	69,1	82,0	86,1	97,5
	Total air flow	m³/h	44200	44200	45900	45900	53125	53125	54400	56100	56100
	External static pressure	Pa	36	36	36	36	36	36	36	36	36
	EER (1)	kW/kW	2,41	2,36	2,35	2,31	2,54	2,49	2,34	2,31	2,12
	COP(2)	kW/kW	3,29	3,29	3,29	3,11	3,40	3,43	3,27	3,32	3,25
	Sound power level [Lw] (3)	dB(A)	91,9	91,9	92,6	92,6	92,4	92,4	92,8	93,3	93,3
	Average sound pressure level [Lpm] (4)	dB(A)	73,3	73,3	74,0	74,0	73,1	73,1	73,5	74,0	74,0
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**140,0**	**136,0**	**163,0**	**158,0**	**188,0**	**182,0**	**211,0**	**213,0**	**231,0**
	Unit power input	kW	61,7	61,3	74,4	73,5	79,3	78,8	99,1	100,0	120,9
	Winter working mode - Heating capacity (2)	**kW**	**182,0**	**182,0**	**203,0**	**190,0**	**231,0**	**231,0**	**261,0**	**279,0**	**308,0**
	Unit power input	kW	54,3	54,3	61,0	59,9	67,3	67,0	79,6	83,3	94,8
	Total air flow		36400	36400	37800	37800	43750	43750	44800	46200	46200
	External static pressure	Pa	25	25	25	25	25	25	25	25	25
	EER (1)	kW/kW	2,27	2,22	2,19	2,15	2,37	2,31	2,13	2,13	1,91
	COP(2)	kW/kW	3,35	3,35	3,33	3,17	3,43	3,45	3,28	3,35	3,25
	Sound power level [Lw] (3)	dB(A)	89,7	89,7	90,3	90,3	90,5	90,5	90,8	91,2	91,2
	Average sound pressure level [Lpm] (4)	dB(A)	71,1	71,1	71,7	71,7	71,2	71,2	71,5	71,9	71,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature according to Eurovent standard.
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	890	1950
C2	1800	1040	2000
C3	2600	1200	2000
C4	3700	1260	2000
C5	4950	1260	2040



PYXIS HP "U": Air / water reversible heat pumps
for outdoor installation, equipped with scroll compressors and axial fans
Cooling Capacity: **42,3 ÷ 195,0 kW**
Heating Capacity: **47,1 ÷ 222,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

NEW
RC Hi-Tech

IDEA®
RC Hi-Tech

pyxis hp "u"

rcgroupairconditioning

R410A SHELL

MAIN FEATURES
- Reversible heat pump.
- 32 models available, for a wide selection opportunity..
- Average step of 10kW.
- EER up to 3,10.
- COP up to 3,26.
- ESEER up to 4,58.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- Plate type heat exchangers.
- AC Axial fans.
- Single, double air circuit.
- Suitable for outdoor installation.

MAIN BENEFITS
- IDEA® defrosting system.
- Units equipped with two scroll compressors for refrigerant circuit to reach an high efficiency.
- Units with single, double refrigerant circuits.
- Units with separated air circuits to grant the continuity of the working mode during the coils defrosting.
- Defrosting dynamics control system IDEA®.
- Electronic expansion valve.
- High EER, COP and ESEER.
- Availability of coil heat exchangers with hydrophilic treatment.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups with low, medium, high prevalence.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

IDEA® DEFROSTING SYSTEM
"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

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

WORKING LIMIT IN HEATING MODE (HEAT PUMP)
Hot water outlet temperature: 30÷60°C
Ambient temperature: -12÷30°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.

PLANT HEAT EXCHANGER
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - Single circuit on water side .
  - Single refrigerant circuit for S version machines.
  - Double refrigerant circuit for D version machines.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Factory assembled differential water pressure switch for water flow control.
- Hydraulic connections with grooved end. Flexible joint not supplied (optional accessory).
- Antifreeze heater.

AIR/GAS HEAT EXCHANGER
- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Frame in galvanized steel.
- Temperature sensor on ambient air.

FANS SECTION
- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- AC type electric motor for condensing pressure control (in summer working mode) or evaporating pressure control (in winter working mode) with stepless variable speed of the axial fans.
- IP54 enclosure class.

REFRIGERANT CIRCUIT
Components for each refrigerant circuit:
- Reversing valve for refrigeration cycle inversion.
- Thermostatic expansion valve.
- Electromagnetic valve on liquid line.
- Sight glass.
- Filter dryer on liquid line.
- Liquid receiver with safety valve and service valve.
- Service valves on liquid line and gas discharge.
- Non-return valve.
- 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.
- Liquid separator on suction line.
- Oil drainage and oil recovery systems.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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.
- Summer / Winter working mode selector.
- Power supply:
  - size U1 – U2 – U3L – U4L: 400/3/50+N
  - size U3 – U4: 400/3/50

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 HP "U" - 1 GAS CIRCUIT, 1 AIR CIRCUIT	46 P2 S	54 P2 S	58 P2 S	66 P2 S	80 P2 S	102 P2 S	128 P2 S	146 P2 S	164 P2 S	186 P2 S	204 P2 S
SIZE	U1	U1	U2	U2	U2	U3	U3	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	-	-	-	-	-	-	-	●	●	●	●
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 low press	-	-	-	-	-	-	-	●	●	●	●
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	-	-	-	-	-	-	-	●	●	●	●
449 - Voltage free contact for desuperheater water pump activation	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	-	-	-	-	-	-	-	●	●	-	-
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring anti vibrating support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
122 - Nordik Kit	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	-	-	-	-	-	-
81 - Phase sequence electronic relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	-	-	-	-	-	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
176 - Victaulic connections for plant HE	-	-	-	-	-	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
252 - Anti-intrusion net	-	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	-	-	-	-	-	●	●	●	●	●	●
1003 - Analogic flow switch	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
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 HP "U" - 2 GAS CIRCUITS, 1 AIR CIRCUIT	46 P2	54 P2	58 P2	66 P2	80 P2	102 P2	128 P2	146 P2	164 P2	186 P2	204 P2
	D	D	D	D	D	D	D	D	D	D	D
SIZE	U1	U1	U2	U2	U2	U3	U3	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	-	-	-	-	-	-	-	●	●	●	●
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 low press	-	-	-	-	-	-	-	●	●	●	●
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	-	-	-	-	-	-	-	-	-	-	-
449 - Voltage free contact for desuperheater water pump activation	-	-	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	-	-	-	-	-	-	-	-	-	-	-
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●
170 - Spring anti vibrating support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●
122 - Nordik Kit	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	-	-	-	-	-	-
81 - Phase sequence electronic relay	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	●	●	●	●	-	-	-	-	-	-
101 - EC fan	-	-	-	-	-	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	-	-
450 - Desuperheater	-	-	-	-	-	-	-	-	-	-	-
176 - Victaulic connections for plant HE	-	-	-	-	-	-	-	-	-	-	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●	●
252 - Anti-intrusion net	-	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	●	●	●	●	●	-	-	-	-	-	-
459 - Shell and tube evaporator	-	-	-	-	-	●	●	●	●	●	●
1003 - Analogic flow switch	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●
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 HP "U" - 2 GAS CIRCUITS, 2 AIR CIRCUITS	102 P2 D	120 P4 D	128 P2 D	140 P4 D	146 P2 D	160 P4 D	164 P2 D	180 P4 D	186 P2 D	204 P2 D
SIZE	U3L	U4L	U3L	U4L	U4L	U4L	U4L	U4L	U4L	U4L
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	-	●	-	●	●	●	●	●	●	●
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 low press	-	●	-	●	●	●	●	●	●	●
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	-	-	-	-	-	-	-	-	-	-
449 - Voltage free contact for desuperheater water pump activation	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	-	●	-	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●
170 - Spring anti vibrating support (kit)	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●
122 - Nordik Kit	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	-	-	-	-
81 - Phase sequence electronic relay	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	●	-	●	-	-	-	-	-	-	-
101 - EC fan	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●
176 - Victaulic connections for plant HE	●	-	●	-	-	-	-	-	-	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●
252 - Anti-intrusion net	-	-	-	-	-	-	-	-	-	-
351 - Coils with pre-painted fins	●	-	●	-	-	-	-	-	-	-
459 - Shell and tube evaporator	●	-	●	-	-	-	●	-	●	●
1003 - Analogic flow switch	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyzer	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

PYXIS HP "U" TECHNICAL DATA - *SINGLE GAS CIRCUIT, SINGLE AIR CIRCUIT*

	PYXIS HP "U"		46 P2 S	54 P2 S	58 P2 S	66 P2 S	80 P2 S	102 P2 S	128 P2 S	146 P2 S	164 P2 S	186 P2 S	204 P2 S
	SIZE		U1	U1	U2	U2	U2	U3	U3	U4	U4	U4	U4
STANDARD	**Summer working mode-Cooling capacity(1)**	**kW**	**42,3**	**47,8**	**57,6**	**64,3**	**71,8**	**96,3**	**117,0**	**138,0**	**155,0**	**175,0**	**194,0**
	Unit power input	kW	16,1	19,7	20,7	23,7	28,7	37,0	46,2	51,7	57,6	65,5	74,0
	Plant exchanger water flow rate	m³/h	7,3	8,2	9,9	11,1	12,4	16,6	20,1	23,7	26,7	30,1	33,4
	Plant exchanger pressure drop	kPa	38	36	45	41	40	49	45	50	47	49	47
	Winter working mode-Heating capacity(2)	**kW**	**47,1**	**54,0**	**63,6**	**70,7**	**80,7**	**107,0**	**132,0**	**153,0**	**173,0**	**197,0**	**218,0**
	Unit power input	kW	16,3	18,9	21,6	23,6	27,4	37,0	44,3	52,6	58,4	66,1	73,6
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Axial fans	n.	4	4	6	6	6	2	2	3	3	3	3
	Total air flow	m³/h	16920	16920	25380	25380	25380	37800	36900	56700	56700	55350	55350
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	15,8	16,0	21,6	21,6	22,9	33,6	44,6	52,1	53,0	65,6	66,0
	Gas circuits	n.	1	1	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	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	32,0	37,9	40,5	46,5	57,4	67,7	80,4	91,3	101,2	113,7	126,7
	Unit starting current (LRA)	A	136,7	144,7	150,1	178,1	215,1	313,8	328,8	370,7	332,7	484,7	502,7
	EER (1)	kW/kW	2,62	2,43	2,78	2,71	2,50	2,60	2,53	2,67	2,69	2,67	2,62
	COP (2)	kW/kW	2,89	2,86	2,94	2,99	2,95	2,89	2,98	2,91	2,96	2,98	2,96
	ESEER		3,84	3,85	4,03	3,99	3,73	3,72	3,73	3,78	3,84	3,86	3,84
	Sound power level [Lw] (3)	dB(A)	84,0	84,0	84,3	85,1	86,1	88,2	92,2	92,2	93,2	95,2	96,2
	Average sound pressure level [Lpm] (4)	dB(A)	67,0	67,0	67,3	67,7	68,8	70,3	74,0	74,0	74,4	76,5	77,4
	Net weight	kg	571	574	697	703	709	910	1065	1160	1182	1277	1296
	Hydraulic connections												
	Plant exchanger IN/OUT-ISO 7/1–R	Ø	2"	2"	2"	2"	2"	-	-	-	-	-	-
	Plant exchanger IN/OUT-OD (5)	Ø mm	-	-	-	-	-	76,1	76,1	76,1	76,1	76,1	76,1
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**	**kW**	**15,5**	**17,5**	**21,1**	**23,6**	**26,4**	**35,4**	**42,8**	**50,5**	**56,9**	**64,2**	**71,3**
	EC axial fans - Max external static pressure	Pa	-	-	-	-	-	60	60	60	60	60	60
	Pumping group												
	Low discharge head - Power input	kW	-	-	-	-	-	-	-	1,5	1,5	1,5	1,5
	Medium discharge head - Power input	kW	0,8	0,8	1,5	1,5	1,5	2,0	2,0	2,2	2,2	2,2	2,2
	High discharge head - Power input	kW	-	-	-	-	-	-	-	3,0	3,0	3,0	3,0
	Water tank - volume	l	150	150	240	240	240	360	360	200	200	200	200
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**42,3**	**47,8**	**57,6**	**64,3**	**71,8**	**96,3**	**117,0**	**138,0**	**155,0**	**175,0**	**194,0**
	Unit power input	kW	16,1	19,7	20,7	23,7	28,7	37,0	46,2	51,7	57,6	65,5	74,0
	Winter working mode - Heating capacity (2)	**kW**	**47,1**	**54,0**	**63,6**	**70,7**	**80,7**	**107,0**	**132,0**	**153,0**	**173,0**	**197,0**	**218,0**
	Unit power input	kW	16,3	18,9	21,6	23,6	27,4	37,0	44,3	52,6	58,4	66,1	73,6
	Total air flow	m³/h	16920	16920	25380	25380	25380	37800	36900	56700	56700	55350	55350
	EER (1)	kW/kW	2,62	2,43	2,78	2,71	2,50	2,60	2,53	2,67	2,69	2,67	2,62
	COP (2)	kW/kW	2,89	2,86	2,94	2,99	2,95	2,89	2,98	2,91	2,96	2,98	2,96
	Sound power level [Lw] (3)	dB(A)	78,6	78,6	79,0	79,8	80,6	82,5	86,1	86,1	87,2	89,0	89,7
	Average sound pressure level [Lpm] (4)	dB(A)	61,6	61,6	62,0	62,4	63,2	64,4	67,9	67,9	68,4	70,2	71,0
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**41,2**	**46,1**	**56,2**	**62,6**	**69,6**	**93,9**	**113,0**	**134,0**	**151,0**	**170,0**	**188,0**
	Unit power input	kW	16,6	20,4	21,1	24,4	29,6	38,0	47,9	52,8	59,2	67,5	76,4
	Winter working mode - Heating capacity (2)	**kW**	**46,5**	**53,1**	**62,6**	**69,7**	**79,3**	**106,0**	**130,0**	**151,0**	**171,0**	**194,0**	**214,0**
	Unit power input	kW	16,1	18,7	21,4	23,4	27,0	36,6	43,9	51,7	57,8	65,3	72,8
	Total air flow	m³/h	14382	14382	21573	21573	21573	32130	31365	48195	48195	47048	47048
	EER (1)	kW/kW	2,48	2,26	2,66	2,57	2,35	2,47	2,36	2,54	2,55	2,52	2,46
	COP (2)	kW/kW	2,89	2,84	2,93	2,98	2,94	2,90	2,96	2,92	2,96	2,97	2,94
	Sound power level [Lw] (3)	dB(A)	75,6	75,6	75,8	76,7	77,9	80,6	84,6	84,6	85,5	87,7	88,8
	Average sound pressure level [Lpm] (4)	dB(A)	58,6	58,6	58,8	59,2	60,5	62,5	66,4	66,4	66,7	69,0	70,0
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**39,6**	**43,8**	**54,3**	**60,2**	**66,5**	**90,4**	**108,0**	**130,0**	**146,0**	**163,0**	**180,0**
	Unit power input	kW	17,3	21,6	22,0	25,3	30,9	39,3	50,2	54,4	61,6	70,6	80,4
	Winter working mode - Heating capacity (2)	**kW**	**45,6**	**51,9**	**61,6**	**68,3**	**77,5**	**104,0**	**127,0**	**148,0**	**167,0**	**189,0**	**209,0**
	Unit power input	kW	15,9	18,5	21,2	23,1	26,7	36,0	43,3	51,0	57,0	64,5	72,1
	Total air flow	m³/h	11844	11844	17766	17766	17766	26460	25830	39690	39690	38745	38745
	EER (1)	kW/kW	2,29	2,03	2,47	2,38	2,15	2,30	2,15	2,39	2,37	2,31	2,24
	COP (2)	kW/kW	2,86	2,80	2,91	2,96	2,90	2,89	2,93	2,90	2,93	2,93	2,90
	Sound power level [Lw] (3)	dB(A)	73,0	73,0	72,7	73,8	75,8	79,3	83,6	83,6	84,4	87,0	88,3
	Average sound pressure level [Lpm] (4)	dB(A)	56,1	56,1	55,7	56,4	58,4	61,2	65,5	65,5	65,6	68,3	69,5
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	-	-	-	-	-	-	-	**130,0**	**146,0**	**163,0**	**180,0**
	Unit power input	kW	-	-	-	-	-	-	-	54,4	61,6	70,6	80,4
	Winter working mode - Heating capacity (2)	**kW**	-	-	-	-	-	-	-	**148,0**	**167,0**	**189,0**	**209,0**
	Unit power input	kW	-	-	-	-	-	-	-	51,0	57,0	64,5	72,1
	Total air flow	m³/h	-	-	-	-	-	-	-	39690	39690	38745	38745
	EER (1)	kW/kW	-	-	-	-	-	-	-	2,39	2,37	2,31	2,24
	COP (2)	kW/kW	-	-	-	-	-	-	-	2,90	2,93	2,93	2,90
	Sound power level [Lw] (3)	dB(A)	-	-	-	-	-	-	-	81,6	82,4	85,0	86,3
	Average sound pressure level [Lpm] (4)	dB(A)	-	-	-	-	-	-	-	63,5	63,6	66,3	67,5

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

PYXIS HP "U" TECHNICAL DATA - *DOUBLE GAS CIRCUIT, SINGLE AIR CIRCUIT*

	PYXIS HP "U"		46 P2	54 P2	58 P2	66 P2	80 P2	102 P2	128 P2	146 P2	164 P2	186 P2	204 P2
			D	D	D	D	D	D	D	D	D	D	D
	SIZE		U1	U1	U2	U2	U2	U3	U3	U4	U4	U4	U4
STANDARD	**Summer working mode-Cooling capacity(1)**	**kW**	**42,4**	**47,8**	**57,5**	**64,3**	**71,7**	**96,2**	**117,0**	**138,0**	**155,0**	**175,0**	**195,0**
	Unit power input	kW	16,2	19,8	20,8	23,9	28,7	37,0	46,2	51,7	57,6	65,5	74,1
	Plant exchanger water flow rate	m³/h	7,3	8,2	9,9	11,1	12,4	16,5	20,1	23,7	26,7	30,1	33,5
	Plant exchanger pressure drop	kPa	47	45	52	55	44	43	41	55	51	48	46
	Winter working mode-Heating capacity(2)	**kW**	**47,3**	**54,2**	**63,9**	**71,0**	**81,1**	**110,0**	**132,0**	**153,0**	**177,0**	**201,0**	**222,0**
	Unit power input	kW	15,9	18,3	21,1	23,1	26,7	35,7	44,1	52,6	58,0	65,7	73,0
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Axial fans	n.	4	4	6	6	6	2	2	3	3	3	3
	Total air flow	m³/h	16920	16920	25380	25380	25380	37800	36900	56700	56700	55350	55350
	Air circuits	n.	1	1	1	1	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	17,4	14,8	19,0	19,9	20,1	35,9	47,7	55,7	56,7	70,2	70,6
	Gas circuits	n.	2	2	2	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	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	32,0	37,9	40,5	46,5	57,4	67,7	80,4	91,3	101,3	113,7	127,7
	Unit starting current (LRA)	A	136,7	144,7	150,1	178,1	215,1	272,8	328,3	370,2	332,2	485,1	502,3
	EER (1)	kW/kW	2,61	2,42	2,77	2,69	2,50	2,60	2,53	2,67	2,69	2,67	2,63
	COP (2)	kW/kW	2,97	2,96	3,03	3,07	3,04	3,08	2,99	2,91	3,05	3,06	3,04
	ESEER		3,56	3,29	3,78	3,68	3,39	3,52	3,42	3,62	3,65	3,61	3,55
	Sound power level [Lw] (3)	dB(A)	84,0	84,0	84,3	85,1	86,1	88,2	92,2	92,2	93,2	95,2	96,2
	Average sound pressure level [Lpm] (4)	dB(A)	67,0	67,0	67,3	67,7	68,8	70,3	74,0	74,0	74,4	76,5	77,4
	Net weight	kg	574	574	700	706	713	938	1097	1194	1217	1316	1335
	Hydraulic connections												
	Plant exchanger IN/OUT-ISO 7/1–R	Ø	2"	2"	2"	2"	2"	-	-	-	-	-	-
	Plant exchanger IN/OUT-OD (5)	Ø mm	-	-	-	-	-	76,1	76,1	76,1	76,1	76,1	76,1
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**	**kW**	-	-	-	-	-	-	-	-	-	-	-
	EC axial fans - Max external static pressure	Pa	-	-	-	-	-	60	60	60	60	60	60
	Pumping group												
	Low discharge head - Power input	kW	-	-	-	-	-	-	-	1,5	1,5	1,5	1,5
	Medium discharge head - Power input	kW	0,8	0,8	1,5	1,5	1,5	2,0	2,0	2,2	2,2	2,2	2,2
	High discharge head - Power input	kW	-	-	-	-	-	-	-	3,0	3,0	3,0	3,0
	Water tank - volume	l	150	150	240	240	240	360	360	200	200	200	200
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**42,4**	**47,8**	**57,5**	**64,3**	**71,7**	**96,2**	**117,0**	**138,0**	**155,0**	**175,0**	**195,0**
	Unit power input	kW	16,2	19,8	20,8	23,9	28,7	37,0	46,2	51,7	57,6	65,5	74,1
	Winter working mode - Heating capacity (2)	**kW**	**47,3**	**54,2**	**63,9**	**71,0**	**81,1**	**110,0**	**132,0**	**153,0**	**177,0**	**201,0**	**222,0**
	Unit power input	kW	15,9	18,3	21,1	23,1	26,7	35,7	44,1	52,6	58,0	65,7	73,0
	Total air flow	m³/h	16920	16920	25380	25380	25380	37800	36900	56700	56700	55350	55350
	EER (1)	kW/kW	2,61	2,42	2,77	2,69	2,50	2,60	2,53	2,67	2,69	2,67	2,63
	COP (2)	kW/kW	2,97	2,96	3,03	3,07	3,04	3,08	2,99	2,91	3,05	3,06	3,04
	Sound power level [Lw] (3)	dB(A)	78,6	78,6	79,0	79,8	80,6	82,5	86,1	86,1	87,2	89,0	89,7
	Average sound pressure level [Lpm] (4)	dB(A)	61,6	61,6	62,0	62,4	63,2	64,4	67,9	67,9	68,4	70,2	71,0
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**41,2**	**46,1**	**56,1**	**62,6**	**69,5**	**93,7**	**113,0**	**135,0**	**151,0**	**170,0**	**188,0**
	Unit power input	kW	16,6	20,5	21,2	24,5	29,6	37,8	47,7	52,7	59,2	67,5	76,4
	Winter working mode - Heating capacity (2)	**kW**	**46,7**	**53,3**	**63,0**	**70,1**	**79,6**	**109,0**	**130,0**	**151,0**	**175,0**	**198,0**	**219,0**
	Unit power input	kW	15,7	18,1	20,8	22,8	26,4	35,3	43,8	51,9	57,2	64,9	72,5
	Total air flow	m³/h	14382	14382	21573	21573	21573	32130	31365	48195	48195	47048	47048
	EER (1)	kW/kW	2,48	2,25	2,65	2,56	2,35	2,48	2,37	2,56	2,55	2,52	2,46
	COP (2)	kW/kW	2,97	2,94	3,03	3,07	3,01	3,09	2,97	2,91	3,06	3,05	3,02
	Sound power level [Lw] (3)	dB(A)	75,6	75,6	75,8	76,7	77,9	80,6	84,6	84,6	85,5	87,7	88,8
	Average sound pressure level [Lpm] (4)	dB(A)	58,6	58,6	58,8	59,2	60,5	62,5	66,4	66,4	66,7	69,0	70,0
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**39,6**	**43,7**	**54,1**	**60,1**	**66,3**	**90,2**	**108,0**	**130,0**	**146,0**	**163,0**	**180,0**
	Unit power input	kW	17,4	21,6	22,0	25,4	31,0	39,2	50,0	54,6	61,6	70,6	80,4
	Winter working mode - Heating capacity (2)	**kW**	**45,7**	**52,0**	**61,9**	**68,6**	**77,7**	**106,0**	**127,0**	**148,0**	**171,0**	**193,0**	**213,0**
	Unit power input	kW	15,5	18,1	20,6	22,6	26,1	34,8	43,3	51,2	56,6	64,1	71,7
	Total air flow	m³/h	11844	11844	17766	17766	17766	26460	25830	39690	39690	38745	38745
	EER (1)	kW/kW	2,28	2,02	2,46	2,37	2,14	2,30	2,16	2,38	2,37	2,31	2,24
	COP (2)	kW/kW	2,94	2,88	3,01	3,04	2,98	3,05	2,93	2,89	3,02	3,01	2,97
	Sound power level [Lw] (3)	dB(A)	73,0	73,0	72,7	73,8	75,8	79,3	83,6	83,6	84,4	87,0	88,3
	Average sound pressure level [Lpm] (4)	dB(A)	56,1	56,1	55,7	56,4	58,4	61,2	65,5	65,5	65,6	68,3	69,5
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	-	-	-	-	-	-	-	**130,0**	**146,0**	**163,0**	**180,0**
	Unit power input	kW	-	-	-	-	-	-	-	54,6	61,6	70,6	80,4
	Winter working mode - Heating capacity (2)	**kW**	-	-	-	-	-	-	-	**148,0**	**171,0**	**193,0**	**213,0**
	Unit power input	kW	-	-	-	-	-	-	-	51,2	56,6	64,1	71,7
	Total air flow	m³/h	-	-	-	-	-	-	-	39690	39690	38745	38745
	EER (1)	kW/kW	-	-	-	-	-	-	-	2,38	2,37	2,31	2,24
	COP (2)	kW/kW	-	-	-	-	-	-	-	2,89	3,02	3,01	2,97
	Sound power level [Lw] (3)	dB(A)	-	-	-	-	-	-	-	81,6	82,4	85,0	86,3
	Average sound pressure level [Lpm] (4)	dB(A)	-	-	-	-	-	-	-	63,5	63,6	66,3	67,5

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

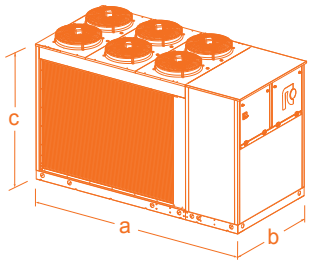
PYXIS HP "U" TECHNICAL DATA - *DOUBLE GAS CIRCUIT, DOUBLE AIR CIRCUIT*

	PYXIS HP "U"		102 P2 D	120 P4 D	128 P2 D	140 P4 D	146 P2 D	160 P4 D	164 P2 D	180 P4 D	186 P2 D	204 P2 D
	SIZE		U3L	U4L	U3L	U4L	U4L	U4L	U4L	U4L	U4L	U4L
STANDARD	**Summer working mode-Cooling capacity(1)**	**kW**	**98,4**	**120,0**	**117,0**	**133,0**	**141,0**	**151,0**	**156,0**	**163,0**	**172,0**	**188,0**
	Unit power input	kW	35,3	38,7	45,5	44,5	49,0	53,5	56,1	66,0	65,9	76,1
	Plant exchanger water flow rate	m³/h	16,9	20,6	20,1	22,8	24,2	26,0	26,8	28,0	29,6	32,4
	Plant exchanger pressure drop	kPa	45	43	41	50	57	49	51	45	46	43
	Winter working mode-Heating capacity(2)	**kW**	**113,0**	**135,0**	**132,0**	**151,0**	**157,0**	**172,0**	**177,0**	**186,0**	**198,0**	**217,0**
	Unit power input	kW	35,2	42,1	43,4	46,3	51,5	54,6	56,9	61,8	64,3	71,9
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	4	2	4	2	4	2	4	2	2
	Capacity steps	n.	2	4	2	4	2	4	2	4	2	2
	Axial fans	n.	4	6	4	6	6	6	6	6	6	6
	Total air flow	m³/h	36600	54900	36600	54900	54900	54900	54900	54900	54900	54900
	Air circuits	n.	2	2	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	35,0	55,2	46,0	56,1	57,9	57,0	58,8	60,5	60,1	60,4
	Gas circuits	n.	2	2	2	2	2	2	2	2	2	2
	Power supply	V/Ph/Hz	400/3/50+N	400/3/50	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	63,6	70,9	77,9	82,1	85,5	103,2	97,0	118,9	111,9	128,9
	Unit starting current (LRA)	A	270,2	200,9	326,2	240,9	366,4	283,9	328,4	340,9	481,3	498,5
	EER (1)	kW/kW	2,79	3,10	2,57	2,99	2,88	2,82	2,78	2,47	2,61	2,47
	COP (2)	kW/kW	3,21	3,21	3,04	3,26	3,05	3,15	3,11	3,01	3,08	3,02
	ESEER		3,50	4,58	3,26	4,44	3,58	4,28	3,49	4,05	3,33	3,17
	Sound power level [Lw] (3)	dB(A)	88,2	92,2	92,2	92,2	92,2	93,2	93,2	95,2	95,2	96,2
	Average sound pressure level [Lpm] (4)	dB(A)	70,3	74,0	74,0	74,0	74,0	74,4	74,4	76,5	76,5	77,4
	Net weight	kg	960	1147	1080	1162	1234	1167	1257	1401	1356	1375
	Hydraulic connections											
	Plant exchanger IN/OUT-ISO 7/1–R	Ø	-	-	-	-	-	-	-	-	-	-
	Plant exchanger IN/OUT-OD (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	76,1	76,1	76,1	76,1
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**	**kW**	**36,1**	**44,1**	**42,9**	**48,8**	**51,6**	**55,5**	**57,2**	**59,7**	**63,2**	**68,9**
	EC axial fans - Max external static pressure	Pa	0	0	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	2,0	2,2	2,0	2,2	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	3,0	3,0
	Water tank - volume	l	360	200	360	200	200	200	200	200	200	200
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**98,4**	**120,0**	**117,0**	**133,0**	**141,0**	**151,0**	**156,0**	**163,0**	**172,0**	**188,0**
	Unit power input	kW	35,3	38,7	45,5	44,5	49,0	53,5	56,1	66,0	65,9	76,1
	Winter working mode - Heating capacity (2)	**kW**	**113,0**	**135,0**	**132,0**	**151,0**	**157,0**	**172,0**	**177,0**	**186,0**	**198,0**	**217,0**
	Unit power input	kW	35,2	42,1	43,4	46,3	51,5	54,6	56,9	61,8	64,3	71,9
	Total air flow	m³/h	36600	54900	36600	54900	54900	54900	54900	54900	54900	54900
	EER (1)	kW/kW	2,79	3,10	2,57	2,99	2,88	2,82	2,78	2,47	2,61	2,47
	COP (2)	kW/kW	3,21	3,21	3,04	3,26	3,05	3,15	3,11	3,01	3,08	3,02
	Sound power level [Lw] (3)	dB(A)	82,5	86,1	86,1	86,1	86,1	87,2	87,2	89,0	89,0	89,7
	Average sound pressure level [Lpm] (4)	dB(A)	64,4	67,9	67,9	67,9	67,9	68,4	68,4	70,2	70,2	71,0
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**96,0**	**118,0**	**113,0**	**130,0**	**138,0**	**147,0**	**152,0**	**157,0**	**167,0**	**181,0**
	Unit power input	kW	36,1	39,3	47,3	45,3	50,0	55,1	57,8	68,6	68,2	79,0
	Winter working mode - Heating capacity (2)	**kW**	**111,0**	**134,0**	**130,0**	**149,0**	**154,0**	**169,0**	**175,0**	**183,0**	**194,0**	**213,0**
	Unit power input	kW	34,7	41,5	43,2	45,8	51,0	54,0	56,3	61,2	63,8	71,2
	Total air flow	m³/h	31110	46665	31110	46665	46665	46665	46665	46665	46665	46665
	EER (1)	kW/kW	2,66	3,00	2,39	2,87	2,76	2,67	2,63	2,29	2,45	2,29
	COP (2)	kW/kW	3,20	3,23	3,01	3,25	3,02	3,13	3,11	2,99	3,04	2,99
	Sound power level [Lw] (3)	dB(A)	80,6	84,6	84,6	84,6	84,6	85,5	85,5	87,7	87,7	88,8
	Average sound pressure level [Lpm] (4)	dB(A)	62,5	66,4	66,4	66,4	66,4	66,7	66,7	69,0	69,0	70,0
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**92,7**	**115,0**	**108,0**	**126,0**	**133,0**	**142,0**	**146,0**	**150,0**	**160,0**	**172,0**
	Unit power input	kW	37,4	40,6	49,8	46,8	52,0	57,0	60,6	72,5	71,7	83,9
	Winter working mode - Heating capacity (2)	**kW**	**109,0**	**131,0**	**127,0**	**146,0**	**151,0**	**166,0**	**171,0**	**179,0**	**190,0**	**208,0**
	Unit power input	kW	34,4	41,1	42,8	45,3	50,5	53,4	55,7	60,7	63,3	70,5
	Total air flow	m³/h	25620	38430	25620	38430	38430	38430	38430	38430	38430	38430
	EER (1)	kW/kW	2,48	2,83	2,17	2,69	2,56	2,49	2,41	2,07	2,23	2,05
	COP (2)	kW/kW	3,17	3,19	2,97	3,22	2,99	3,11	3,07	2,95	3,00	2,95
	Sound power level [Lw] (3)	dB(A)	79,3	83,6	83,6	83,6	83,6	84,4	84,4	87,0	87,0	88,3
	Average sound pressure level [Lpm] (4)	dB(A)	61,2	65,5	65,5	65,5	65,5	65,6	65,6	68,3	68,3	69,5
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	-	**115,0**	-	**126,0**	**133,0**	**142,0**	**146,0**	**150,0**	**160,0**	**172,0**
	Unit power input	kW	-	40,6	-	46,8	52,0	57,0	60,6	72,5	71,7	83,9
	Winter working mode - Heating capacity (2)	**kW**	-	**131,0**	-	**146,0**	**151,0**	**166,0**	**171,0**	**179,0**	**190,0**	**208,0**
	Unit power input	kW	-	41,1	-	45,3	50,5	53,4	55,7	60,7	63,3	70,5
	Total air flow	m³/h	-	38430	-	38430	38430	38430	38430	38430	38430	38430
	EER (1)	kW/kW	-	2,83	-	2,69	2,56	2,49	2,41	2,07	2,23	2,05
	COP (2)	kW/kW	-	3,19	-	3,22	2,99	3,11	3,07	2,95	3,00	2,95
	Sound power level [Lw] (3)	dB(A)	-	81,6	-	81,6	81,6	82,4	82,4	85,0	85,0	86,3
	Average sound pressure level [Lpm] (4)	dB(A)	-	63,5	-	63,5	63,5	63,6	63,6	66,3	66,3	67,5

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; 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
U3L	2960	1800	1950
U4	4000	1200	1970
U4L	4000	1800	1950



PYXIS HP: Air / water reversible heat pumps
for outdoor installation, equipped with scroll compressors and axial fans
Cooling capacity: **121,0 ÷ 772,0 kW**
Heating capacity: **135,0 ÷ 932,0 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

NEW !!
RC Hi-Tech

IDEA®
RC Hi-Tech

pyxis hp

rcgroupairconditioning

R410A PLATE SHELL A C

MAIN FEATURES
- Reversible heat pump.
- 24 size available, for a wide selection opportunity.
- Average step of 25kW.
- EER up to 2,95.
- COP up to 3,20.
- ESEER up to 4,22.
- Scroll compressors.
- R410A Refrigerant charge.
- Double, triple, quadruple refrigerant circuit.
- Plate type or shell and tube heat exchangers.
- AC Axial fans.
- Double, triple, quadruple air circuit.
- Suitable for outdoor installation.

MAIN BENEFITS
- Units equipped with two scroll compressors for refrigerant circuit to reach an high efficiency.
- Units with double, triple, quadruple refrigerant circuits.
- Units with separated air circuits to grant the continuity of the working mode during the coils defrosting.
- Defrosting dynamics control system IDEA®.
- Electronic expansion valve.
- High COP.
- Availability of coil heat exchangers with hydrophilic treatment.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups with low, medium, high prevalence.
- Extremely easily of maintenance.
- Complete set of components dedicated to the safety of the unity.
- Eurovent Certification.

IDEA® DEFROSTING SYSTEM
"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

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

WORKING LIMIT IN HEATING MODE (HEAT PUMP)
Hot water outlet temperature: 30÷60°C
Ambient temperature: -10÷30°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.

PLANT HEAT EXCHANGER

From model 120 P4 D VT2 up to model 410 P4 D VT5 included:

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel:
  - Single circuit on water side .
  - Double refrigerant circuit for D version machines.
- 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.

From model 430 P6 T VT5 up to model 830 P8 Q VT8 included:

- Single pass type shell and tube evaporator, optimized for R410A refrigerant:
  - Single circuit on water side .
  - Triple refrigerant circuit for T version machines.
  - Quadruple refrigerant circuit for Q version machines.
- Tubes with a helical rifled internal surface.
- Intermediate baffles positioned to ensure optimum speed of the fluid and low pressure drops.
- 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.

AIR/GAS HEAT EXCHANGER

- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Frame in galvanized steel.
- Temperature sensor on ambient air.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- AC type electric motor for condensing pressure control (in summer working mode) or evaporating pressure control (in winter working mode) with stepless variable speed of the axial fans.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Reversing valve for refrigeration cycle inversion.
- Sight glass.
- Filter dryer on liquid line.
- Liquid receiver with safety valve and service valve.
- Service valves on liquid line and gas discharge.
- Non-return valve.
- 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.
- Liquid separator on suction line.
- Oil drainage and oil recovery systems.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.

From model 120 P4 D VT2 up to model 180 P4 D VT2 included:

- Thermostatic expansion valve.
- Electromagnetic valve on liquid line.

From model 215 P4 D VT2 up to model 830 P8 Q VT8 included:

- Electronic expansion valve. 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.

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.
- Summer / Winter working mode selector.
- Power supply: 400/3/50

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 HP	120 P4	140 P4	146 P2	160 P4	164 P2	180 P4	186 P2	204 P2	215 P4	235 P4	255 P4	305 P4
	D	D	D	D	D	D	D	D	D	D	D	D
SIZE	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT3	VT3
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	●	●	●	●	●	●	●	●	●	●	●	●
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 low press	●	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for desuperheater water pump activation	●	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring anti vibrating support (kit)	-	-	-	-	-	-	-	-	-	-	-	-
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●
122 - Nordik Kit	-	-	-	-	-	-	-	-	-	-	-	-
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	-	-	-	-	-	-
81 - Phase sequence electronic relay	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	-	-	●	-	●	-	●	●	-	-	-	-
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	-	-	-	-	-	-	-	-	-	-	-	-
252 - Anti-intrusion net	●	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	-	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	-	-	-	-	-	-	-	-	●	●	●	●
1003 - Analogic flow switch	●	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyser	●	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●	●
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 HP	340 P4	380 P4	410 P4	430 P6	470 P6	500 P6	560 P6	610 P6	680 P8	750 P8	800 P8	830 P8
	D	D	D	T	T	T	T	T	Q	Q	Q	Q
SIZE	VT3	VT3	VT4	VT5	VT5	VT5	VT5	VT5	VT6	VT6	VT7	VT8
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	●	●	●	●	●	●	●	●	●	●	●	●
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 low press	●	●	-	-	-	-	-	-	-	-	-	-
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	●	●	-	-	-	-	-	-	-	-	-	-
449 - Voltage free contact for desuperheater water pump activation	●	●	●	●	●	●	●	●	●	●	●	●
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●	●	●
171 - Rubber antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●	●	●
170 - Spring anti vibrating support (kit)	-	-	-	-	-	-	-	-	-	-	-	-
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●	●	●
122 - Nordik Kit	-	-	-	-	-	-	-	-	-	-	-	-
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	-	-	-	-	-	-
81 - Phase sequence electronic relay	●	●	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●	●	●
1002 - Soft Starter	-	-	-	-	-	-	-	-	-	-	-	-
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	-	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	-	-	-	-	-	-	-	-	-	-	-	-
252 - Anti-intrusion net	●	●	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●	●	●
459 - Shell and tube evaporator	●	●	-	-	-	-	-	-	-	-	-	-
1003 - Analogic flow switch	●	●	●	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●	●	●
1005 - Power supply analyser	●	●	●	●	●	●	●	●	●	●	●	●
84 - Additional external alarm	●	●	●	●	●	●	●	●	●	●	●	●
889 - Master plant SEQUENCER	●	●	●	●	●	●	●	●	●	●	●	●
962 - Kit modem GSM	●	●	●	●	●	●	●	●	●	●	●	●
957 - Plantwatch without modem	●	●	●	●	●	●	●	●	●	●	●	●
930 - Remote graphic terminal kit	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

PYXIS HP TECHNICAL DATA - *DOUBLE GAS CIRCUIT, DOUBLE AIR CIRCUIT*

	PYXIS HP		120 P4 D	140 P4 D	146 P2 D	160 P4 D	164 P2 D	180 P4 D	186 P2 D	204 P2 D	215 P4 D	235 P4 D
	SIZE		VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2	VT2
STANDARD	**Summer working mode - Cooling capacity (1)**	kW	**121,0**	**134,0**	**142,0**	**152,0**	**157,0**	**169,0**	**187,0**	**195,0**	**194,0**	**210,0**
	Unit power input	kW	41,0	46,7	51,1	55,7	58,1	65,0	77,6	75,3	73,8	84,0
	Plant exchanger water flow rate	m³/h	20,7	23,0	24,3	26,2	27,0	29,2	32,3	33,6	33,4	36,2
	Plant exchanger pressure drop	kPa	43	51	58	49	52	48	54	47	47	46
	Winter working mode - Heating capacity (2)	kW	**135,0**	**151,0**	**156,0**	**171,0**	**177,0**	**191,0**	**217,0**	**222,0**	**220,0**	**240,0**
	Unit power input	kW	44,6	48,9	54,0	57,0	59,4	64,5	74,8	74,5	73,3	80,8
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	2	4	2	4	2	2	4	4
	Capacity steps	n.	4	4	2	4	2	4	2	2	4	4
	Axial fans	n.	4	4	4	4	4	4	4	4	4	4
	Total air flow	m³/h	71280	71280	71280	71280	71280	71280	71280	68400	68400	68400
	Air circuits	n.	2	2	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	60,0	61,0	63,0	62,0	64,0	65,8	65,3	65,7	67,2	69,2
	Gas circuits	n.	2	2	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	400/3/50	400/3/50
	Max unit operating current (FLA)	A	78,2	89,2	92,6	110,1	103,8	120,5	133,6	130,6	135,6	147,6
	Unit starting current (LRA)	A	208,6	248,6	374,6	291,6	336,6	348,5	488,6	506,6	404,6	416,6
	EER (1)	kW/kW	2,95	2,87	2,78	2,73	2,70	2,60	2,41	2,59	2,63	2,50
	COP (2)	kW/kW	3,03	3,09	2,89	3,00	2,98	2,96	2,90	2,98	3,00	2,97
	ESEER		4,17	4,08	3,43	3,99	3,37	3,95	3,07	3,28	4,04	3,97
	Sound power level [Lw] (3)	dB(A)	85,0	85,0	85,0	86,0	86,0	86,0	86,0	87,0	95,0	94,5
	Average sound pressure level [Lpm] (4)	dB(A)	66,8	66,8	66,8	67,8	67,8	67,4	67,4	68,4	76,2	75,7
	Net weight	kg	1618	1681	1754	1698	1788	1930	1885	1905	1957	2114
	Hydraulic connections											
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	-	-	-	-	-	-	-	-	-	-
	Plant exchanger IN/OUT - OD (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**		**44,3**	**49,1**	**52,0**	**55,9**	**57,7**	**62,2**	**68,8**	**71,6**	**71,2**	**77,1**
	EC axial fans - Max external static pressure	Pa	60	60	60	60	60	60	60	60	60	60
	Pumping group											
	Low discharge head - Power input	kW	1,5	1,5	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	4,0	4,0
	High discharge head - Power input	kW	3,0	3,0	3,0	3,0	3,0	3,0	3,0	3,0	5,5	5,5
	Water tank - volume	l	130	130	130	130	130	130	130	130	130	130
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	kW	**121,0**	**134,0**	**142,0**	**152,0**	**157,0**	**169,0**	**187,0**	**195,0**	**194,0**	**210,0**
	Unit power input	kW	41,0	46,7	51,1	55,7	58,1	65,0	77,6	75,3	73,8	84,0
	Winter working mode - Heating capacity (2)	kW	**135,0**	**151,0**	**156,0**	**171,0**	**177,0**	**191,0**	**217,0**	**222,0**	**220,0**	**240,0**
	Unit power input	kW	44,6	48,9	54,0	57,0	59,4	64,5	74,8	74,5	73,3	80,8
	Total air flow	m³/h	71280	71280	71280	71280	71280	71280	71280	68400	68400	68400
	EER (1)	kW/kW	2,95	2,87	2,78	2,73	2,70	2,60	2,41	2,59	2,63	2,50
	COP (2)	kW/kW	3,03	3,09	2,89	3,00	2,98	2,96	2,90	2,98	3,00	2,97
	Sound power level [Lw] (3)	dB(A)	79,2	79,3	79,3	80,2	80,2	79,8	79,8	80,6	80,9	79,9
	Average sound pressure level [Lpm] (4)	dB(A)	61,1	61,1	61,1	62,0	62,0	61,2	61,2	62,0	62,1	61,1
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	kW	**119,0**	**131,0**	**139,0**	**149,0**	**154,0**	**165,0**	**182,0**	**190,0**	**189,0**	**204,0**
	Unit power input	kW	41,2	47,0	51,7	56,4	59,0	66,3	79,5	76,9	75,6	86,4
	Winter working mode - Heating capacity (2)	kW	**134,0**	**149,0**	**154,0**	**169,0**	**174,0**	**189,0**	**213,0**	**219,0**	**217,0**	**236,0**
	Unit power input	kW	43,6	48,1	53,1	56,0	58,4	63,6	73,7	73,5	72,3	79,7
	Total air flow	m³/h	60588	60588	60588	60588	60588	60588	60588	58140	58140	58140
	EER (1)	kW/kW	2,89	2,79	2,69	2,64	2,61	2,49	2,29	2,47	2,50	2,36
	COP (2)	kW/kW	3,07	3,10	2,90	3,02	2,98	2,97	2,89	2,98	3,00	2,96
	Sound power level [Lw] (3)	dB(A)	77,0	77,0	77,0	78,1	78,1	78,4	78,4	79,6	79,3	78,6
	Average sound pressure level [Lpm] (4)	dB(A)	58,8	58,8	58,8	59,9	59,9	59,8	59,8	61,1	60,5	59,7
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	kW	**116,0**	**128,0**	**135,0**	**145,0**	**149,0**	**160,0**	**174,0**	**182,0**	**182,0**	**195,0**
	Unit power input	kW	41,7	47,8	52,7	57,5	60,8	68,7	82,9	79,8	78,8	90,7
	Winter working mode - Heating capacity (2)	kW	**132,0**	**146,0**	**151,0**	**166,0**	**172,0**	**185,0**	**209,0**	**214,0**	**212,0**	**230,0**
	Unit power input	kW	42,7	47,1	52,2	55,1	57,5	62,5	72,8	72,5	71,4	78,8
	Total air flow	m³/h	49896	49896	49896	49896	49896	49896	49896	47880	47880	47880
	EER (1)	kW/kW	2,78	2,68	2,56	2,52	2,45	2,33	2,10	2,28	2,31	2,15
	COP (2)	kW/kW	3,09	3,10	2,89	3,01	2,99	2,96	2,87	2,95	2,97	2,92
	Sound power level [Lw] (3)	dB(A)	75,3	75,3	75,3	76,7	76,7	77,6	77,6	79,1	78,4	77,8
	Average sound pressure level [Lpm] (4)	dB(A)	57,2	57,1	57,1	58,5	58,5	59,0	59,0	60,5	59,6	59,0
ELN KIT	**Summer working mode - Cooling capacity (1)**	kW	116,0	128,0	135,0	145,0	149,0	**160,0**	**174,0**	**182,0**	**182,0**	**195,0**
	Unit power input	kW	41,7	47,8	52,7	57,5	60,8	68,7	82,9	79,8	78,8	90,7
	Winter working mode - Heating capacity (2)	kW	132,0	146,0	151,0	166,0	172,0	**185,0**	**209,0**	**214,0**	**212,0**	**230,0**
	Unit power input	kW	42,7	47,1	52,2	55,1	57,5	62,5	72,8	72,5	71,4	78,8
	Total air flow	m³/h	49896	49896	49896	49896	49896	49896	49896	47880	47880	47880
	EER (1)	kW/kW	2,78	2,68	2,56	2,52	2,45	2,33	2,10	2,28	2,31	2,15
	COP (2)	kW/kW	3,09	3,10	2,89	3,01	2,99	2,96	2,87	2,95	2,97	2,92
	Sound power level [Lw] (3)	dB(A)	73,3	73,3	73,3	74,7	74,7	75,6	75,6	77,1	76,4	75,8
	Average sound pressure level [Lpm] (4)	dB(A)	55,2	55,1	55,1	56,5	56,5	57,0	57,0	58,5	57,6	57,0

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

PYXIS HP TECHNICAL DATA - *DOUBLE GAS CIRCUIT, DOUBLE AIR CIRCUIT - TRIPLE GAS CIRCUIT, TRIPLE AIR CIRCUIT.*

	PYXIS HP		255 P4 D	305 P4 D	340 P4 D	380 P4 D	410 P4 D	430 P6 T	470 P6 T	500 P6 T	560 P6 T	610 P6 T
	SIZE		VT3	VT3	VT3	VT3	VT4	VT5	VT5	VT5	VT5	VT5
STANDARD	**Summary working mode - Cooling capacity (1)**	kW	**242,0**	**274,0**	**306,0**	**340,0**	**380,0**	**408,0**	**430,0**	**469,0**	**506,0**	**542,0**
	Unit power input	kW	91,0	106,6	118,1	137,1	155,1	159,4	161,7	179,7	204,9	236,7
	Plant exchanger water flow rate	m³/h	41,5	47,0	52,7	58,5	65,4	70,3	74,0	80,8	87,1	92,9
	Plant exchanger pressure drop	kPa	51	43	45	43	46	31	34	40	44	50
	Winter working mode - Heating capacity (2)	kW	**281,0**	**315,0**	**359,0**	**402,0**	**456,0**	**482,0**	**512,0**	**558,0**	**617,0**	**678,0**
	Unit power input	kW	92,4	104,0	113,2	131,4	149,5	155,5	161,5	176,6	192,8	215,2
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	4	4	4	4	4	6	6	6	6	6
	Capacity steps	n.	4	4	4	4	4	6	6	6	6	6
	Axial fans	n.	6	6	6	6	8	9	9	9	9	9
	Total air flow	m³/h	106920	106920	102600	102600	142560	160380	153900	153900	153900	153900
	Air circuits	n.	2	2	2	2	2	3	3	3	3	3
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	76,2	77,4	100,9	101,9	102,9	141,9	162,5	164,0	182,5	182,5
	Gas circuits	n.	2	2	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	400/3/50	400/3/50
	Max unit operating current (FLA)	A	163,4	188,4	207,4	236,4	269,2	282,1	286,1	314,1	355,1	404,1
	Unit starting current (LRA)	A	441,4	495,4	529,4	644,4	687,2	621,1	638,1	753,1	804,1	856,1
	EER (1)	kW/kW	2,66	2,57	2,59	2,48	2,45	2,56	2,66	2,61	2,47	2,29
	COP (2)	kW/kW	3,04	3,03	3,17	3,06	3,05	3,10	3,17	3,16	3,20	3,15
	ESEER		3,96	4,01	4,06	4,01	3,90	4,13	4,22	4,19	4,09	3,94
	Sound power level [Lw] (3)	dB(A)	96,7	99,7	99,7	99,7	101,6	102,6	103,4	104,1	102,5	103,4
	Average sound pressure level [Lpm] (4)	dB(A)	77,9	80,3	80,2	80,3	82,1	83,1	83,3	84,1	82,5	82,9
	Net weight	kg	2458	2507	2681	2739	3015	3876	4029	4087	4422	4461
	Hydraulic connections											
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	-	-	-	-	-	-	-	-	-	-
	Plant exchanger IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	168,3	168,3	168,3	168,3	168,3
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**		**88,7**	**100,0**	**112,0**	**125,0**	**139,0**	**150,0**	**158,0**	**172,0**	**186,0**	**199,0**
	EC axial fans - Max external static pressure	Pa	60	60	60	60	60	60	60	60	60	60
	Pumping group											
	Low discharge head - Power input	kW	1,5	1,5	1,5	4,0	4,0	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	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	7,5	7,5
	Water tank - volume	l	190	190	190	190	-	-	-	-	-	-
LNO KIT 100%	**Summary working mode - Cooling capacity (1)**	kW	**242,0**	**274,0**	**306,0**	**340,0**	**380,0**	**408,0**	**430,0**	**469,0**	**506,0**	**542,0**
	Unit power input	kW	91,0	106,6	118,1	137,1	155,1	159,4	161,7	179,7	204,9	236,7
	Winter working mode - Heating capacity (2)	kW	**281,0**	**315,0**	**359,0**	**402,0**	**456,0**	**482,0**	**512,0**	**558,0**	**617,0**	**678,0**
	Unit power input	kW	92,4	104,0	113,2	131,4	149,5	155,5	161,5	176,6	192,8	215,2
	Total air flow	m³/h	106920	106920	102600	102600	142560	160380	153900	153900	153900	153900
	EER (1)	kW/kW	2,66	2,57	2,59	2,48	2,45	2,56	2,66	2,61	2,47	2,29
	COP (2)	kW/kW	3,04	3,03	3,17	3,06	3,05	3,10	3,17	3,16	3,20	3,15
	Sound power level [Lw] (3)	dB(A)	81,6	84,7	85,0	84,2	85,7	87,3	88,2	88,5	86,5	87,3
	Average sound pressure level [Lpm] (4)	dB(A)	62,8	65,2	65,6	64,8	66,2	67,8	68,2	68,5	66,5	66,8
LNO KIT 85%	**Summary working mode - Cooling capacity (1)**	kW	**236,0**	**266,0**	**297,0**	**329,0**	**369,0**	**397,0**	**419,0**	**456,0**	**490,0**	**521,0**
	Unit power input	kW	92,5	109,5	121,7	141,8	158,4	163,4	165,6	183,9	211,2	245,8
	Winter working mode - Heating capacity (2)	kW	**277,0**	**311,0**	**353,0**	**395,0**	**448,0**	**476,0**	**504,0**	**551,0**	**606,0**	**665,0**
	Unit power input	kW	91,1	102,6	112,1	129,9	146,4	153,5	159,5	174,9	191,2	211,8
	Total air flow	m³/h	90882	90882	87210	87210	121176	136323	130815	130815	130815	130815
	EER (1)	kW/kW	2,55	2,43	2,44	2,32	2,33	2,43	2,53	2,48	2,32	2,12
	COP (2)	kW/kW	3,04	3,03	3,15	3,04	3,06	3,10	3,16	3,15	3,17	3,14
	Sound power level [Lw] (3)	dB(A)	80,5	83,6	83,7	83,4	85,0	86,3	87,1	87,7	85,9	86,7
	Average sound pressure level [Lpm] (4)	dB(A)	61,7	64,1	64,2	63,9	65,5	66,8	67,1	67,7	65,9	66,2
LNO KIT 70%	**Summary working mode - Cooling capacity (1)**	kW	**228,0**	**255,0**	**284,0**	**313,0**	**353,0**	**382,0**	**403,0**	**437,0**	**466,0**	**492,0**
	Unit power input	kW	95,4	113,3	127,4	148,3	165,7	169,0	171,5	192,5	221,9	260,3
	Winter working mode - Heating capacity (2)	kW	**273,0**	**305,0**	**345,0**	**386,0**	**439,0**	**466,0**	**494,0**	**538,0**	**591,0**	**647,0**
	Unit power input	kW	89,8	101,3	110,6	128,7	144,9	151,8	157,8	173,0	188,8	210,1
	Total air flow	m³/h	74844	74844	71820	71820	99792	112266	107730	107730	107730	107730
	EER (1)	kW/kW	2,39	2,25	2,23	2,11	2,13	2,26	2,35	2,27	2,10	1,89
	COP (2)	kW/kW	3,04	3,01	3,12	3,00	3,03	3,07	3,13	3,11	3,13	3,08
	Sound power level [Lw] (3)	dB(A)	79,9	82,9	82,9	82,9	84,7	85,7	86,5	87,2	85,6	86,5
	Average sound pressure level [Lpm] (4)	dB(A)	61,1	63,5	63,5	63,4	65,2	66,3	66,5	67,2	65,6	65,9
ELN KIT	**Summary working mode - Cooling capacity (1)**	kW	**228,0**	**255,0**	**284,0**	**313,0**	**353,0**	**382,0**	**403,0**	**437,0**	**466,0**	**492,0**
	Unit power input	kW	95,4	113,3	127,4	148,3	165,7	169,0	171,5	192,5	221,9	260,3
	Winter working mode - Heating capacity (2)	kW	**273,0**	**305,0**	**345,0**	**386,0**	**439,0**	**466,0**	**494,0**	**538,0**	**591,0**	**647,0**
	Unit power input	kW	89,8	101,3	110,6	128,7	144,9	151,8	157,8	173,0	188,8	210,1
	Total air flow	m³/h	74844	74844	71820	71820	99792	112266	107730	107730	107730	107730
	EER (1)	kW/kW	2,39	2,25	2,23	2,11	2,13	2,26	2,35	2,27	2,10	1,89
	COP (2)	kW/kW	3,04	3,01	3,12	3,00	3,03	3,07	3,13	3,11	3,13	3,08
	Sound power level [Lw] (3)	dB(A)	77,9	80,9	80,9	80,9	82,7	83,7	84,5	85,2	83,6	84,5
	Average sound pressure level [Lpm] (4)	dB(A)	59,1	61,5	61,5	61,4	63,2	64,3	64,5	65,2	63,6	63,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

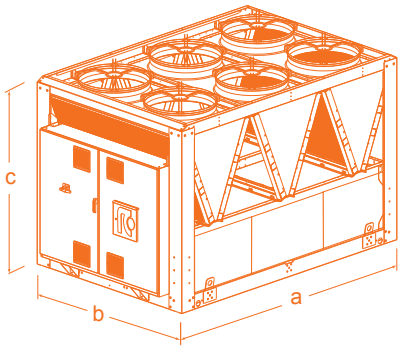
PYXIS HP TECHNICAL DATA - *QUADRUPLE GAS CIRCUIT, QUADRUPLE AIR CIRCUIT.*

	PYXIS HP		680 P8 Q	750 P8 Q	800 P8 Q	830 P8 Q
	SIZE		VT6	VT6	VT7	VT8
STANDARD	**Summer working mode - Cooling capacity (1)**	kW	**615,0**	**666,0**	**729,0**	**772,0**
	Unit power input	kW	237,5	275,2	290,4	301,6
	Plant exchanger water flow rate	m³/h	106,0	114,0	126,0	133,0
	Plant exchanger pressure drop	kPa	59	70	80	57
	Winter working mode - Heating capacity (2)	kW	**728,0**	**823,0**	**873,0**	**932,0**
	Unit power input	kW	231,8	257,2	280,7	298,7
	Compressors		scroll	scroll	scroll	scroll
	Quantity	n.	8	8	8	8
	Capacity steps	n.	8	8	8	8
	Axial fans	n.	12	12	14	16
	Total air flow	m³/h	205200	205200	239400	273600
	Air circuits	n.	4	4	4	4
	Refrigerant		R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	233,3	237,8	269,4	294,8
	Gas circuits	n.	4	4	4	4
	Power supply	V/Ph/Hz	400/3/50	400/3/50	400/3/50	400/3/50
	Max unit operating current (FLA)	A	414,8	473,8	499,6	523,4
	Unit starting current (LRA)	A	912,8	963,8	1006,4	1048,6
	EER (1)	kW/kW	2,59	2,42	2,51	2,56
	COP (2)	kW/kW	3,14	3,20	3,11	3,12
	ESEER		4,14	3,97	4,03	4,07
	Sound power level [Lw] (3)	dB(A)	103,4	104,2	105,2	106,0
	Average sound pressure level [Lpm] (4)	dB(A)	82,9	83,3	84,2	85,1
	Net weight	kg	5213	5358	5600	5789
	Hydraulic connections					
	Plant exchanger IN/OUT - ISO 7/1 – R	Ø	-	-	-	-
	Plant exchanger IN/OUT - OD (5)	Ø mm	219,1	219,1	219,1	219,1
OPTIONAL	**Partial heat recovery - Heating Capacity (6)**		**226,0**	**244,0**	**268,0**	**283,0**
	EC axial fans - Max external static pressure	Pa	60	60	60	60
	Pumping group					
	Low discharge head - Power input	kW	5,5	5,5	5,5	5,5
	Medium discharge head - Power input	kW	11,0	11,0	11,0	11,0
	High discharge head - Power input	kW	15,0	15,0	15,0	15,0
	Water tank - volume	l	-	-	-	-
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	kW	**615,0**	**666,0**	**729,0**	**772,0**
	Unit power input	kW	237,5	275,2	290,4	301,6
	Winter working mode - Heating capacity (2)	kW	**728,0**	**823,0**	**873,0**	**932,0**
	Unit power input	kW	231,8	257,2	280,7	298,7
	Total air flow	m³/h	205200	205200	239400	273600
	EER (1)	kW/kW	2,59	2,42	2,51	2,56
	COP (2)	kW/kW	3,14	3,20	3,11	3,12
	Sound power level [Lw] (3)	dB(A)	87,3	88,9	89,4	90,0
	Average sound pressure level [Lpm] (4)	dB(A)	66,8	67,9	68,5	69,1
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	kW	**597,0**	**644,0**	**707,0**	**751,0**
	Unit power input	kW	243,7	283,7	298,3	307,8
	Winter working mode - Heating capacity (2)	kW	**718,0**	**808,0**	**859,0**	**920,0**
	Unit power input	kW	229,4	253,3	277,1	293,9
	Total air flow	m³/h	174420	174420	203490	232560
	EER (1)	kW/kW	2,45	2,27	2,37	2,44
	COP (2)	kW/kW	3,13	3,19	3,10	3,13
	Sound power level [Lw] (3)	dB(A)	86,7	87,9	88,7	89,4
	Average sound pressure level [Lpm] (4)	dB(A)	66,2	66,9	67,7	68,5
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	kW	**572,0**	**613,0**	**676,0**	**721,0**
	Unit power input	kW	255,4	297,6	311,5	319,0
	Winter working mode - Heating capacity (2)	kW	**702,0**	**788,0**	**840,0**	**900,0**
	Unit power input	kW	226,5	251,0	274,5	290,3
	Total air flow	m³/h	143640	143640	167580	191520
	EER (1)	kW/kW	2,24	2,06	2,17	2,26
	COP (2)	kW/kW	3,10	3,14	3,06	3,10
	Sound power level [Lw] (3)	dB(A)	86,5	87,4	88,3	89,1
	Average sound pressure level [Lpm] (4)	dB(A)	65,9	66,4	67,3	68,1
ELN KIT	**Summer working mode - Cooling capacity (1)**	kW	**572,0**	**613,0**	**676,0**	**721,0**
	Unit power input	kW	255,4	297,6	311,5	319,0
	Winter working mode - Heating capacity (2)	kW	**702,0**	**788,0**	**840,0**	**900,0**
	Unit power input	kW	226,5	251,0	274,5	290,3
	Total air flow	m³/h	143640	143640	167580	191520
	EER (1)	kW/kW	2,24	2,06	2,17	2,26
	COP (2)	kW/kW	3,10	3,14	3,06	3,10
	Sound power level [Lw] (3)	dB(A)	84,5	85,4	86,3	87,1
	Average sound pressure level [Lpm] (4)	dB(A)	63,9	64,4	65,3	66,1

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

DIMENSIONS (mm)

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



REVERSO SCREW: Air / water reversible heat pumps
for outdoor installation, equipped with screw compressors and axial fans
Cooling Capacity: **201,0 ÷ 1095,0 kW**
Heating Capacity: **231,0 ÷ 1219,0 kW**

IDEA®
RC Hi-Tech

reverso screw

rcgroupairconditioning

R134a SHELL A C

MAIN FEATURES

- Reversible heat pump.
- 15 size available, for a wide selection opportunity.
- Average step of 60kW.
- EER up to 3,00.
- COP up to 3,61.
- ESEER up to 3,42.
- Twin-screw compressors.
- R134a refrigerant charge.
- Double refrigerant circuit.
- Shell and tube heat exchangers.
- AC Axial fans.
- Double refrigerant circuit.
- Suitable for outdoor installation.

MAIN BENEFITS

- Units with separated air circuits to grant the continuity of the working mode during the coils defrosting.
- Defrosting dynamics control system IDEA®.
- Electronic expansion valve.
- High COP.
- Availability of kit for the reduction and the extreme reduction of the noise.
- Availability of pumping groups.
- Easily of maintenance.
- Components dedicated to the safety of the unity.

IDEA® DEFROSTING SYSTEM

"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

WORKING LIMITS IN COOLING MODE

Chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷50°C

WORKING LIMIT IN HEATING MODE (HEAT PUMP)

Hot water outlet temperature: 20÷63°C
Ambient temperature: -10÷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 oil filter.
- Oil flow switch.
- 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 200 V2 U04 to model 280 V2 U06 included.
- 2 capacity steps 0-50-100% for each compressor, from model 200 V2 U04 to model 280 V2 U06 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 340 V2 U08 to model 1090 V2 14 included.
- Stepless capacity control, 50÷100% for each compressor from model 340 V2 U08 to model 1090 V2 14 included.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

PLANT GAS/WATER HEAT EXCHANGER
- 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).

EXHAUSTION GAS/AIR HEAT EXCHANGER
- 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.
- Sub-cooling circuit to allow a significant increase in cooling capacity. The circuit is active only when the heat exchanger operates as an air cooled condenser.
- Ambient air temperature sensor.

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.
- 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.
- Reversing valve for refrigeration cycle inversion.
- Sight glass.
- Filter dryer on liquid line.
- Solenoid valves on liquid lines.
- Liquid receiver.
- 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.
- Check valves.
- Liquid separator on compressor suction line.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters. Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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 200 V2 U04 to model 280 V2 U06 included.
- Compressor Star / Delta starting system from model 340 V2 U08 to model 1090 V2 14 included.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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 (optional accessory).
- The hydraulic connections with grooved end are not supplied with flexible joint (optional accessory).

OPTIONAL ACCESSORIES

REVERSO SCREW SIZE	200 V2 U04	250 V2 U06	280 V2 U06	340 V2 U08	370 V2 U08	410 V2 U08	440 V2 U10	520 V2 U10	570 V2 U10	670 V2 U12
739 - Pumping group (1 pump)	●	●	●	●	●	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●	●	●	●	●	●
757 - Pumping group LN (2 pumps)	●	●	●	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	-	-	-	-	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●
Supply network control relay	●	●	●	●	●	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●	●	●
85 - Demand limit	●	●	●	●	●	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●
Line voltage indication	●	●	●	●	●	●	●	●	●	●
Line current indication	●	●	●	●	●	●	●	●	●	●
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

REVERSO SCREW SIZE	790 V2 U12	880 V2 U12	930 V2 U14	980 V2 U14	1090 V2 U14
739 - Pumping group (1 pump)	●	●	●	●	●
740 - Pumping group (2 pumps)	●	●	●	●	●
756 - Pumping group LN (1 pump)	●	●	●	●	●
757 - Pumping group LN (2 pumps)	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●
151 - ELN kit (extremely noise reduction)	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●
101 - EC fan	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●
119 - Kit brine B	-	-	-	-	-
1004 - Antifreezing heater for pumping group	●	●	●	●	●
79 - Electrical panel heating system	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●
449 - Voltage free contact for partial heat recovery water pump activation	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●
Supply network control relay	●	●	●	●	●
83 - Compressor operation indicator	●	●	●	●	●
550 - Stop valve on compressor suction line	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●
85 - Demand limit	●	●	●	●	●
88 - Analog set point compensation	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●
Line voltage indication	●	●	●	●	●
Line current indication	●	●	●	●	●
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

REVERSO SCREW TECHNICAL DATA

	REVERSO SCREW		200 V2	250 V2	280 V2	340 V2	370 V2	410 V2	440 V2	520 V2
	SIZE		U04	U06	U06	U08	U08	U08	U10	U10
STANDARD	**Summary working mode - Cooling capacity (1)**	**kW**	**201**	**242**	**280**	**338**	**371**	**411**	**442**	**518**
	Unit power input	kW	67,4	81,8	94,9	114,2	124,9	138,9	150,3	173,2
	Plant exchanger water flow rate	m³/h	34,5	41,6	48,0	58,1	63,7	70,6	76,0	88,9
	Plant exchanger pressure drop	kPa	10	8	11	9	17	30	13	32
	Winter working mode - Heating capacity (2)	**kW**	**231**	**269**	**312**	**361**	**402**	**453**	**466**	**561**
	Unit power input	kW	72,9	87,6	102,3	109,1	121,5	137,3	139,9	169,5
	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 steps	n.	4	4	4	25…100%	25…100%	25…100%	25…100%	25…100%
	Axial fans	n.	4	6	6	8	8	8	10	10
	Total air flow	m³/h	89644	144498	139686	193536	187992	181216	241920	234990
	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	116	103	138	143	191	239	179	238
	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	160,6	188,4	226,4	236,2	267,2	301,2	327,0	369,0
	Unit starting current (LRA)	A	365,6	409,4	497,4	414,2	500,2	661,2	678,0	850,0
	EER - Eurovent standard (1)	kW/kW	2,98	2,96	2,95	2,96	2,97	2,96	2,94	2,99
	COP - Eurovent standard (2)	kW/kW	3,17	3,07	3,05	3,31	3,31	3,3	3,33	3,31
	ESEER		3,46	3,42	3,29	3,37	3,38	3,31	3,37	3,34
	Sound power level [Lw] (3)	dB(A)	91,6	92,2	92,3	92,5	92,9	97,2	97,2	97,7
	Average sound pressure level [Lpm] (4)	dB(A)	72,3	72,2	72,3	71,7	72,1	76,4	76	76,5
	Net weight	kg	3181	3773	3783	5714	5730	5782	6475	6642
	Hydraulic connections									
	Plant exchanger IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	219,1	219,1	219,1	219,1	219,1
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**39,9**	**48,2**	**55,7**	**67,3**	**73,9**	**81,7**	**88,0**	**103,0**
	Pumping group	kW	2,2	2,2	2,2	3,0	3,0	5,5	5,5	5,5
LNO KIT 100%	**Summary working mode - Cooling capacity (1)**	**kW**	**201**	**242**	**280**	**338**	**371**	**411**	**442**	**518**
	Unit power input	kW	67,4	81,8	94,9	114,2	124,9	138,9	150,3	173,2
	Winter working mode - Heating capacity (2)	**kW**	**231**	**269**	**312**	**361**	**402**	**453**	**466**	**561**
	Unit power input	kW	72,9	87,6	102,3	109,1	121,5	137,3	139,9	169,5
	Total air flow	m³/h	89644	144498	139686	193536	187992	181216	241920	234990
	EER - Eurovent standard (1)	kW/kW	2,98	2,96	2,95	2,96	2,97	2,96	2,94	2,99
	COP - Eurovent standard (2)	kW/kW	3,17	3,07	3,05	3,31	3,31	3,30	3,33	3,31
	Sound power level [Lw] (3)	dB(A)	89,6	90,2	90,3	90,5	90,9	95,2	95,2	95,7
	Average sound pressure level [Lpm] (4)	dB(A)	70,3	70,2	70,3	69,7	70,1	74,4	74	74,5
LNO KIT 85%	**Summary working mode - Cooling capacity (1)**	**kW**	**198**	**240**	**276**	**333**	**365**	**404**	**435**	**511**
	Unit power input	kW	67,6	81,4	94,8	114,0	124,6	139,8	149,5	174,4
	Winter working mode - Heating capacity (2)	**kW**	**228**	**266**	**309**	**356**	**396**	**446**	**456**	**551**
	Unit power input	kW	71,5	85,5	100,3	106,6	119,3	135,2	136,1	167,0
	Total air flow	m³/h	76197	122823	118733	164506	159793	154034	205632	199742
	EER - Eurovent standard (1)	kW/kW	2,93	2,95	2,91	2,92	2,93	2,89	2,91	2,93
	COP - Eurovent standard (2)	kW/kW	3,19	3,11	3,08	3,34	3,32	3,30	3,35	3,30
	Sound power level [Lw] (3)	dB(A)	86,6	87,2	87,3	87,5	87,9	92,2	92,2	92,7
	Average sound pressure level [Lpm] (4)	dB(A)	67,3	67,2	67,3	66,7	67,1	71,4	71	71,5
LNO KIT 70%	**Summary working mode - Cooling capacity (1)**	**kW**	**194**	**236**	**271**	**325**	**356**	**393**	**424**	**501**
	Unit power input	kW	68,1	81,4	95,4	113,6	124,5	140,4	149,8	177,0
	Winter working mode - Heating capacity (2)	**kW**	**224**	**262**	**303**	**350**	**388**	**438**	**443**	**536**
	Unit power input	kW	70,0	83,2	98,4	103,9	115,8	131,5	132,2	161,9
	Total air flow		62751	101149	97780	135475	131594	126851	169344	164493
	EER - Eurovent standard (1)	kW/kW	2,85	2,90	2,84	2,86	2,86	2,80	2,83	2,83
	COP - Eurovent standard (2)	kW/kW	3,20	3,15	3,08	3,37	3,35	3,33	3,35	3,31
	Sound power level [Lw] (3)	dB(A)	83,6	84,2	84,3	84,5	84,9	89,2	89,2	89,7
	Average sound pressure level [Lpm] (4)	dB(A)	64,3	64,2	64,3	63,7	64,1	68,4	68	68,5
ELN KIT	**Summary working mode - Cooling capacity (1)**	**kW**	**194**	**236**	**271**	**325**	**356**	**393**	**424**	**501**
	Unit power input	kW	68,1	81,4	95,4	113,6	124,5	140,4	149,8	177,0
	Winter working mode - Heating capacity (2)	**kW**	**224**	**262**	**303**	**350**	**388**	**438**	**443**	**536**
	Unit power input	kW	70,0	83,2	98,4	103,9	115,8	131,5	132,2	161,9
	Total air flow		62751	101149	97780	135475	131594	126851	169344	164493
	EER - Eurovent standard (1)	kW/kW	2,85	2,90	2,84	2,86	2,86	2,80	2,83	2,83
	COP - Eurovent standard (2)	kW/kW	3,20	3,15	3,08	3,37	3,35	3,33	3,35	3,31
	Sound power level [Lw] (3)	dB(A)	80,6	81,2	81,3	81,5	81,9	86,2	86,2	86,7
	Average sound pressure level [Lpm] (4)	dB(A)	61,3	61,2	61,3	60,7	61,1	65,4	65	65,5

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

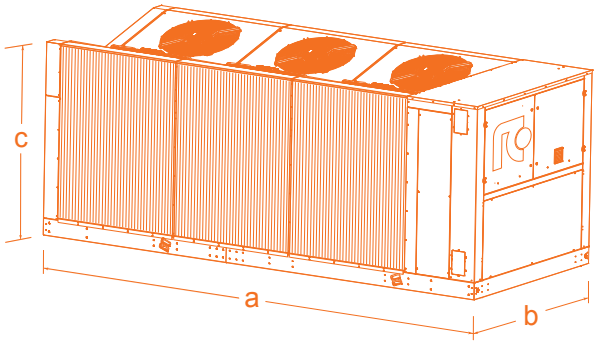
REVERSO SCREW TECHNICAL DATA

	REVERSO SCREW SIZE		570 V2 U10	670 V2 U12	790 V2 U12	880 V2 U12	930 V2 U14	980 V2 U14	1090 V2 U14
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**571**	**666**	**795**	**882**	**933**	**977**	**1095**
	Unit power input	kW	190,3	225,0	266,8	297,0	314,1	329,0	367,4
	Plant exchanger water flow rate	m³/h	98,2	114,0	137,0	152,0	161,0	168,0	188,0
	Plant exchanger pressure drop	kPa	26	46	40	38	41	43	51
	Winter working mode - Heating capacity (2)	**kW**	**617**	**739**	**903**	**1012**	**1010**	**1065**	**1219**
	Unit power input	kW	180,4	222,6	259,5	280,3	291,1	302,6	337,7
	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 steps	n.	25…100%	25…100%	25…100%	25…100%	25…100%	25…100%	25…100%
	Axial fans	n.	10	12	12	12	14	14	14
	Total air flow	m³/h	234990	290304	281988	271824	328986	328986	317128
	Air circuits	n.	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	238	214	284	355	331	331	414
	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	406,0	460,8	520,8	582,8	621,6	669,6	764,6
	Unit starting current (LRA)	A	583,0	614,8	657,8	767,8	881,6	957,6	1112,6
	EER - Eurovent standard (1)	kW/kW	3,00	2,96	2,98	2,97	2,97	2,97	2,98
	COP - Eurovent standard (2)	kW/kW	3,42	3,32	3,48	3,61	3,47	3,52	3,61
	ESEER		3,45	3,38	3,38	3,37	3,41	3,49	3,49
	Sound power level [Lw] (3)	dB(A)	97,7	100,4	101,7	101,4	99,9	99,9	102,9
	Average sound pressure level [Lpm] (4)	dB(A)	76,5	78,8	80,1	79,8	77,7	77,7	80,9
	Net weight	kg	6739	7118	7695	8170	8507	8567	9563
	Hydraulic connections								
	Plant exchanger IN/OUT - OD (5)	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1	219,1
OPT	Partial heat recovery (6)								
	Heating capacity	**kW**	**114**	**133**	**158**	**176**	**186**	**194**	**218**
	Pumping group	kW	5,5	7,5	7,5	15,0	15,0	15,0	15,0
LNO KIT 100%	**Summer working mode - Cooling capacity (1)**	**kW**	**571**	**666**	**795**	**882**	**933**	**977**	**1095**
	Unit power input	kW	190,3	225,0	266,8	297,0	314,1	329,0	367,4
	Winter working mode - Heating capacity (2)	**kW**	**617**	**739**	**903**	**1012**	**1010**	**1065**	**1219**
	Unit power input	kW	180,4	222,6	259,5	280,3	291,1	302,6	337,7
	Total air flow	m³/h	234990	290304	281988	271824	328986	328986	317128
	EER - Eurovent standard (1)	kW/kW	3,00	2,96	2,98	2,97	2,97	2,97	2,98
	COP - Eurovent standard (2)	kW/kW	3,42	3,32	3,48	3,61	3,47	3,52	3,61
	Sound power level [Lw] (3)	dB(A)	95,7	98,4	99,7	99,4	97,9	97,9	100,9
	Average sound pressure level [Lpm] (4)	dB(A)	74,5	76,8	78,1	77,8	75,7	75,7	78,9
LNO KIT 85%	**Summer working mode - Cooling capacity (1)**	**kW**	**562**	**656**	**780**	**865**	**920**	**961**	**1070**
	Unit power input	kW	192,5	226,2	269,9	302,4	318,3	334,8	375,4
	Winter working mode - Heating capacity (2)	**kW**	**605**	**729**	**890**	**992**	**992**	**1046**	**1195**
	Unit power input	kW	176,9	217,0	255,0	275,6	285,1	296,3	331,9
	Total air flow	m³/h	199742	246758	239690	231050	279638	279638	269559
	EER - Eurovent standard (1)	kW/kW	2,92	2,90	2,89	2,86	2,89	2,87	2,85
	COP - Eurovent standard (2)	kW/kW	3,42	3,36	3,49	3,60	3,48	3,53	3,60
	Sound power level [Lw] (3)	dB(A)	92,7	95,4	96,7	96,4	94,9	94,9	97,9
	Average sound pressure level [Lpm] (4)	dB(A)	71,5	73,8	75,1	74,8	72,7	72,7	75,9
LNO KIT 70%	**Summer working mode - Cooling capacity (1)**	**kW**	**549**	**641**	**760**	**843**	**892**	**939**	**1040**
	Unit power input	kW	195,4	229,7	276,4	312,2	327,9	345,2	388,1
	Winter working mode - Heating capacity (2)	**kW**	**582**	**716**	**870**	**967**	**969**	**1021**	**1163**
	Unit power input	kW	172,2	211,8	248,6	270,1	280,1	290,1	325,8
	Total air flow		164493	203213	197392	190277	230290	230290	221990
	EER - Eurovent standard (1)	kW/kW	2,81	2,79	2,75	2,70	2,72	2,72	2,68
	COP - Eurovent standard (2)	kW/kW	3,38	3,38	3,50	3,58	3,46	3,52	3,57
	Sound power level [Lw] (3)	dB(A)	89,7	92,4	93,7	93,4	91,9	91,9	94,9
	Average sound pressure level [Lpm] (4)	dB(A)	68,5	70,8	72,1	71,8	69,7	69,7	72,9
ELN KIT	**Summer working mode - Cooling capacity (1)**	**kW**	**549**	**641**	**760**	**843**	**892**	**939**	**1040**
	Unit power input	kW	195,4	229,7	276,4	312,2	327,9	345,2	388,1
	Winter working mode - Heating capacity (2)	**kW**	**582**	**716**	**870**	**967**	**969**	**1021**	**1163**
	Unit power input	kW	172,2	211,8	248,6	270,1	280,1	290,1	325,8
	Total air flow		164493	203213	197392	190277	230290	230290	221990
	EER - Eurovent standard (1)	kW/kW	2,81	2,79	2,75	2,70	2,72	2,72	2,68
	COP - Eurovent standard (2)	kW/kW	3,38	3,38	3,50	3,58	3,46	3,52	3,57
	Sound power level [Lw] (3)	dB(A)	86,7	89,4	90,7	90,4	88,9	88,9	91,9
	Average sound pressure level [Lpm] (4)	dB(A)	65,5	67,8	69,1	68,8	66,7	66,7	69,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient air temperature according to Eurovent standard.
2. Referred to hot water outlet temperature 45°C; 7°C ambient air temperature according to Eurovent standard.
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 chilled water temperature 12/7°C; 35°C ambient air temperature; hot water temperature 40/45°C

DIMENSIONS (mm)

REVERSO SCREW	a	b	c
U04	3815	2206	2015
U06	5215	2206	2015
U08	6045	2206	2525
U10	7175	2206	2525
U12	8305	2206	2525
U14	9435	2206	2525



NEMO HP: Water / water reversible heat pumps
for indoor installation, equipped with scroll compressor and plate heat exchangers
Cooling Capacity: **5,5 ÷ 25,0 kW**
Heating Capacity: **6,4 ÷ 29,3 kW**

EUROVENT CERTIFIED PERFORMANCE
www.eurovent-certification.com

nemo hp

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R410A PLATE

MAIN FEATURES
- Reversible heat pump.
- 13 models available, for a wide selection opportunity..
- Average step of 2,5kW.
- EER up to 4,44.
- COP up to 4,18.
- ESEER up to 4,80.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchangers.
- 3-speed circulation pump.
- Suitable for indoor installation.

MAIN BENEFITS
- Availability of partial heat recovery system.
- Easily of maintenance.
- Reduced noise emission
- 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

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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.

PLANT SIDE HEAT EXCHANGER

- 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.

EXHAUSTION SIDE HEAT EXCHANGER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Anticondensate insulation made of polyurethane.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the condensing/evaporating control system of the 2-way motorized valve.

REFRIGERANT CIRCUIT

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. 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.
- 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.
- Summer / Winter working mode selector.
- 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 HP 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

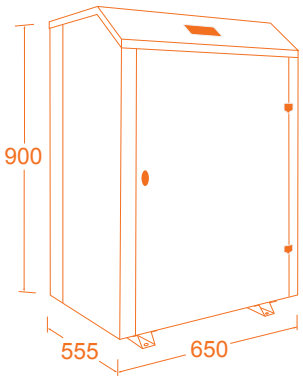
TECHNICAL DATA NEMO HP

	NEMO HP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**5,6**	**7,6**	**10,5**	**13,0**	**5,3**	**6,8**	**9,5**	**12,3**
	Unit power input	kW	1,6	2,0	2,6	3,3	1,6	2,0	2,6	3,3
	Plant exchanger water flow rate	m³/h	1,0	1,3	1,8	2,2	0,9	1,2	1,6	2,1
	Plant exchanger pressure drop	kPa	37	33	38	42	33	30	34	38
	Exhaust exchanger water flow rate	m³/h	1,2	1,6	2,1	2,8	1,1	1,5	2,0	2,6
	Exhaust exchanger pressure drop	kPa	54	48	49	59	45	45	47	53
	Winter working mode - Heating capacity (2)	**kW**	**7,6**	**9,5**	**13,1**	**17,2**	**7,2**	**9,2**	**12,7**	**16,5**
	Unit power input	kW	2,0	2,5	3,3	4,1	2,0	2,5	3,2	4,1
	Max unit operating current	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0	12,3
	Plant exchanger water flow rate	m³/h	1,0	1,3	1,8	2,2	0,9	1,2	1,6	2,1
	Plant exchanger pressure drop	kPa	29	30	34	33	26	23	27	29
	Exhaust exchanger water flow rate	m³/h	1,0	1,2	1,7	2,3	0,9	1,2	1,7	2,2
	Exhaust exchanger pressure drop	kPa	31	28	32	35	27	25	28	31
	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	62,0	69,0	100,0	117,5	30,0	40,0	45,0	53,5
	EER (1)	kW/kW	3,47	3,77	4,05	3,93	3,36	3,40	3,68	3,77
	COP (2)	kW/kW	3,80	3,85	4,02	4,16	3,67	3,70	3,95	4,04
	ESEER		3,71	4,06	4,33	4,21	3,64	3,71	3,99	4,09
	Sound power level [Lw] (3)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2	58,2
	Average sound pressure level [Lpm] (4)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0	44,0
	Net weight	kg	90,8	93,5	103,6	108,4	90,8	93,5	103,6	108,4
	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"	1 1/2"	1 1/2"	1 1/2"
OPT	Partial heat recovery (5)									
	Heating capacity	**kW**	**0,9**	**1,1**	**1,6**	**2,1**	**0,9**	**1,1**	**1,5**	**2,0**
	Water tank - volume	l	40	40	40	40	40	40	40	40

	NEMO HP		T 15 P1	T 17 P1	T 20 P1	T 25 P1	T 30 P1
	SIZE		J3	J3	J3	J3	J3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**13,9**	**16,6**	**18,6**	**23,4**	**30,0**
	Unit power input	kW	3,8	4,4	4,9	6,1	6,8
	Plant exchanger water flow rate	m³/h	2,4	2,9	3,2	4,0	5,2
	Plant exchanger pressure drop	kPa	35	40	37	40	41
	Exhaust exchanger water flow rate	m³/h	3,0	3,5	3,9	5,0	5,8
	Exhaust exchanger pressure drop	kPa	51	56	50	53	40
	Winter working mode - Heating capacity (2)	**kW**	**18,5**	**21,8**	**24,7**	**30,8**	**37,4**
	Unit power input	kW	4,6	5,5	6,1	7,5	8,9
	Max unit operating current	A	13,8	17,0	17,0	23,0	24,0
	Plant exchanger water flow rate	m³/h	2,4	2,9	3,2	4,0	5,2
	Plant exchanger pressure drop	kPa	27	32	29	30	34
	Exhaust exchanger water flow rate	m³/h	2,4	2,9	3,2	4,1	5,0
	Exhaust exchanger pressure drop	kPa	29	33	31	34	35
	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	66,0	77,0	103,0	113,0	120,0
	EER (1)	kW/kW	3,65	3,76	3,78	3,83	4,44
	COP (2)	kW/kW	4,03	4,00	4,03	4,12	4,18
	ESEER		3,94	4,02	4,09	4,10	4,80
	Sound power level [Lw] (3)	dB(A)	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (4)	dB(A)	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	116,6	118,1	120,6	143,8	149,5
	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 (5)						
	Heating capacity	**kW**	**2,2**	**2,6**	**3,0**	**3,7**	**4,7**
	Water tank - volume	l	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to chilled water temperature 12/7°C; hot water outlet temperature 45°C according to Eurovent standard.
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. 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 HP: Water / water reversible heat pumps
for indoor installation, equipped with scroll compressors and plate heat exchangers
Cooling Capacity: **26,8 ÷ 606,0 kW**
Heating Capacity: **34,8 ÷ 817,0 kW**

manta hp

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R410A PLATE

MAIN FEATURES
- Reversible heat pump.
- 32 models available, for a wide selection opportunity..
- Average step of 25kW.
- EER up to 4,07.
- COP up to 3,96.
- ESEER up to 5,33.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- 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.
- 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

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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.

PLANT SIDE HEAT EXCHANGER
- 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.

EXHAUSTION SIDE HEAT EXCHANGER
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the 2-way motorized valve for the condensing control (summer working mode) and evaporating control (winter working mode).

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:
- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. 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.
- 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.
- Oil drainage and oil recovery systems.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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 HP	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
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
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 HP	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 190 P4 D
SIZE	J7	J7	J7	J7	J7	J7	J7	J8	J8	J8	J9
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	-	●	-	●	-	●	-	●	●	●	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
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 HP	T 200 P2 S	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	J9	J10	J10	J10	J10
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●
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 HP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**26,8**	**30,3**	**33,7**	**37,4**	**42,3**	**43,8**	**51,7**	**50,5**
	Unit power input	kW	7,0	7,8	8,8	10,6	12,2	11,9	14,0	13,4
	Plant exchanger water flow rate	m³/h	4,6	5,2	5,8	6,4	7,3	7,5	8,9	8,7
	Plant exchanger pressure drop	kPa	55	56	50	37	46	28	47	29
	Exhaust exchanger water flow rate	m³/h	5,7	6,5	7,2	8,2	9,3	9,5	11,2	11,0
	Exhaust exchanger pressure drop	kPa	69	63	64	47	57	38	57	38
	Winter working mode - Heating capacity (2)	**kW**	**34,8**	**39,3**	**43,8**	**50,2**	**57,6**	**59,2**	**69,3**	**68,0**
	Unit power input	kW	8,6	9,6	10,9	13,0	14,9	14,9	17,5	16,9
	Plant exchanger water flow rate	m³/h	4,6	5,2	5,8	6,4	7,3	7,5	8,9	8,7
	Plant exchanger pressure drop	kPa	42	42	37	25	30	20	31	20
	Exhaust exchanger water flow rate	m³/h	4,6	5,2	5,8	6,5	7,5	7,7	9,0	8,9
	Exhaust exchanger pressure drop	kPa	47	48	42	31	38	22	38	23
	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	3,83	3,88	3,81	3,52	3,48	3,67	3,68	3,77
	COP (2)	kW/kW	4,05	4,10	4,03	3,86	3,86	3,98	3,96	4,02
	ESEER		4,07	4,12	4,02	4,28	4,18	4,36	4,68	4,36
	Sound power level [Lw] (3)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9
	Average sound pressure level [Lpm] (4)	dB(A)	50,0	51,0	52,0	53,0	53,0	53,0	53,0	53,0
	Net weight	kg	263	266	275	288	445	455	455	470
	Hydraulic connections									
	Plant/Exhaustion exchangers IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"
	Plant/Exhaustion exchangers IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**4,2**	**4,7**	**5,2**	**5,9**	**6,8**	**--**	**8,2**	**--**

	MANTA HP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**56,9**	**57,3**	**62,5**	**63,7**	**84,7**	**74,8**	**96,9**	**98,2**
	Unit power input	kW	16,0	15,2	17,5	17,0	21,5	20,5	27,1	26,2
	Plant exchanger water flow rate	m³/h	9,8	9,8	10,7	10,9	14,5	12,8	16,6	16,8
	Plant exchanger pressure drop	kPa	50	28	43	28	50	28	46	29
	Exhaust exchanger water flow rate	m³/h	12,4	12,4	13,7	13,8	18,2	16,4	21,2	21,3
	Exhaust exchanger pressure drop	kPa	60	37	51	36	60	37	52	36
	Winter working mode - Heating capacity (2)	**kW**	**76,4**	**76,6**	**84,0**	**84,6**	**101,0**	**101,0**	**132,0**	**132,0**
	Unit power input	kW	19,9	19,2	21,9	21,2	26,1	25,4	33,6	32,5
	Plant exchanger water flow rate	m³/h	9,8	9,8	10,7	10,9	14,5	12,8	16,6	16,8
	Plant exchanger pressure drop	kPa	32	20	27	20	40	19	27	19
	Exhaust exchanger water flow rate	m³/h	9,9	10,0	10,8	11,0	13,1	13,1	17,1	17,3
	Exhaust exchanger pressure drop	kPa	40	22	35	22	41	23	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
	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	3,56	3,76	3,57	3,75	3,94	3,65	3,57	3,75
	COP (2)	kW/kW	3,84	4,00	3,84	3,99	3,87	3,97	3,93	4,06
	ESEER		4,48	4,32	4,39	4,25	5,06	4,24	4,51	4,29
	Sound power level [Lw] (3)	dB(A)	69,9	69,9	70,9	70,9	71,9	71,9	76,9	76,9
	Average sound pressure level [Lpm] (4)	dB(A)	54,0	54,0	55,0	55,0	56,0	56,0	61,0	61,0
	Net weight	kg	465	480	470	495	475	506	730	770
	Hydraulic connections									
	Plant/Exhaustion exchangers IN/OUT - ISO228/1-G M	Ø	2"	2"	2"	2"	2"	2"	--	--
	Plant/Exhaustion exchangers IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	76,1	76,1
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**8,9**	**--**	**9,8**	**--**	**11,9**	**--**	**15,5**	**--**

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
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 chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

TECHNICAL DATA MANTA

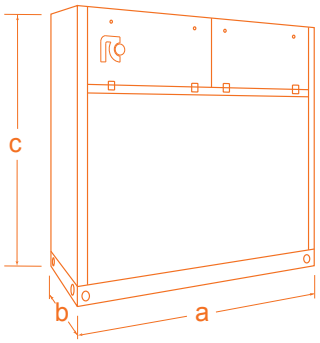
	MANTA HP		T 120 P2 S	T 120 P2 D	T 150 P2 S	T 150 P2 D	T 170 P4 D	T 190 P4 D	T 200 P2 S	T 200 P2 D
	SIZE		J7	J7	J8	J8	J8	J9	J9	J9
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**122,0**	**119,0**	**158,0**	**154,0**	**194,0**	**207,0**	**207,0**	**220,0**
	Unit power input	kW	34,3	33,4	43,4	42,7	47,8	55,1	54,8	55,1
	Plant exchanger water flow rate	m³/h	20,9	20,5	27,0	26,4	33,3	35,5	35,6	37,7
	Plant exchanger pressure drop	kPa	48	38	46	42	43	34	46	53
	Exhaust exchanger water flow rate	m³/h	26,7	26,2	34,5	33,8	41,5	45,1	45,0	47,1
	Exhaust exchanger pressure drop	kPa	53	47	45	47	69	42	62	71
	Winter working mode - Heating capacity (2)	**kW**	**165,0**	**164,0**	**213,0**	**211,0**	**237,0**	**262,0**	**275,0**	**276,0**
	Unit power input	kW	42,2	41,4	53,4	53,0	59,8	71,0	66,4	66,3
	Plant exchanger water flow rate	m³/h	20,9	20,5	27,0	26,4	33,3	35,5	35,6	37,7
	Plant exchanger pressure drop	kPa	28	24	24	24	58	75	37	43
	Exhaust exchanger water flow rate	m³/h	21,4	21,2	27,8	27,4	30,9	33,2	36,2	36,4
	Exhaust exchanger pressure drop	kPa	39	31	38	33	45	28	43	44
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	4	4	2	2
	Capacity steps	n.	2	2	2	2	4	4	2	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	23,9	22,4	22,8
	Gas circuits	n.	1	2	1	2	2	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	97	97	131	131	148	160	164	164
	Unit starting current (LRA)	A	321	321	375	375	333	345	466	466
	EER (1)	kW/kW	3,56	3,56	3,64	3,61	4,06	3,76	3,78	3,99
	COP (2)	kW/kW	3,91	3,96	3,99	3,98	3,96	3,69	4,14	4,16
	ESEER		4,07	4,50	4,14	4,65	5,33	5,04	4,47	4,73
	Sound power level [Lw] (3)	dB(A)	80,1	80,1	81,0	81,0	81,0	81,0	81,0	81,0
	Average sound pressure level [Lpm] (4)	dB(A)	64,0	64,0	64,0	64,0	64,0	64,0	64,0	64,0
	Net weight	kg	785	800	1035	1040	1140	1345	1100	1135
	Hydraulic connections									
	Plant/Exhaustion exchangers IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--
	Plant/Exhaustion exchangers IN/OUT - OD (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	88,9	88,9	88,9
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**19,4**	**--**	**25,2**	**24,9**	**28,0**	**30,1**	**32,9**	**33,0**

	MANTA HP		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	J10	J10	J10	J10
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**262,0**	**250,0**	**328,0**	**313,0**	**364,0**	**405,0**	**482,0**	**606,0**
	Unit power input	kW	64,2	67,6	81,8	86,7	98,6	109,2	126,5	166,9
	Plant exchanger water flow rate	m³/h	45,0	42,9	56,3	53,7	62,6	69,5	82,7	104,0
	Plant exchanger pressure drop	kPa	52	61	49	70	70	64	63	85
	Exhaust exchanger water flow rate	m³/h	55,9	54,3	70,3	68,4	79,3	88,2	105,0	132,0
	Exhaust exchanger pressure drop	kPa	68	81	60	89	86	74	64	83
	Winter working mode - Heating capacity (2)	**kW**	**332,0**	**335,0**	**413,0**	**420,0**	**488,0**	**539,0**	**646,0**	**817,0**
	Unit power input	kW	79,2	82,9	99,0	106,6	119,9	132,8	134,3	202,7
	Plant exchanger water flow rate	m³/h	45,0	42,9	56,3	53,7	62,6	69,5	82,7	104,0
	Plant exchanger pressure drop	kPa	46	44	40	48	46	40	34	44
	Exhaust exchanger water flow rate	m³/h	43,9	43,8	54,5	54,6	63,9	70,5	88,9	107,0
	Exhaust exchanger pressure drop	kPa	49	50	46	57	57	53	52	69
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	3	4	3	4	4	4	6	6
	Capacity steps	n.	3	4	3	4	4	4	6	6
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	23,1	24,7	30,3	31,6	31,1	48,1	49,5	62,4
	Gas circuits	n.	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
	Max unit operating current (FLA)	A	197	246	194	262	295	328	393	492
	Unit starting current (LRA)	A	441	584	418	507	597	630	637	794
	EER (1)	kW/kW	4,08	3,70	4,01	3,61	3,69	3,71	3,81	3,63
	COP (2)	kW/kW	4,19	4,04	4,17	3,94	4,07	4,06	4,81	4,03
	ESEER		5,32	4,82	5,28	4,71	4,82	4,88	5,13	4,89
	Sound power level [Lw] (3)	dB(A)	82,8	84,1	82,8	84,1	84,5	84,5	86,3	86,3
	Average sound pressure level [Lpm] (4)	dB(A)	65,8	67,0	65,8	67,0	67,0	67,0	68,8	68,8
	Net weight	kg	1310	1570	1390	1615	1710	1796	2270	2365
	Hydraulic connections									
	Plant/Exhaustion exchangers IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--
	Plant/Exhaustion exchangers IN/OUT - OD (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**39,8**	**39,7**	**49,4**	**49,5**	**57,9**	**63,9**	**80,6**	**96,9**

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
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 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



MANTA WP: Water / water heat pumps
for indoor installation, equipped with scroll compressors and plate heat exchangers
Inversion on hydraulic circuit.
Cooling Capacity: **28,0 ÷ 655,0 kW**
Heating Capacity: **35,1 ÷ 828,0 kW**

manta wp

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Reversible heat pump.
- Inversion on hydraulic circuit.
- 32 models available, for a wide selection opportunity..
- Average step of 25kW.
- EER up to 4,29.
- COP up to 4,46.
- ESEER up to 5,33.
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- 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.
- 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.

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.
- Anticondensate insulation made of polyurethane.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the 2-way motorized valve for the condensing control .

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.
  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 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.
- Oil drainage and oil recovery systems.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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 WP	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
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●
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 WP	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
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	-	●	-	●	-	●	-	●	●	●	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	-
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 WP	T 190 P4 D	T 200 P2 S	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	J9	J9	J10	J10	J10	J10
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●	●	●	●
Exhaustion heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●	●	●	●
1002 - Condensing control with 2 way valve	●	●	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
Ambient temperature sensor	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	-	-	-	-	-	-	-	-	-	-	-
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 WP

	MANTA WP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**28,0**	**31,7**	**35,7**	**40,3**	**47,0**	**46,8**	**55,4**	**55,6**
	Unit power input	kW	7,0	7,9	9,1	10,7	12,3	11,8	14,1	13,5
	Evaporator water flow rate	m³/h	4,8	5,5	6,1	6,9	8,1	8,0	9,5	9,5
	Evaporator pressure drop	kPa	55	56	51	37	46	28	47	29
	Condenser water flow rate	m³/h	5,9	6,7	7,6	8,7	10,1	10,1	11,9	11,8
	Condenser pressure drop	kPa	69	63	65	47	57	38	57	38
	Winter working mode - Heating capacity (2)	**kW**	**35,1**	**39,6**	**44,8**	**51,3**	**59,8**	**59,5**	**69,9**	**70,2**
	Unit power input	kW	8,7	9,7	11,1	13,1	15,3	14,7	17,7	17,0
	Evaporator water flow rate	m³/h	4,6	5,3	5,9	6,7	7,8	7,8	9,1	9,2
	Evaporator pressure drop	kPa	52	53	48	35	43	26	44	27
	Condenser water flow rate	m³/h	4,8	5,5	6,1	6,9	8,1	8,0	9,5	9,5
	Condenser pressure drop	kPa	49	49	43	30	37	25	38	26
	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	3,98	4,03	3,93	3,77	3,83	3,95	3,93	4,11
	COP (2)	kW/kW	4,05	4,10	4,04	3,91	3,92	4,05	3,96	4,12
	ESEER		4,07	4,12	4,02	4,27	4,18	4,36	4,68	4,36
	Sound power level [Lw] (3)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9
	Average sound pressure level [Lpm] (4)	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 (5)	Ø mm	--	--	--	--	--	--	--	--
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**4,2**	**4,8**	**5,4**	**6,0**	**7,1**	**--**	**8,3**	**--**

	MANTA WP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**63,8**	**63,0**	**69,1**	**69,5**	**80,9**	**83,0**	**106,0**	**105,0**
	Unit power input	kW	16,0	15,3	18,1	17,4	21,6	20,2	27,4	26,5
	Evaporator water flow rate	m³/h	10,9	10,8	11,9	11,9	13,9	14,3	18,2	18,1
	Evaporator pressure drop	kPa	50	28	44	28	50	29	46	29
	Condenser water flow rate	m³/h	13,6	13,4	14,9	14,9	17,5	17,7	22,8	22,7
	Condenser pressure drop	kPa	60	37	52	37	60	37	52	36
	Winter working mode - Heating capacity (2)	**kW**	**80,0**	**78,9**	**87,5**	**87,8**	**103,0**	**99,2**	**135,0**	**134,0**
	Unit power input	kW	20,1	19,2	22,3	21,6	26,4	25,1	33,8	32,6
	Evaporator water flow rate	m³/h	10,5	10,4	11,4	11,5	13,4	14,3	17,6	17,5
	Evaporator pressure drop	kPa	46	26	41	27	47	25	43	27
	Condenser water flow rate	m³/h	10,9	10,8	11,9	11,9	13,9	12,9	18,2	18,1
	Condenser pressure drop	kPa	40	25	34	25	39	24	35	24
	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	3,98	4,12	3,82	3,99	3,74	4,10	3,87	3,96
	COP (2)	kW/kW	3,99	4,11	3,92	4,06	3,90	3,95	4,00	4,11
	ESEER		4,48	4,32	4,39	4,25	5,06	4,24	4,51	4,29
	Sound power level [Lw] (3)	dB(A)	69,9	69,9	70,9	70,9	71,9	71,9	76,9	76,9
	Average sound pressure level [Lpm] (4)	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 (5)	Ø mm	--	--	--	--	--	--	76,1	76,1
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**9,5**	**--**	**10,3**	**--**	**12,1**	**--**	**15,9**	**--**

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
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 chilled water temperature 12/7°C; condenser water temperature 30/35°C and recovery hot water temperature 40/45°C.

TECHNICAL DATA MANTA WP

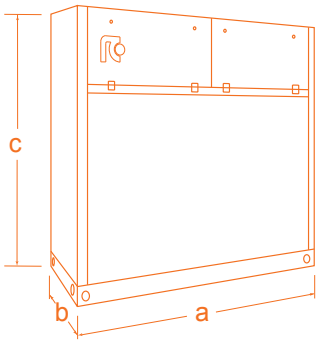
	MANTA WP		T 120 P2 S	T 120 P2 D	T 150 P2 S	T 150 P2 D	T 170 P4 D	T 175 P3 S	T 190 P4 D	T 200 P2 S
	SIZE		J7	J7	J8	J8	J8	J8	J9	J9
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**132,0**	**132,0**	**172,0**	**170,0**	**200,0**	**195,0**	**228,0**	**222,0**
	Unit power input	kW	34,5	33,8	43,4	43,1	48,2	51,3	53,1	55,5
	Evaporator water flow rate	m³/h	22,7	22,6	29,5	29,2	34,3	33,5	39,2	38,1
	Evaporator pressure drop	kPa	48	38	46	42	42	56	34	46
	Condenser water flow rate	m³/h	28,6	28,4	37,0	36,6	42,6	42,2	48,4	47,6
	Condenser pressure drop	kPa	53	47	45	47	70	78	42	61
	Winter working mode - Heating capacity (2)	**kW**	**169,0**	**177,0**	**217,0**	**216,0**	**250,0**	**249,0**	**277,0**	**279,0**
	Unit power input	kW	42,4	39,7	53,7	53,2	59,0	62,9	65,5	66,9
	Evaporator water flow rate	m³/h	21,9	23,8	28,3	28,3	33,2	33,5	36,7	36,8
	Evaporator pressure drop	kPa	45	36	44	40	39	51	30	43
	Condenser water flow rate	m³/h	22,7	22,6	29,5	29,2	34,3	32,4	39,2	38,1
	Condenser pressure drop	kPa	34	28	30	32	44	53	33	41
	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	2	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	3,83	3,90	3,96	3,94	4,15	3,80	4,29	4,00
	COP (2)	kW/kW	3,99	4,46	4,04	4,06	4,24	3,96	4,23	4,17
	ESEER		4,07	4,50	4,14	4,65	5,33	5,37	5,04	4,47
	Sound power level [Lw] (3)	dB(A)	80,1	80,1	81,0	81,0	81,0	82,8	81,0	81,0
	Average sound pressure level [Lpm] (4)	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 (5)	Ø mm	76,1	76,1	76,1	76,1	76,1	76,1	88,9	88,9
OPT	Partial heat recovery (6)									
	Heating capacity	**kW**	**19,9**	**--**	**25,7**	**25,7**	**30,1**	**29,4**	**33,2**	**33,3**

	MANTA WP		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	**Summer working mode - Cooling capacity (1)**	**kW**	**224,0**	**265,0**	**270,0**	**331,0**	**339,0**	**394,0**	**436,0**	**523,0**	**655,0**
	Unit power input	kW	55,7	65,0	68,4	83,0	87,4	99,7	111,5	128,8	169,3
	Evaporator water flow rate	m³/h	38,4	45,5	46,3	56,8	58,2	67,5	74,8	89,8	112,0
	Evaporator pressure drop	kPa	52	52	61	49	70	70	64	63	85
	Condenser water flow rate	m³/h	47,9	56,6	57,9	71,1	73,0	84,5	93,8	112,0	141,0
	Condenser pressure drop	kPa	70	68	81	60	89	86	74	64	83
	Winter working mode - Heating capacity (2)	**kW**	**280,0**	**334,0**	**342,0**	**417,0**	**431,0**	**497,0**	**550,0**	**660,0**	**828,0**
	Unit power input	kW	67,0	79,9	83,4	100,0	107,8	121,2	134,1	158,7	203,9
	Evaporator water flow rate	m³/h	37,0	44,1	44,9	54,9	56,3	65,3	72,2	87,1	109,0
	Evaporator pressure drop	kPa	49	49	58	46	66	66	60	59	79
	Condenser water flow rate	m³/h	38,4	45,5	46,3	56,8	58,2	67,5	74,8	89,8	112,0
	Condenser pressure drop	kPa	47	46	54	40	59	57	49	43	55
	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	4,02	4,08	3,95	3,99	3,88	3,95	3,91	4,06	3,87
	COP (2)	kW/kW	4,18	4,18	4,10	4,17	4,00	4,10	4,10	4,16	4,06
	ESEER		4,73	5,32	4,82	5,28	4,71	4,82	4,88	5,13	4,89
	Sound power level [Lw] (3)	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] (4)	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 (5)	Ø mm	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9	88,9
OPT	Partial heat recovery (6)										
	Heating capacity	**kW**	**33,6**	**40,0**	**40,7**	**49,8**	**51,1**	**59,2**	**65,5**	**79,0**	**98,5**

1. Referred to chilled water temperature 12/7°C; condenser water temperature 30/35°C according to Eurovent standard.
2. Referred to hot water outlet temperature at 45°C and chilled water temperature 15/10°C according to Eurovent standard.
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 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 WP: Water / water heat pumps
for indoor installation, equipped with screw compressors and shall and tube heat exchangers.
Inversion on hydraulic circuit.
Cooling Capacity: **394 ÷ 1505 kW**
Heating Capacity: **477 ÷ 1976 kW**

frigo screw wp

rcgroupairconditioning

R134a SHELL

MAIN FEATURES
- Water/water heat pump liquid chiller.
- Inversion on hydraulic circuit.
- 14 models available, for a wide selection opportunity..
- Average step of 80kW.
- EER up to 5,05.
- COP up to 5,24.
- ESEER up to 5,72.
- Twin-screw compressors.
- Double refrigerant circuit.
- R134a Refrigerant charge.
- Electronic expansion valve.
- Shell and tube heat exchangers.
- Suitable for indoor installation.

MAIN BENEFITS
- 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.

WORKING LIMITS IN COOLING/HEATING 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 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.
- Insulation made of polyurethane.
- Temperature sensor on water outlet.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Driver for the additional module.
  - Additional module “1” for condenser water outlet temperature sensor.

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 WP	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	●	●	●	●	●	●	●	●	●	●	●	●	●	●
Condensers flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	●	●	●	●
Condensers 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●
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 WP

	FRIGO SCREW WP		410 V2	460 V2	510 V2	540 V2	610 V2	700 V2	790 V2	940 V2
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**393**	**443**	**493**	**551**	**604**	**657**	**741**	**881**
	Unit power input	kW	82,4	92,7	102,9	110,0	133,6	144,7	164,3	195,8
	Evaporator water flow rate	m³/h	67,5	76,0	84,6	94,6	104,0	113,0	127,0	151,0
	Evaporator pressure drop	kPa	6	22	17	18	21	25	22	17
	Condenser water flow rate	m³/h	82,2	92,4	103,0	114,0	127,0	138,0	156,0	186,0
	Condenser pressure drop	kPa	10	14	15	17	23	19	22	17
	Winter working mode - Heating capacity (2)	**kW**	**474**	**524**	**592**	**662**	**734**	**833**	**956**	**1115**
	Unit power input	kW	95,4	107,6	120,6	129,5	146,2	161,1	184,6	217,3
	Evaporator water flow rate	m³/h	65,2	71,9	81,2	91,8	102,0	116,0	133,0	155,0
	Evaporator pressure drop	kPa	25	13	9	11	14	11	16	13
	Condenser water flow rate	m³/h	67,5	76,0	84,6	94,6	104,0	113,0	127,0	151,0
	Condenser pressure drop	kPa	7	10	9	11	16	16	17	13
	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 steps	n.	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	65	65	155	155	155	155	142	136
	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	205	235,6	269,6	269,6	288,2	330,4	366,8	414
	Unit starting current (LRA)	A	382,5	468,8	629,8	629,8	639,1	811,2	544,4	568,0
	EER (1)	kW/kW	4,77	4,78	4,79	5,01	4,52	4,54	4,51	4,50
	COP (2)	kW/kW	4,97	4,87	4,91	5,11	5,02	5,17	5,18	5,13
	ESEER		5,41	5,34	5,25	5,72	5,12	5,19	5,16	5,08
	Sound power level [Lw] (3)	dB(A)	91,8	91,8	91,8	91,8	96,8	96,8	97,6	100,6
	Average sound pressure level [Lpm] (4)	dB(A)	74,0	74,0	74,0	74,0	79,0	79,0	79,0	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
	Condenser IN/OUT - ISO228/1-G M	Ø	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"	2 x 3"
	Condenser IN/OUT - OD (5)	Ø	--	--	--	--	--	--	--	--
OPT.	Partial heat recovery (6)									
	Heating capacity	kW	49,3	54,4	61,4	69,4	76,8	87,6	101	117

1. Referred to chilled water temperature 12/7°C; water to the condenser 30/35°C.
2. Referred to chilled water temperature 15/10°C; water outlet to the condenser 45°C.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Sound power level [Lw] according to ISO EN 9614 – 2.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chilled water temperature 12/7°C; water to the condenser 30/35°C and hot water temperature 40/45°C.

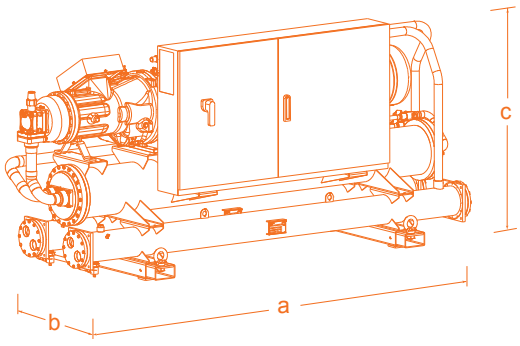
TECHNICAL DATA FRIGO SCREW WP

	FRIGO SCREW WP		1050 V2	1110 V2	1140 V2	1310 V2	1460 V2	1610 V2
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**976**	**1033**	**1076**	**1226**	**1369**	**1511**
	Unit power input	kW	217,4	228,5	236,0	269,5	296,3	335,0
	Evaporator water flow rate	m³/h	167,0	177,0	185,0	210,0	235,0	259,0
	Evaporator pressure drop	kPa	22	23	19	24	30	38
	Condenser water flow rate	m³/h	206,0	218,0	226,0	258,0	287,0	318,0
	Condenser pressure drop	kPa	18	23	20	16	17	20
	Winter working mode - Heating capacity (2)	**kW**	**1259**	**1346**	**1411**	**1569**	**1767**	**1978**
	Unit power input	kW	243,1	258,3	274,0	301,7	337,2	384,8
	Evaporator water flow rate	m³/h	175,0	187,0	196,0	218,0	246,0	275,0
	Evaporator pressure drop	kPa	18	21	15	20	26	34
	Condenser water flow rate	m³/h	167,0	177,0	185,0	210,0	235,0	259,0
	Condenser pressure drop	kPa	12	15	13	11	12	14
	Compressors		twin-screw	twin-screw	twin-screw	twin-screw	twin-screw	twin-screw
	Quantity	n.	2	2	2	2	2	2
	Capacity steps	n.	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	130	130	121	180	176	172
	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	474,2	535,8	567,4	615,4	709,6	797,6
	Unit starting current (LRA)	A	611,1	720,9	826,7	902,7	1057,8	1181,8
	EER (1)	kW/kW	4,49	4,52	4,56	4,55	4,62	4,51
	COP (2)	kW/kW	5,18	5,21	5,15	5,20	5,24	5,14
	ESEER		5,06	5,16	5,04	5,04	5,10	4,99
	Sound power level [Lw] (3)	dB(A)	100,6	101,2	101,2	101,2	103,6	103,6
	Average sound pressure level [Lpm] (4)	dB(A)	82,0	82,0	82,0	82,0	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
	Condenser IN/OUT - ISO228/1-G M	Ø	2 x 3"	2 x 3"	--	--	--	--
	Condenser IN/OUT - OD (5)	Ø	--	--	2 x 114,3	2 x 114,3	2 x 114,3	2 x 141,3
OPT.	Partial heat recovery (6)							
	Heating capacity	kW	132	142	148	165	186	208

1. Referred to chilled water temperature 12/7°C; water to the condenser 30/35°C.
2. Referred to chilled water temperature 15/10°C; water outlet to the condenser 45°C.
3. Average sound pressure level [LPm] 1m far according to ISO EN 3744.
4. Sound power level [Lw] according to ISO EN 9614 – 2.
5. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
6. Referred to chilled water temperature 12/7°C; water to the condenser 30/35°C and hot water temperature 40/45°C.

DIMENSIONS (mm)

FRIGO SCREW CLA	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



NEMO A HP: Motoevaporating heat pumps
for indoor installation, equipped with scroll compressor and plate heat exchanger
Cooling Capacity: **5,5 ÷ 25,0 kW**
Heating Capacity: **6,4 ÷ 29,3 kW**

nemo a hp

rcgroupairconditioning

R410A PLATE SPLIT SYSTEM

MAIN FEATURES
- Split-system heat pump liquid chiller.
- 13 models available, for a wide selection opportunity.
- Average step of 2,5kW.
- EER up to 2,90.
- COP up to 3,40.
- Scroll compressor.
- R410A Refrigerant charge.
- Single refrigerant circuit.
- Plate type heat exchanger.
- 3-speed circulation pump
- Suitable for indoor installation.
- Split-system.

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

INDOOR INSTALLATION
The machines are designed for indoor installation.

REMOTE EXCHANGER
The units are designed to be matched with remote exchanger with axial fans (TEAM MATE HP series) or plug-fan (TEAM MATE HP 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

WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 28÷58°C
Ambient temperature: -12÷30°C

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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.

PLANT SIDE HEAT EXCHANGER
- 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
- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. 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.
- 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/evaporating control system.
- 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.
- Summer / Winter working mode selector.
- 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 AIR/GAS HEAT EXCHANGERS

The units are designed to be matched with remote air/gas heat exchangers with axial fans (TEAM MATE HP) or plug-fan (TEAM MATE HP PF) series.

TEAM MATE HP

pg: 155

TEAM MATE HP PF

pg: 159

OPTIONAL ACCESSORIES

NEMO A HP 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 air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE PF remote air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●	●	●
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 HP

	NEMO A HP		M 06 P1	M 08 P1	M 10 P1	M 13 P1	T 06 P1	T 08 P1	T 10 P1
	SIZE		J3	J3	J3	J3	J3	J3	J3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**5,5**	**7,3**	**9,4**	**12,3**	**5,2**	**6,7**	**8,9**
	Unit power input (*)	kW	2,0	2,7	3,4	4,2	1,9	2,5	3,3
	Plant exchanger water flow rate	m³/h	1,0	1,3	1,6	2,1	0,9	1,1	1,5
	Plant exchanger pressure drop	kPa	33	22	29	25	29	19	26
	Winter working mode - Heating capacity (2)	**kW**	**6,4**	**8,3**	**10,9**	**14,1**	**6,1**	**7,7**	**10,3**
	Unit power input (*)	kW	2,1	2,7	3,4	4,1	2,1	2,6	3,3
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1	1
	Capacity steps	n.	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
	Refrigerant		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
	Gas circuits	n.	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
	Max unit operating current (FLA) (*)	A	14,8	19,1	23,0	33,0	6,7	8,5	10,0
	Unit starting current (LRA)	A	62,0	69,0	100,0	117,5	30,0	40,0	45,0
	EER - (1) (*)	kW/kW	2,82	2,73	2,74	2,9	2,69	2,65	2,71
	COP - (2) (*)	kW/kW	3,01	3,09	3,19	3,4	2,92	2,99	3,13
	Sound power level [Lw] (3)	dB(A)	56,2	56,2	58,2	58,2	56,2	56,2	58,2
	Average sound pressure level [Lpm] (4)	dB(A)	42,0	42,0	44,0	44,0	42,0	42,0	44,0
	Net weight	kg	90,6	92,4	101,6	105,5	90,5	92,4	101,6
	Hydraulic connections								
	Plant side exchanger 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"
	Refrigerant connection								
	Liquid return	n x Ø	10	10	10	12	10	10	10
	Gas delivery	n x Ø	16	16	16	16	16	16	16
TEAM MATE HP	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP STD	Mod.	M 11	M 11	M 14	M 17	M 11	M 11	M 14
	Nominal power input	kW	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
	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
OPT	Partial heat recovery (5)								
	Heating capacity	**kW**	**2,0**	**2,7**	**3,5**	**4,5**	**1,9**	**2,4**	**3,3**
	Water tank - volume	l	40	40	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.

TECHNICAL DATA NEMO A HP

			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
TEAM MATE HP LNO	**NEMO A HP + TEAM MATE HP LNO**								
	Summer working mode - Cooling capacity (1)	**kW**	**5,5**	**7,2**	**9,2**	**12,3**	**5,2**	**6,5**	**8,7**
	Unit power input (*)	kW	2,0	2,7	3,5	4,3	1,9	2,5	3,3
	Winter working mode - Heating capacity (2)	**kW**	**6,4**	**8,3**	**10,7**	**14,0**	**6,1**	**7,6**	**10,1**
	Unit power input (*)	kW	2,1	2,6	3,3	4,2	2,0	2,5	3,2
	EER (1) (*)	kW/kW	2,79	2,65	2,63	2,86	2,67	2,59	2,62
	COP (2) (*)	kW/kW	3,04	3,1	3,17	3,32	2,94	3,01	3,1
	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP LNO	Mod.	M 11	M 11	M 14	M 20	M 11	M 11	M 14
	Nominal power input	kW	0,2	0,2	0,2	0,3	0,2	0,2	0,2
	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
TEAM MATE HP ELN	**NEMO A HP + TEAM MATE HP ELN**								
	Summer working mode - Cooling capacity (1)	**kW**	**5,4**	**7,0**	**8,9**	**12,0**	**5,1**	**6,4**	**8,4**
	Unit power input (*)	kW	2,0	2,8	3,6	4,4	1,9	2,6	3,4
	Winter working mode - Heating capacity (2)	**kW**	**6,3**	**8,1**	**10,6**	**13,8**	**6,0**	**7,5**	**10,0**
	Unit power input (*)	kW	2,1	2,6	3,4	4,2	2,0	2,5	3,2
	EER (1) (*)	kW/kW	2,72	2,52	2,46	2,71	2,6	2,47	2,45
	COP (2) (*)	kW/kW	3,06	3,09	3,16	3,31	2,96	2,99	3,09
	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP ELN	Mod.	M 11	M 11	M 14	M 20	M 11	M 11	M 14
	Nominal power input	kW	0,2	0,2	0,2	0,3	0,2	0,2	0,2
	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
TEAM MATE HP PF STD	**NEMO A HP + TEAM MATE PF HP STD**								
	Summer working mode - Cooling capacity (1)	**kW**	**5,5**	**7,3**	**9,0**	**12,0**	**5,2**	**6,7**	**8,5**
	Unit power input (*)	kW	2,1	2,8	3,8	4,6	2,1	2,6	3,6
	Winter working mode - Heating capacity (2)	**kW**	**6,4**	**8,3**	**10,5**	**13,7**	**6,1**	**7,7**	**9,9**
	Unit power input (*)	kW	2,3	2,8	3,5	4,3	2,2	2,7	3,4
	EER (1) (*)	kW/kW	2,64	2,61	2,41	2,61	2,52	2,52	2,38
	COP (2) (*)	kW/kW	2,84	2,95	2,97	3,17	2,75	2,85	2,9
	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP PF STD	Mod.	T 11	T 11	T 11	T 14	T 11	T 11	T 11
	External static pressure	Pa	50	50	50	50	50	50	50
	Nominal power input	kW	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
TEAM MATE HP PF LNO	**NEMO A HP + TEAM MATE PF HP LNO**								
	Summer working mode - Cooling capacity (1)	**kW**	**5,6**	**7,4**	**9,3**	**12,0**	**5,3**	**6,8**	**8,8**
	Unit power input (*)	kW	1,9	2,6	3,5	4,4	1,9	2,5	3,3
	Winter working mode - Heating capacity (2)	**kW**	**6,6**	**8,5**	**10,8**	**13,8**	**6,3**	**7,9**	**10,2**
	Unit power input (*)	kW	2,2	2,7	3,4	4,2	2,1	2,6	3,3
	EER (1) (*)	kW/kW	2,89	2,87	2,65	2,7	2,77	2,77	2,63
	COP (2) (*)	kW/kW	3,03	3,14	3,14	3,29	2,93	3,02	3,07
	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP PF LNO	Mod.	T 14	T 14	T 14	T 17	T 14	T 14	T 14
	External static pressure	Pa	36	36	36	36	36	36	36
	Nominal power input	kW	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
TEAM MATE HP PF ELN	**NEMO A HP + TEAM MATE PF HP ELN**								
	Summer working mode - Cooling capacity (1)	**kW**	**5,6**	**7,3**	**9,1**	**11,2**	**5,3**	**6,7**	**8,5**
	Unit power input (*)	kW	1,7	2,6	3,5	4,8	1,8	2,4	3,4
	Winter working mode - Heating capacity (2)	**kW**	**6,7**	**8,4**	**10,6**	**13,3**	**6,3**	**7,8**	**10,0**
	Unit power input (*)	kW	1,9	2,6	3,3	4,1	2,0	2,5	3,2
	EER (1) (*)	kW/kW	3,30	2,84	2,56	2,34	2,91	2,76	2,54
	COP (2) (*)	kW/kW	3,55	3,22	3,18	3,26	3,07	3,12	3,11
	REMOTE AIR/GAS HEAT EXCHANGER								
	Quantity	n.	1	1	1	1	1	1	1
	Series TEAM MATE HP PF ELN	Mod.	T 14	T 14	T 14	T 14	T 17	T 14	T 14
	External static pressure	Pa	25	25	25	25	25	25	25
	Nominal power input	kW	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

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.

TECHNICAL DATA NEMO A HP

	NEMO A HP		T 13 P1	T 15 P1	T 17 P1	T 20 P1	T 25 P1	T 30 P1
	SIZE		J3	J3	J3	J3	J3	J3
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**11,6**	**13,1**	**15,6**	**17,0**	**21,5**	**25,0**
	Unit power input (*)	kW	4,3	4,8	5,6	6,5	7,7	9,0
	Plant exchanger water flow rate	m³/h	2,0	2,3	2,7	2,9	3,7	4,3
	Plant exchanger pressure drop	kPa	22	28	23	28	32	27
	Winter working mode - Heating capacity (2)	**kW**	**13,6**	**15,0**	**17,7**	**19,6**	**24,9**	**29,3**
	Unit power input (*)	kW	4,2	4,8	5,5	6,2	7,6	8,6
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	1	1
	Capacity steps	n.	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
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,4	5,4	5,8	5,8	6,5	7,1
	Gas circuits	n.	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
	Max unit operating current (FLA) (*)	A	12,3	13,8	17,0	17,0	23,0	24,0
	Unit starting current (LRA)	A	53,5	66,0	77,0	103,0	113,0	120,0
	EER - (1) (*)	kW/kW	2,72	2,73	2,8	2,6	2,78	2,78
	COP - (2) (*)	kW/kW	3,21	3,11	3,24	3,14	3,28	3,39
	Sound power level [Lw] (3)	dB(A)	58,2	61,2	65,2	62,2	64,2	64,2
	Average sound pressure level [Lpm] (4)	dB(A)	44,0	47,0	51,0	48,0	50,0	50,0
	Net weight	kg	105,5	112,7	113,8	114,9	136,3	140,1
	Hydraulic connections							
	Plant side exchanger 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"
	Refrigerant connection							
	Liquid return	n x Ø	12	12	12	12	16	16
	Gas delivery	n x Ø	16	16	16	16	22	22
TEAM MATE HP	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP STD	Mod.	M 17	M 20	M 25	M 25	M 30	M 35
	Nominal power input	kW	0,3	0,4	0,5	0,5	0,5	0,5
	Max operating current	A	1,2	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	230/1/50
OPT	Partial heat recovery (5)							
	Heating capacity	**kW**	**4,3**	**4,8**	**5,7**	**6,2**	**7,9**	**9,2**
	Water tank - volume	l	40	40	40	40	40	40

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.

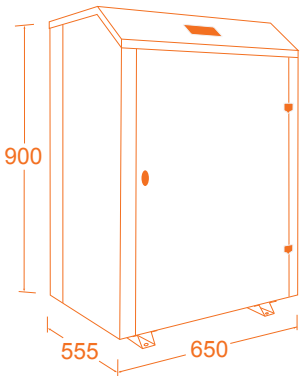
TECHNICAL DATA NEMO A HP

			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 HP LNO	**NEMO A HP + TEAM MATE HP LNO**							
	Summer working mode - Cooling capacity (1)	**kW**	**11,6**	**13,2**	**16,0**	**17,5**	**22,4**	**25,6**
	Unit power input (*)	kW	4,3	4,8	5,3	6,2	7,4	8,9
	Winter working mode - Heating capacity (2)	**kW**	**13,6**	**15,2**	**18,2**	**20,2**	**25,9**	**29,7**
	Unit power input (*)	kW	4,3	4,8	5,3	6,1	7,6	8,7
	EER (1) (*)	kW/kW	2,67	2,75	3,01	2,83	3,01	2,89
	COP (2) (*)	kW/kW	3,15	3,12	3,36	3,27	3,34	3,38
	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP LNO	Mod.	M 20	M 25	M 30	M 30	M 45	M 45
	Nominal power input	kW	0,3	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	230/1/50
TEAM MATE HP ELN	**NEMO A HP + TEAM MATE HP ELN**							
	Summer working mode - Cooling capacity (1)	**kW**	**11,3**	**12,9**	**15,7**	**17,0**	**21,9**	**24,8**
	Unit power input (*)	kW	4,4	4,8	5,4	6,3	7,6	9,1
	Winter working mode - Heating capacity (2)	**kW**	**13,4**	**15,0**	**18,0**	**19,9**	**25,5**	**29,2**
	Unit power input (*)	kW	4,3	4,8	5,3	6,1	7,6	8,7
	EER (1) (*)	kW/kW	2,54	2,66	2,91	2,69	2,89	2,72
	COP (2) (*)	kW/kW	3,14	3,13	3,38	3,26	3,34	3,36
	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP ELN	Mod.	M 20	M 25	M 30	M 30	M 45	M 45
	Nominal power input	kW	0,3	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	230/1/50
TEAM MATE HP PF STD	**NEMO A HP + TEAM MATE PF HP STD**							
	Summer working mode - Cooling capacity (1)	**kW**	**11,2**	**12,8**	**15,2**	**17,1**	**21,8**	**24,7**
	Unit power input (*)	kW	4,6	5,0	5,7	6,6	8,4	9,9
	Winter working mode - Heating capacity (2)	**kW**	**13,3**	**14,9**	**17,7**	**19,9**	**25,4**	**29,1**
	Unit power input (*)	kW	4,4	4,9	5,5	6,4	8,4	9,4
	EER (1) (*)	kW/kW	2,42	2,57	2,65	2,59	2,61	2,49
	COP (2) (*)	kW/kW	3	3,05	3,23	3,13	3,03	3,09
	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP PF STD	Mod.	T 14	T 17	T 21	T 24	T 33	T 33
	External static pressure	Pa	50	50	50	50	50	50
	Nominal power input	kW	0,4	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	380-480/3/50-60
TEAM MATE HP PF LNO	**NEMO A HP + TEAM MATE PF HP LNO**							
	Summer working mode - Cooling capacity (1)	**kW**	**11,3**	**12,9**	**15,3**	**17,7**	**21,8**	**24,8**
	Unit power input (*)	kW	4,5	4,8	5,6	6,5	7,8	9,3
	Winter working mode - Heating capacity (2)	**kW**	**13,4**	**15,1**	**17,7**	**20,5**	**25,4**	**29,1**
	Unit power input (*)	kW	4,3	4,8	5,4	6,6	7,8	8,9
	EER (1) (*)	kW/kW	2,53	2,67	2,73	2,73	2,79	2,66
	COP (2) (*)	kW/kW	3,12	3,17	3,29	3,12	3,25	3,28
	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP PF LNO	Mod.	T 17	T 21	T 24	T 33	T 38	T 38
	External static pressure	Pa	36	36	36	36	36	36
	Nominal power input	kW	0,3	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	380-480/3/50-60
TEAM MATE HP PF ELN	**NEMO A HP + TEAM MATE PF HP ELN**							
	Summer working mode - Cooling capacity (1)	**kW**	**10,5**	**11,9**	**14,1**	**16,0**	**20,5**	**23,8**
	Unit power input (*)	kW	4,8	5,1	5,9	6,8	8,2	9,5
	Winter working mode - Heating capacity (2)	**kW**	**12,9**	**14,4**	**17,1**	**19,3**	**24,6**	**28,6**
	Unit power input (*)	kW	4,2	4,6	5,2	6,0	7,6	8,6
	EER (1) (*)	kW/kW	2,18	2,33	2,37	2,36	2,51	2,50
	COP (2) (*)	kW/kW	3,07	3,10	3,31	3,23	3,24	3,31
	REMOTE AIR/GAS HEAT EXCHANGER							
	Quantity	n.	1	1	1	1	1	1
	Series TEAM MATE HP PF ELN	Mod.	T 14	T 17	T 21	T 24	T 33	T 38
	External static pressure	Pa	25	25	25	25	25	25
	Nominal power input	kW	0,2	0,2	0,2	0,3	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	380-480/3/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.

DIMENSIONS (mm)



MANTA A HP: Motoevaporating heat pumps
for indoor installation, equipped with scroll compressors and plate heat exchanger
Cooling Capacity: **23,5 ÷ 367,0 kW**
Heating Capacity: **27,0 ÷ 431,0 kW**

manta a hp

rcgroupairconditioning

R410A PLATE SPLIT SYSTEM

MAIN FEATURES
- Split-system liquid chiller.
- 28 models available, for a wide selection opportunity..
- Average step of 25kW.
- EER up to
- COP up to
- ESEER up to
- Scroll compressors.
- R410A Refrigerant charge.
- Single, double refrigerant circuit.
- Plate type heat exchangers.
- Suitable for indoor installation.
- Split-system.

MAIN BENEFITS
- Units equipped with two compressors for refrigerant circuit to reach a high efficiency.
- Units with single and double refrigerant circuits.
- Availability of remote air/gas heat exchanger with axial fans (TEAM MATE HP series) and with plug fan (TEAM MATE HP PF series).
- Availability of partial and total heat recovery system.
- Easily of maintenance.

INDOOR INSTALLATION
The machines are designed for indoor installation.

REMOTE EXCHANGER
The units are designed to be matched with remote exchanger with axial fans (TEAM MATE HP series) or plug-fan (TEAM MATE HP 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

WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 28÷58°C
Ambient temperature: -12÷30°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.

PLANT SIDE HEAT EXCHANGER
- 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:
- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. 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.
- Filter dryer on liquid line.
- Service valves on liquid line and gas discharge.
- Non-return valve.
- 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 accessories.
- Oil drainage and oil recovery systems.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- Valves on gas delivery and liquid return for coupling to remote air cooled condenser.
- 0÷10V proportional signal to manage the condensing/evaporating 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.
- Summer / Winter working mode selector.
- Ambient temperature sensor.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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 AIR/GAS HEAT EXCHANGERS

The units are designed to be matched with remote air/gas heat exchangers with axial fans (TEAM MATE HP) or plug-fans (TEAM MATE HP PF) series.

TEAM MATE HP
pg: 155

TEAM MATE HP PF
pg: 159

OPTIONAL ACCESSORIES

MANTA A HP	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
TEAM MATE HP remote air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-	-	-
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-	-	-
450 - Desuperheater	●	●	●	●	●	-	●	-	●	-	●
605 - Compr. power factor capacitor - 0,9	-	-	-	-	-	-	●	●	●	●	●
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 HP	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 190 P4
	D	S	D	S	D	S	D	S	D	D	D
SIZE	J7	J7	J7	J7	J7	J7	J7	J8	J8	J8	J9
TEAM MATE HP remote air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas heat exchangers	●	●	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	●	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	-	-	-	●	●	●	●	●	●	●	●
450 - Desuperheater	-	●	-	●	-	●	-	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●
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 HP	T 200 P2	T 200 P2	T 240 P4	T 300 P4	T 340 P4	T 380 P4
	S	D	D	D	D	D
SIZE	J9	J9	J9	J9	J10	J10
TEAM MATE HP remote air/gas heat exchangers	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas heat exchangers	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●
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 HP

	MANTA A HP		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
	SIZE		J4	J4	J4	J4	J7	J7	J7	J7	J7	J7
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**23,5**	**25,7**	**30,0**	**35,6**	**35,6**	**40,0**	**47,6**	**46,8**	**56,1**	**51,5**
	Unit power input (*)	kW	9,1	10,6	11,6	13,5	13,2	15,4	18,0	17,9	19,8	20,9
	Plant exchanger water flow rate	m³/h	4,0	4,4	5,2	6,1	6,1	6,9	8,2	8,1	9,6	8,9
	Plant exchanger pressure drop	kPa	42,0	39,0	38,0	30,0	31,0	22,0	37,0	22,0	41,0	20,0
	Winter working mode - Heating capacity (2)	**kW**	**27,0**	**30,1**	**34,4**	**41,0**	**40,9**	**46,7**	**55,9**	**55,0**	**65,3**	**61,2**
	Unit power input (*)	kW	8,8	9,8	11,2	13,5	13,5	15,4	18,1	17,7	20,9	19,9
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	1	1	1	1	2	2	2	2	2	2
	Capacity steps	n.	1	1	1	1	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	5,6	5,6	5,7	6,2	6,6	10,7	9,3	11,1	10,4	11,2
	Gas circuits	n.	1	1	1	1	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	400/3/50	400/3/50
	Max unit operating current (FLA) (*)	A	22	25	31	34	42	42	44	44	50	50
	Unit starting current (LRA)	A	118	118	140	173	132	132	140	140	143	143
	EER (1) (*)	kW/kW	2,59	2,43	2,59	2,63	2,70	2,60	2,65	2,62	2,83	2,47
	COP (2) (*)	kW/kW	3,06	3,08	3,07	3,03	3,03	3,04	3,08	3,11	3,12	3,08
	Sound power level [Lw] (3)	dB(A)	65,4	66,4	67,4	68,8	68,9	68,9	68,9	68,9	69,9	69,9
	Average sound pressure level [Lpm] (4)	dB(A)	50,0	51,0	52,0	53,0	53,0	53,0	53,0	53,0	54,0	54,0
	Net weight	kg	247	250	255	290	415	425	425	433	430	440
	Hydraulic connections											
	Plant side exchanger IN/OUT - ISO228/1-G M	Ø	1 1/2"	1 1/2"	1 1/2"	2"	2"	2"	2"	2"	2"	2"
	Plant side exchanger IN/OUT - OD (5)	Ø mm	--	--	--	--	--	--	--	--	--	--
	Refrigerant connection											
	Liquid return	n x Ø	16	16	16	16	16	2 x 16	22	2 x 16	22	2 x 16
	Gas delivery	n x Ø	28	28	28	28	28	2 x 22	28	2 x 22	35	2 x 28
TEAM MATE HP	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP STD	Mod.	M 35	M 35	M 45	M 50	M 60	M 30	M 70	M 35	M 95	M 35
	Nominal power input	kW	0,5	0,5	0,8	1,1	1,1	0,5	1,1	0,5	1,6	0,5
	Max operating current	A	2,9	2,9	3,6	5,7	5,7	2,9	5,7	2,9	8,5	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	230/1/50	230/1/50
OPT	Partial heat recovery (6)											
	Heating capacity	kW	**8,6**	**9,4**	**11,0**	**13,1**	**13,1**	**--**	**17,5**	**--**	**20,6**	**--**

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation temperature

TECHNICAL DATA MANTA A HP

	MANTA A HP		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
	SIZE		J4	J4	J4	J4	J7	J7	J7	J7	J7	J7
TEAM MATE HP LNO	**MANTA A HP + TEAM MATE HP LNO**											
	Summer working mode - Cooling capacity (1)	**kW**	**24,0**	**26,4**	**30,3**	**36,5**	**35,8**	**40,0**	**49,1**	**47,8**	**55,0**	**52,8**
	Unit power input (*)	kW	8,9	10,4	11,6	12,9	12,9	15,2	17,5	17,5	20,2	20,3
	Winter working mode - Heating capacity (2)	**kW**	**27,4**	**30,5**	**34,5**	**42,2**	**41,4**	**47,2**	**57,1**	**55,9**	**64,4**	**62,0**
	Unit power input (*)	kW	9,0	9,9	11,3	13,4	13,4	15,2	18,5	18,0	20,7	20,1
	EER (1) (*)	kW/kW	2,69	2,55	2,61	2,83	2,77	2,64	2,81	2,73	2,72	2,60
	COP (2) (*)	kW/kW	3,06	3,08	3,04	3,16	3,10	3,10	3,09	3,11	3,11	3,09
	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP LNO	Mod.	M 45	M 45	M 50	M 70	M 70	M 35	M 95	M 45	M 95	M 45
	Nominal power input	kW	0,7	0,7	0,9	0,9	0,9	0,5	1,4	0,7	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	230/1/50	230/1/50
TEAM MATE HP ELN	**MANTA A HP + TEAM MATE HP ELN**											
	Summer working mode - Cooling capacity (1)	**kW**	**23,3**	**25,5**	**29,5**	**35,6**	**34,9**	**38,8**	**47,9**	**46,5**	**53,4**	**51,1**
	Unit power input (*)	kW	9,2	10,7	11,8	13,2	13,2	15,6	17,9	18,1	20,9	21,1
	Winter working mode - Heating capacity (2)	**kW**	**27,0**	**30,1**	**34,0**	**41,4**	**40,6**	**46,5**	**56,1**	**54,9**	**63,4**	**61,1**
	Unit power input (*)	kW	8,8	9,8	11,2	13,2	13,2	15,0	18,2	17,7	20,5	19,9
	EER (1) (*)	kW/kW	2,54	2,38	2,49	2,69	2,64	2,48	2,67	2,57	2,56	2,42
	COP (2) (*)	kW/kW	3,06	3,07	3,04	3,14	3,08	3,09	3,08	3,10	3,10	3,07
	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP ELN	Mod.	M 45	M 45	M 50	M 70	M 70	M 35	M 95	M 45	M 95	M 45
	Nominal power input	kW	0,6	0,6	0,8	0,8	0,8	0,4	1,1	0,6	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	230/1/50	230/1/50
TEAM MATE HP PF STD	**MANTA A HP + TEAM MATE PF HP STD**											
	Summer working mode - Cooling capacity (1)	**kW**	**23,2**	**26,1**	**29,9**	**34,4**	**35,6**	**40,5**	**47,5**	**46,3**	**55,4**	**52,3**
	Unit power input (*)	kW	10,0	11,0	12,2	14,4	14,3	16,5	19,4	19,7	22,0	21,6
	Winter working mode - Heating capacity (2)	**kW**	**26,8**	**30,3**	**34,5**	**40,5**	**40,9**	**47,6**	**56,0**	**54,5**	**64,6**	**61,6**
	Unit power input (*)	kW	9,6	10,4	11,7	13,7	14,6	16,9	19,4	19,2	22,7	21,0
	EER (1) (*)	kW/kW	2,32	2,38	2,46	2,39	2,49	2,45	2,45	2,35	2,52	2,42
	COP (2) (*)	kW/kW	2,80	2,92	2,95	2,96	2,80	2,81	2,88	2,84	2,85	2,93
	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP PF STD	Mod.	T 33	T 38	T 44	T 44	T 58	T 33	T 69	T 33	T 86	T 38
	External static pressure	Pa	50	50	50	50	50	50	50	50	50	50
	Nominal power input	kW	1,3	1,14	1,24	1,24	2,18	1,3	2,39	1,3	3,34	1,14
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60
TEAM MATE HP PF LNO	**MANTA A HP + TEAM MATE PF HP LNO**											
	Summer working mode - Cooling capacity (1)	**kW**	**23,9**	**27,7**	**30,8**	**35,5**	**35,8**	**40,5**	**48,4**	**47,6**	**56,8**	**55,3**
	Unit power input (*)	kW	9,1	10,4	11,8	14,0	13,5	15,4	18,7	17,9	21,4	20,4
	Winter working mode - Heating capacity (2)	**kW**	**27,6**	**31,7**	**35,2**	**41,2**	**41,4**	**47,6**	**56,5**	**56,1**	**66,3**	**64,3**
	Unit power input (*)	kW	9,1	10,6	11,9	13,8	13,9	15,8	19,2	18,2	22,9	21,6
	EER (1) (*)	kW/kW	2,62	2,67	2,61	2,54	2,65	2,63	2,59	2,66	2,65	2,71
	COP (2) (*)	kW/kW	3,04	2,98	2,97	2,98	2,97	3,01	2,94	3,08	2,90	2,98
	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP PF LNO	Mod.	T 44	T 58	T 58	T 58	T 69	T 38	T 86	T 44	T 114	T 58
	External static pressure	Pa	36	36	36	36	36	36	36	36	36	36
	Nominal power input	kW	0,8	1,4	1,4	1,4	1,51	0,74	2,15	0,8	3,57	1,4
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60
TEAM MATE HP PF ELN	**MANTA A HP + TEAM MATE PF HP ELN**											
	Summer working mode - Cooling capacity (1)	**kW**	**23,1**	**27,0**	**30,0**	**34,5**	**34,8**	**39,4**	**47,1**	**46,1**	**55,4**	**54,0**
	Unit power input (*)	kW	9,2	10,2	11,6	14,0	13,5	15,6	18,5	18,1	20,7	20,0
	Winter working mode - Heating capacity (2)	**kW**	**27,1**	**31,2**	**34,5**	**40,5**	**40,6**	**46,8**	**55,5**	**55,1**	**65,2**	**63,3**
	Unit power input (*)	kW	8,8	10,1	11,3	13,3	13,4	15,3	18,4	17,7	21,4	20,4
	EER (1) (*)	kW/kW	2,50	2,65	2,58	2,46	2,58	2,52	2,55	2,54	2,67	2,70
	COP (2) (*)	kW/kW	3,09	3,09	3,06	3,05	3,04	3,06	3,02	3,12	3,04	3,10
	REMOTE AIR/GAS HEAT EXCHANGERS											
	Quantity	n.	1	1	1	1	1	2	1	2	1	2
	Series TEAM MATE HP PF ELN	Mod.	T 44	T 58	T 58	T 58	T 69	T 38	T 86	T 44	T 114	T 58
	External static pressure	Pa	25	25	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	2,1	0,8
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation temperature

TECHNICAL DATA MANTA A HP

	MANTA A HP		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 150 P2 S
	SIZE		J7	J7	J7	J7	J7	J7	J7	J7	J8
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**59,5**	**58,9**	**68,9**	**70,9**	**89,7**	**91,5**	**116,0**	**115,0**	**148,0**
	Unit power input (*)	kW	22,7	22,7	27,5	27,0	35,0	33,9	42,8	42,6	55,0
	Plant exchanger water flow rate	m³/h	10,2	10,1	11,8	12,2	15,4	15,7	19,9	19,7	25,4
	Plant exchanger pressure drop	kPa	35,0	22,0	40,0	23	36	23	40	31	37
	Winter working mode - Heating capacity (2)	**kW**	**68,8**	**68,7**	**80,8**	**82,1**	**105,0**	**107,0**	**135,0**	**136,0**	**174,0**
	Unit power input (*)	kW	22,9	22,5	26,7	26,5	34,2	33,4	43,8	43,3	54,7
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,4	11,2	10,9	12,6	15,7	20,2	23,4	28,2	24,5
	Gas circuits	n.	1	2	1	2	1	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	400/3/50
	Max unit operating current (FLA) (*)	A	62	62	68	68	80	80	97	97	131
	Unit starting current (LRA)	A	171	171	207	207	265	265	321	321	375
	EER (1) (*)	kW/kW	2,62	2,59	2,51	2,63	2,56	2,70	2,71	2,70	2,69
	COP (2) (*)	kW/kW	3,00	3,06	3,03	3,10	3,07	3,20	3,08	3,14	3,18
	Sound power level [Lw] (3)	dB(A)	70,9	70,9	71,9	71,9	76,9	76,9	80,1	80,1	81,0
	Average sound pressure level [Lpm] (4)	dB(A)	55,0	55,0	56,0	56,0	61,0	61,0	64,0	64,0	64,0
	Net weight	kg	432	452	435	460	675	705	725	737	950
	Hydraulic connections										
	Plant side exchanger IN/OUT - ISO228/1-G M	Ø	2"	2"	2"	2"	--	--	--	--	--
	Plant side exchanger IN/OUT - OD (5)	Ø mm	--	--	--	--	76,1	76,1	76,1	76,1	76,1
	Refrigerant connection										
	Liquid return	n x Ø	22	2 x 16	22	2 x 16	22	2 x 22	28	2 x 22	35
	Gas delivery	n x Ø	42	2 x 28	42	2 x 28	42	2 x 28	42	2 x 35	54
TEAM MATE HP	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	1	2	1
	Series TEAM MATE HP STD	Mod.	M 95	M 45	M 95	M 50	M 130	M 70	T 185	M 95	T 210
	Nominal power input	kW	1,6	0,8	1,6	1,1	2,1	1,1	3,2	1,6	3,2
	Max operating current	A	8,5	3,6	8,5	5,7	11,4	5,7	17,1	8,5	17,1
	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	400/3/50+N
OPT	Partial heat recovery (6)										
	Heating capacity	kW	**21,8**	**--**	**25,3**	**--**	**32,9**	**--**	**42,5**	**--**	**54,2**

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation temperature

TECHNICAL DATA MANTA A HP

	MANTA A HP		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 150 P2 S
	SIZE		J7	J7	J7	J7	J7	J7	J7	J7	J8
TEAM MATE HP LNO	**MANTA A HP + TEAM MATE HP LNO**										
	Summer working mode - Cooling capacity (1)	**kW**	**59,3**	**59,4**	**71,0**	**70,7**	**94,0**	**94,0**	**116,0**	**114,0**	**149,0**
	Unit power input (*)	kW	22,5	22,8	26,4	26,7	33,2	33,1	42,0	42,2	54,6
	Winter working mode - Heating capacity (2)	**kW**	**69,0**	**69,0**	**82,8**	**82,5**	**109,0**	**109,0**	**137,0**	**136,0**	**175,0**
	Unit power input (*)	kW	22,7	22,7	26,9	26,1	34,9	34,2	43,5	42,9	55,2
	EER (1) (*)	kW/kW	2,63	2,61	2,69	2,65	2,83	2,84	2,76	2,70	2,73
	COP (2) (*)	kW/kW	3,04	3,04	3,08	3,16	3,12	3,19	3,15	3,17	3,17
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	1	2	1
	Series TEAM MATE HP LNO	Mod.	M 110	M 50	M 130	M 60	T 185	M 95	T 210	M 110	T 250
	Nominal power input	kW	1,4	0,9	1,8	0,9	2,7	1,4	2,7	1,4	3,6
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N	230/1/50	400/3/50+N	230/1/50	400/3/50+N
TEAM MATE HP ELN	**MANTA A HP + TEAM MATE HP ELN**										
	Summer working mode - Cooling capacity (1)	**kW**	**57,5**	**57,9**	**69,3**	**68,6**	**92,1**	**92,0**	**113,0**	**111,0**	**145,0**
	Unit power input (*)	kW	23,4	23,3	27,1	27,6	33,9	33,7	43,1	43,4	56,2
	Winter working mode - Heating capacity (2)	**kW**	**67,9**	**67,9**	**81,5**	**81,2**	**107,0**	**108,0**	**134,0**	**134,0**	**172,0**
	Unit power input (*)	kW	22,4	22,3	26,5	25,9	34,3	33,6	42,9	42,3	54,6
	EER (1) (*)	kW/kW	2,46	2,48	2,56	2,49	2,72	2,73	2,62	2,56	2,58
	COP (2) (*)	kW/kW	3,03	3,04	3,07	3,14	3,12	3,21	3,12	3,17	3,15
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	1	2	1
	Series TEAM MATE HP ELN	Mod.	M 110	M 50	M 130	M 60	T 185	M 95	T 210	M 110	T 250
	Nominal power input	kW	1,1	0,8	1,5	0,8	2,2	1,1	2,2	1,1	3,0
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50+N	230/1/50	400/3/50+N	230/1/50	400/3/50+N
TEAM MATE HP PF STD	**MANTA A HP + TEAM MATE PF HP STD**										
	Summer working mode - Cooling capacity (1)	**kW**	**58,6**	**58,7**	**72,6**	**68,4**	**92,1**	**91,4**	**111,0**	**113,0**	**158,0**
	Unit power input (*)	kW	24,9	23,8	29,3	28,6	38,9	36,6	49,8	46,9	46,5
	Winter working mode - Heating capacity (2)	**kW**	**68,0**	**69,0**	**84,3**	**81,2**	**107,0**	**107,0**	**131,0**	**134,0**	**185,0**
	Unit power input (*)	kW	24,6	23,3	30,7	26,9	39,5	36,1	48,0	46,7	52,0
	EER (1) (*)	kW/kW	2,35	2,47	2,48	2,39	2,37	2,50	2,23	2,41	3,40
	COP (2) (*)	kW/kW	2,76	2,96	2,75	3,02	2,71	2,96	2,73	2,87	3,56
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	1	2	(***)
	Series TEAM MATE HP PF STD	Mod.	T 86	T 44	T 114	T 44	T 144	T 69	T 144	T 86	(***)
	External static pressure	Pa	50	50	50	50	50	50	50	50	(***)
	Nominal power input	kW	3,34	1,24	5,63	1,24	7,4	2,39	7,4	3,34	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)
TEAM MATE HP PF LNO	**MANTA A HP + TEAM MATE PF HP LNO**										
	Summer working mode - Cooling capacity (1)	**kW**	**60,3**	**60,4**	**72,6**	**70,7**	**90,1**	**92,9**	**122,0**	**116,0**	**158,0**
	Unit power input (*)	kW	24,2	23,2	28,4	27,6	37,4	35,2	36,5	45,8	46,5
	Winter working mode - Heating capacity (2)	**kW**	**70,0**	**70,3**	**84,6**	**82,5**	**106,0**	**108,0**	**144,0**	**138,0**	**185,0**
	Unit power input (*)	kW	24,9	23,7	29,9	27,0	36,8	35,8	41,0	47,4	52,0
	EER (1) (*)	kW/kW	2,49	2,60	2,56	2,56	2,41	2,64	3,34	2,53	3,40
	COP (2) (*)	kW/kW	2,81	2,97	2,83	3,05	2,88	3,02	3,51	2,91	3,56
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	(***)	2	(***)
	Series TEAM MATE HP PF LNO	Mod.	T 114	T 58	T 144	T 58	T 144	T 86	(***)	T 114	(***)
	External static pressure	Pa	36	36	36	36	36	36	(***)	36	(***)
	Nominal power input	kW	3,57	1,4	4,69	1,4	4,69	2,15	(***)	3,57	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)	380-480/3F/50-60	(***)
TEAM MATE HP PF ELN	**MANTA A HP + TEAM MATE PF HP ELN**										
	Summer working mode - Cooling capacity (1)	**kW**	**58,6**	**58,9**	**70,9**	**68,6**	**87,1**	**90,6**	**122,0**	**113,0**	**158,0**
	Unit power input (*)	kW	23,7	22,9	27,4	27,8	37,1	34,8	36,5	44,3	46,5
	Winter working mode - Heating capacity (2)	**kW**	**68,6**	**69,0**	**83,1**	**81,2**	**104,0**	**106,0**	**144,0**	**136,0**	**185,0**
	Unit power input (*)	kW	23,4	22,5	27,8	26,0	34,8	33,9	41,0	44,4	52,0
	EER (1) (*)	kW/kW	2,47	2,57	2,59	2,47	2,35	2,60	3,34	2,55	3,40
	COP (2) (*)	kW/kW	2,93	3,06	2,99	3,12	2,99	3,13	3,51	3,06	3,56
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	1	2	1	2	1	2	(***)	2	(***)
	Series TEAM MATE HP PF ELN	Mod.	T 114	T 58	T 144	T 58	T 144	T 86	(***)	T 114	(***)
	External static pressure	Pa	25	25	25	25	25	25	(***)	25	(***)
	Nominal power input	kW	2,1	0,8	2,8	0,8	2,8	1,3	(***)	2,1	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)	380-480/3F/50-60	(***)

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation temperature

TECHNICAL DATA MANTA A HP

	MANTA A HP		T 150 P2 D	T 170 P4 D	T 190 P4 D	T 200 P2 S	T 200 P2 D	T 240 P4 D	T 300 P4 D	T 340 P4 D	T 380 P4 D
	SIZE		J8	J8	J9	J9	J9	J9	J9	J10	J10
STANDARD	**Summer working mode - Cooling capacity (1)**	**kW**	**145,0**	**171,0**	**189,0**	**186,0**	**186,0**	**235,0**	**290,0**	**338,0**	**367,0**
	Unit power input (*)	kW	55,3	61,3	70,8	71,0	72,1	85,5	110,3	124,3	142,2
	Plant exchanger water flow rate	m³/h	24,9	29,4	32,4	32,0	32,0	40,3	49,8	58,2	63,1
	Plant exchanger pressure drop	kPa	32	33	25	34	39	49	54	55	48
	Winter working mode - Heating capacity (2)	**kW**	**173,0**	**191,0**	**210,0**	**218,0**	**218,0**	**272,0**	**340,0**	**396,0**	**431,0**
	Unit power input (*)	kW	54,4	60,4	68,0	67,9	68,3	86,1	109,3	124,5	137,3
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	4	4	2	2	4	4	4	4
	Capacity steps	n.	2	4	4	2	2	4	4	4	4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	30,7	31,4	35,3	30,4	34,2	36,1	52,9	53,5	86,7
	Gas circuits	n.	2	2	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	131	148	160	164	164	246	262	295	328
	Unit starting current (LRA)	A	375	333	345	466	466	584	507	597	630
	EER (1) (*)	kW/kW	2,62	2,79	2,67	2,62	2,58	2,75	2,63	2,72	2,58
	COP (2) (*)	kW/kW	3,18	3,16	3,09	3,21	3,19	3,16	3,11	3,18	3,14
	Sound power level [Lw] (3)	dB(A)	81,0	81,0	81,0	81,0	81,0	84,1	84,1	84,5	84,5
	Average sound pressure level [Lpm] (4)	dB(A)	64,0	64,0	64,0	64,0	64,0	67,0	67,0	67,0	67,0
	Net weight	kg	965	1065	1035	1000	1035	1452	1477	1555	1600
	Hydraulic connections										
	Plant side exchanger IN/OUT - ISO228/1-G M	Ø	--	--	--	--	--	--	--	--	--
	Plant side exchanger IN/OUT - OD (5)	Ø mm	76,1	76,1	88,9	88,9	88,9	88,9	88,9	88,9	88,9
	Refrigerant connection										
	Liquid return	n x Ø	2 x 22	2 x 28	2 x 28	35	2 x 28	2 x 28	2 x 35	2 x 35	2 x 35
	Gas delivery	n x Ø	2 x 35	2 x 42	2 x 42	54	2 x 42	2 x 42	2 x 54	2 x 54	2 x 54
TEAM MATE HP	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	2	2	2	1	2	2	2	2	2
	Series TEAM MATE HP STD	Mod.	M 110	M 130	M 130	T 250	M 130	T 185	T 210	T 250	T 250
	Nominal power input	kW	1,6	2,1	2,1	4,2	2,1	3,2	3,2	4,2	4,2
	Max operating current	A	8,5	11,4	11,4	22,8	11,4	17,1	17,1	22,8	22,8
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	230/1/50	400/3/50+N	230/1/50	400/3/50+N	400/3/50+N	400/3/50+N	400/3/50+N
OPT	Partial heat recovery (6)										
	Heating capacity	kW	**53,1**	**62,8**	**69,3**	**68,4**	**68,2**	**86,1**	**106,0**	**124,0**	**135,0**

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation temperature

TECHNICAL DATA MANTA A HP

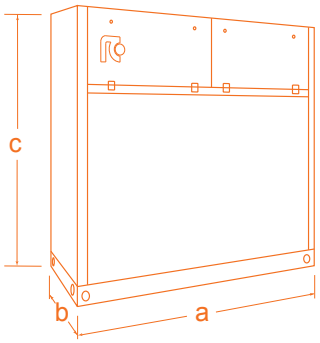
	MANTA A HP		T 150 P2 D	T 170 P4 D	T 190 P4 D	T 200 P2 S	T 200 P2 D	T 240 P4 D	T 300 P4 D	T 340 P4 D	T 380 P4 D
	SIZE		J8	J8	J9	J9	J9	J9	J9	J10	J10
TEAM MATE HP LNO	**MANTA A HP + TEAM MATE HP LNO**										
	Summer working mode - Cooling capacity (1)	**kW**	**149,0**	**171,0**	**199,0**	**186,0**	**195,0**	**235,0**	**297,0**	**337,0**	**366,0**
	Unit power input (*)	kW	53,4	60,9	67,0	71,0	68,2	83,9	106,8	124,4	141,9
	Winter working mode - Heating capacity (2)	**kW**	**178,0**	**193,0**	**219,0**	**219,0**	**226,0**	**276,0**	**347,0**	**398,0**	**433,0**
	Unit power input (*)	kW	54,9	60,1	69,3	67,4	69,8	85,2	110,2	123,2	136,2
	EER (1) (*)	kW/kW	2,79	2,81	2,97	2,62	2,86	2,80	2,78	2,71	2,58
	COP (2) (*)	kW/kW	3,24	3,21	3,16	3,25	3,24	3,24	3,15	3,23	3,18
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	2	2	2	1	2	2	2	2	2
	Series TEAM MATE HP LNO	Mod.	M 140	M 140	T 185	T 280	T 185	T 210	T 280	T 280	T 280
	Nominal power input	kW	1,8	1,8	2,7	3,6	2,7	2,7	3,6	3,6	3,6
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	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
TEAM MATE HP ELN	**MANTA A HP + TEAM MATE HP ELN**										
	Summer working mode - Cooling capacity (1)	**kW**	**145,0**	**166,0**	**194,0**	**179,0**	**191,0**	**229,0**	**289,0**	**327,0**	**352,0**
	Unit power input (*)	kW	54,9	62,9	68,1	74,0	69,5	86,4	109,5	127,7	147,9
	Winter working mode - Heating capacity (2)	**kW**	**175,0**	**189,0**	**215,0**	**216,0**	**222,0**	**271,0**	**341,0**	**391,0**	**426,0**
	Unit power input (*)	kW	54,3	59,2	68,3	66,9	68,7	84,2	108,9	121,8	134,8
	EER (1) (*)	kW/kW	2,64	2,64	2,85	2,42	2,75	2,65	2,64	2,56	2,38
	COP (2) (*)	kW/kW	3,22	3,19	3,15	3,23	3,23	3,22	3,13	3,21	3,16
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	2	2	2	1	2	2	2	2	2
	Series TEAM MATE HP ELN	Mod.	M 140	M 140	T 185	T 280	T 185	T 210	T 280	T 280	T 280
	Nominal power input	kW	1,5	1,5	2,2	3,0	2,2	2,2	3,0	3,0	3,0
	Power supply (**)	V/Ph/Hz	230/1/50	230/1/50	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
TEAM MATE HP PF STD	**MANTA A HP + TEAM MATE PF HP STD**										
	Summer working mode - Cooling capacity (1)	**kW**	**150,0**	**172,0**	**194,0**	**202,0**	**191,0**	**247,0**	**310,0**	**359,0**	**398,0**
	Unit power input (*)	kW	60,7	68,0	78,5	58,9	79,9	72,9	92,8	105,3	118,1
	Winter working mode - Heating capacity (2)	**kW**	**177,0**	**192,0**	**215,0**	**239,0**	**223,0**	**292,0**	**364,0**	**423,0**	**469,0**
	Unit power input (*)	kW	62,5	67,4	78,8	64,4	79,1	80,7	103,1	117,2	130,3
	EER (1) (*)	kW/kW	2,47	2,53	2,47	3,43	2,39	3,39	3,34	3,41	3,37
	COP (2) (*)	kW/kW	2,83	2,85	2,73	3,71	2,82	3,62	3,53	3,61	3,60
	REMOTE AIR/GAS HEAT EXCHANGERS										
	Quantity	n.	2	2	2	(***)	2	(***)	(***)	(***)	(***)
	Series TEAM MATE HP PF STD	Mod.	T 114	T 114	T 144	(***)	T 144	(***)	(***)	(***)	(***)
	External static pressure	Pa	50	50	50	(***)	50	(***)	(***)	(***)	(***)
	Nominal power input	kW	5,63	5,63	7,4	(***)	7,4	(***)	(***)	(***)	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)	380-480/3F/50-60	(***)	(***)	(***)	(***)
TEAM MATE HP PF LNO	**MANTA A HP + TEAM MATE PF HP LNO**										
	Summer working mode - Cooling capacity (1)	**kW**	**150,0**	**172,0**	**190,0**	**202,0**	**204,0**	**247,0**	**310,0**	**359,0**	**398,0**
	Unit power input (*)	kW	48,7	55,9	65,2	57,9	57,9	71,4	91,0	103,0	116,0
	Winter working mode - Heating capacity (2)	**kW**	**178,0**	**193,0**	**212,0**	**239,0**	**240,0**	**292,0**	**364,0**	**423,0**	**469,0**
	Unit power input (*)	kW	51,0	55,9	63,5	63,9	64,3	79,8	102,0	116,0	129,0
	EER (1) (*)	kW/kW	--	--	--	--	--	--	--	--	--
	COP (2) (*)	kW/kW	--	--	--	--	--	--	--	--	--
	REMOTE AIR/GAS HEAT EXCHANGERS		--	--	--	--	--	--	--	--	--
	Quantity	n.	2	2	2	(***)	(***)	(***)	(***)	(***)	(***)
	Series TEAM MATE HP PF LNO	Mod.	T 144	T 144	T 144	(***)	(***)	(***)	(***)	(***)	(***)
	External static pressure	Pa	36	36	36	(***)	(***)	(***)	(***)	(***)	(***)
	Nominal power input	kW	4,69	4,69	4,69	(***)	(***)	(***)	(***)	(***)	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)	(***)	(***)	(***)	(***)	(***)
TEAM MATE HP PF ELN	**MANTA A HP + TEAM MATE PF HP ELN**										
	Summer working mode - Cooling capacity (1)	**kW**	**146,0**	**167,0**	**183,0**	**202,0**	**204,0**	**247,0**	**310,0**	**359,0**	**398,0**
	Unit power input (*)	kW	50,7	58,5	68,8	57,9	57,9	71,4	91,0	103,0	116,0
	Winter working mode - Heating capacity (2)	**kW**	**175,0**	**189,0**	**209,0**	**239,0**	**240,0**	**292,0**	**364,0**	**423,0**	**469,0**
	Unit power input (*)	kW	50,9	55,8	63,6	63,9	64,3	79,8	102,0	116,0	129,0
	EER (1) (*)	kW/kW	--	--	--	--	--	--	--	--	--
	COP (2) (*)	kW/kW	--	--	--	--	--	--	--	--	--
	REMOTE AIR/GAS HEAT EXCHANGERS		--	--	--	--	--	--	--	--	--
	Quantity	n.	2	2	2	(***)	(***)	(***)	(***)	(***)	(***)
	Series TEAM MATE HP PF ELN	Mod.	T 144	T 144	T 144	(***)	(***)	(***)	(***)	(***)	(***)
	External static pressure	Pa	25	25	25	(***)	(***)	(***)	(***)	(***)	(***)
	Nominal power input	kW	2,8	2,8	2,8	(***)	(***)	(***)	(***)	(***)	(***)
	Power supply (**)	V/ph/Hz	380-480/3F/50-60	380-480/3F/50-60	380-480/3F/50-60	(***)	(***)	(***)	(***)	(***)	(***)

1. Referred to chilled water temperature 12/7°C; ambient temperature 35°C.
2. Referred to hot water outlet temperature 45°C; 7°C ambient temperature.
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. 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 air/gas heat exchanger
(**) The remote air/gas heat exchangers has separated power supply.
(***) Remote air/gas heat exchangers not available for this model:
Cooling: Value is referred to 45°C condensation temperature
Heating: Value is referred to 3°C evaporation 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



MULTIPLO PF: Multifunction chillers for indoor installation, equipped with scroll compressors and plug fan
Cooling Capacity: **21,8 ÷ 222,0 kW**
Heating Capacity: **25,2 ÷ 236,0 kW**

IDEA® RC Hi-Tech

multiplo pf

rcgroupairconditioning

R410A PLATE EC

MAIN FEATURES
- Multifunction chiller
- 17 models available, for a wide selection opportunity..
- Average step of 12kW.
- EER up to 3,12.
- COP up to 3,84.
- ESEER up to 4,01.
- Scroll compressors.
- Single gas circuit.
- R410A Refrigerant charge.
- Plate type heat exchangers.
- EC-type plug fan.
- Single air circuit.
- Electronic expansion valve.
- Suitable for indoor installation.

MAIN BENEFITS
- Defrosting dynamics control system IDEA®.
- Availability of pumping groups.
- Availability of kit for the reduction of the noise.
- Easily of maintenance.

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.

IDEA® DEFROSTING SYSTEM
"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

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

WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 30÷60°C
Ambient temperature: -10÷35°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.

PLANT SIDE HEAT EXCHANGER
- 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.
- Antifreeze heater.

AIR/GAS HEAT EXCHANGER
- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- 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 the single refrigerant circuit:
- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valves:
  - o For P1 units:
    - One electronic expansion valve.
  - o For P2 units:
    - One valve on plant side heat exchanger.
    - One valve on source side heat exchanger (finned coil).

  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.
- Thermostatic expansion valve for defrosting check on air/gas heat exchanger.
- Sight glass.
- Liquid receiver with service valve and safety valve.
- Filter dryer on liquid line.
- Solenoid valves on liquid lines.
- 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.
- Oil drainage and oil recovery systems.
- Check valves.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters. Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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+N.

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.
  - Clock card for alarms date and time displaying and storing.
  - Nonvolatile “Flash” memory for data storage.
  - Menu with protection password.
  - LAN connection.

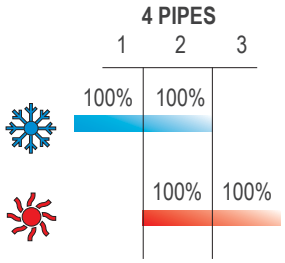
HYDRAULIC CONNECTIONS OF HEAT EXCHANGERS
- The heat exchangers’ threaded hydraulic connections are available up to a diameter of 2” included, and correspond to ISO 228/1 – G M.
- The pipes’ threaded hydraulic connections are available up to a diameter of 2” included, and correspond to ISO 7/1 – R.
- 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.

MULTIPLO PF

Multifunction liquid chiller with independent or simultaneous production of chilled and hot water for 4 pipes plants.

WORKING LOGIC

According to the request, the unit can produce chilled water and hot water for heating, as indicated in the below scheme, that summarizes the various working conditions.
The unit cooling and heating functions are enabled by selectors placed on the electric board.
The pumps indicated in the scheme are optional accessories and they are factory installed inside the chiller.
The pumps are active only when the relative working mode is enabled.



MULTIPLO PF can produce chilled water or hot water with variable loads up to 50% of the nominal.
Unit equipped with two compressors can partialize their operation so as to obtain different working conditions as per following table:

UNITS EQUIPPED WITH 2 COMPRESSORS			
Cool %	**Heat %**	**Compressor 1**	**Compressor 2**
50	-	●	-
100	-	●	●
-	50	●	-
-	100	●	●
50	50	●	-
100	100	●	●
Defrosting		●	-
Defrosting		●	●

UNITS EQUIPPED WITH 1 COMPRESSOR		
Cool %	**Heat %**	**Compressor 1**
100	-	●
-	100	●
100	100	●
Defrosting		●

● component on; **-** component off.

OPTIONAL ACCESSORIES

MULTIPLO 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
SIZE	C1	C1	C1	C1	C1	C1	C2	C2	C2
744 - CW Pumping group (1 pump)	●	●	●	●	●	●	●	●	●
748 - CW Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-
746 - HW Pumping group (1 pump)	-	-	-	-	-	-	-	-	-
750 - HW Pumping group (2 pumps)	-	-	-	-	-	-	-	-	-
768 - Chilled water storage tank	●	●	●	●	●	●	●	●	●
763 - Chilled and hot water tanks	●	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●	●
Plant side heat exchanger flexible joint with adapter pipe (solder type)	-	-	-	-	-	-	-	-	-
Plant side heat exchanger flexible joint with adapter for flange connection	-	-	-	-	-	-	-	-	-
251 - Coils protection nets	●	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●	●
Coil in special execution	●	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●	●

MULTIPLO PF	62 P2 S	71 P2 S	85 P2 S	107 P2 S	135 P2 S	170 P2 S	195 P2 S	220 P2 S
SIZE	C2	C2	C3	C3	C4	C4	C4	C5
744 - CW Pumping group (1 pump)	●	●	●	●	●	●	●	●
748 - CW Pumping group (2 pumps)	-	-	-	-	●	●	●	●
746 - HW Pumping group (1 pump)	-	-	-	-	●	●	●	●
750 - HW Pumping group (2 pumps)	-	-	-	-	●	●	●	●
768 - Chilled water storage tank	●	●	●	●	●	●	●	●
763 - Chilled and hot water tanks	●	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●	●
Plant side heat exchanger flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●	●
Plant side heat exchanger flexible joint with adapter for flange connection	-	-	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●
Coil in special execution	●	●	●	●	●	●	●	●
160 - Discharge air plenum with sound attenuators	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●
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 MULTIPLO PF

	MULTIPLO 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	**Only cooling - Cooling capacity (1)**	**kW**	**21,8**	**24,8**	**29,0**	**32,9**	**36,7**	**42,4**	**53,9**	**67,8**
	Unit power input	kW	7,0	8,2	9,9	11,1	12,8	15,5	18,6	23,4
	Evaporator water flow rate	m³/h	3,8	4,3	5,0	5,7	6,3	7,3	9,3	11,7
	Evaporator pressure drop	kPa	27	35	37	29	36	37	33	29
	Only heating - Heating capacity (2)	**kW**	**25,2**	**28,8**	**30,0**	**37,9**	**42,4**	**43,7**	**56,6**	**70,9**
	Unit power input	kW	6,6	7,6	9,1	10,2	11,7	13,8	17,4	21,8
	Condenser water flow rate	m³/h	4,4	5,0	5,2	6,6	7,4	7,6	9,8	11,8
	Condenser pressure drop	kPa	34	44	41	34	42	42	41	32
	Cooling + Heating (3)									
	Cooling capacity	**kW**	**22,7**	**26,1**	**30,6**	**34,9**	**39,0**	**45,4**	**55,5**	**69,7**
	Heating capacity	**kW**	**28,7**	**32,9**	**38,5**	**43,8**	**49,0**	**57,2**	**71,2**	**89,4**
	Unit power input	kW	6,5	7,4	9,0	10,1	11,6	13,9	17,7	22,1
	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
	Plug 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	12,2	12,3	12,3	13,0	13,0	13,0	16,4	17,9
	Gas circuits	n.	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
	Max unit operating current (FLA)	A	20,3	25,3	26,3	29,9	35,9	38,9	48,6	52,4
	Unit starting current (LRA)	A	99,3	115,3	122,3	122,9	144,9	178,9	233,6	148,4
	EER (1)	kW/kW	3,12	3,03	2,93	2,96	2,86	2,73	2,90	2,90
	COP (2)	kW/kW	3,84	3,80	3,30	3,70	3,63	3,16	3,25	3,25
	ESEER		4,01	3,93	3,62	3,66	3,46	3,19	3,51	3,70
	Sound power level [Lw] (4)	dB(A)	87,1	88,7	92,9	92,1	94,2	96,0	94,8	93,1
	Average sound pressure level [Lpm] (5)	dB(A)	70,6	72,1	76,3	75,6	77,6	79,4	77,6	75,9
	Net weight	kg	400	410	410	430	430	440	690	740
	Hydraulic connections									
	Evaporator/Condenser 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/Condenser IN/OUT - OD (6)	Ø mm	-	-	-	-	-	-	-	-
OPTIONAL	Chilled water pumping group	kW	0,75	0,75	0,75	0,75	0,75	0,75	1,5	1,5
	Hot water pumping group	kW	0,75	0,75	0,75	0,75	0,75	0,75	1,5	1,5
	Chilled water tank - volume	l	130	130	130	130	130	130	210	210
	Hot water tank - volume	l	130	130	130	130	130	130	210	210

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

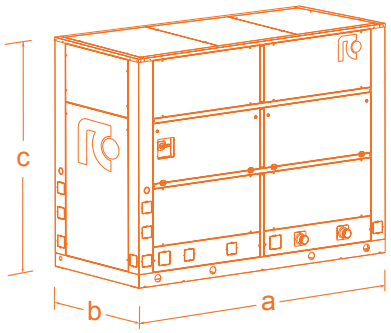
TECHNICAL DATA MULTIPLO PF

	MULTIPLO PF		55 P2 S	62 P2 S	71 P2 S	85 P2 S	107 P2 S	135 P2 S	170 P2 S	195 P2 S	220 P2 S
	SIZE		C2	C2	C2	C3	C3	C4	C4	C4	C5
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**56,9**	**63,9**	**72,1**	**85,8**	**109,0**	**134,0**	**175,0**	**194,0**	**222,0**
	Unit power input	kW	19,2	21,7	25,0	28,0	37,5	45,4	60,3	70,0	74,7
	Evaporator water flow rate	m³/h	9,8	11,0	12,4	14,8	18,7	23,1	30,1	33,4	38,2
	Evaporator pressure drop	kPa	36	35	35	38	36	37	36	41	42
	Only heating - Heating capacity (2)	**kW**	**59,7**	**67,1**	**75,5**	**90,0**	**114,0**	**143,0**	**185,0**	**208,0**	**236,0**
	Unit power input	kW	18,5	20,8	23,4	26,6	35,7	42,7	57,3	64,2	70,7
	Condenser water flow rate	m³/h	10,4	11,7	13,1	15,6	19,8	24,8	32,1	36,1	41,0
	Condenser pressure drop	kPa	40	38	42	45	40	40	35	55	54
	Cooling + Heating (3)										
	Cooling capacity	**kW**	**58,2**	**65,7**	**75,0**	**88,5**	**111,0**	**139,0**	**180,0**	**204,0**	**229,0**
	Heating capacity	**kW**	**74,6**	**84,2**	**95,6**	**112,0**	**142,0**	**179,0**	**231,0**	**261,0**	**293,0**
	Unit power input	kW	18,4	20,7	23,5	26,7	36,3	43,1	57,9	65,2	71,4
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2
	Plug fans EC	n.	2	2	2	3	3	4	4	4	5
	Total air flow	m³/h	18000	20500	23000	25500	32000	40000	52000	54000	62500
	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	17,7	17,7	18,6	23,2	26,3	33,7	39,4	41,9	69,4
	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	59,8	56,9	70,4	82,7	94,7	113,8	147,6	164,2	185,0
	Unit starting current (LRA)	A	152,8	280,4	179,4	222,7	279,7	337,3	392,2	456,2	477,0
	EER (1)	kW/kW	2,97	2,94	2,88	3,06	2,91	2,95	2,90	2,77	2,97
	COP (2)	kW/kW	3,22	3,23	3,23	3,38	3,19	3,35	3,23	3,24	3,34
	ESEER		3,85	3,69	3,61	3,94	3,47	3,97	3,49	3,38	3,69
	Sound power level [Lw] (4)	dB(A)	86,8	96,7	89,2	93,9	98,7	92,6	95,9	96,6	96,6
	Average sound pressure level [Lpm] (5)	dB(A)	69,6	79,5	72,0	76,0	80,8	74,0	77,3	78,0	77,3
	Net weight	kg	680	750	770	960	1160	1560	1680	1770	2150
	Hydraulic connections										
	Evaporator / Condenser IN/OUT - ISO 7/1 – R	Ø	2"	2"	2"	-	-	-	-	-	-
	Evaporator / Condenser IN/OUT - OD (6)	Ø mm	-	-	-	76,1	76,1	88,9	88,9	88,9	88,9
OPTIONAL	Chilled water pumping group	kW	1,5	1,5	1,5	2,2	2,2	3,0	3,0	3,0	3,0
	Hot water pumping group	kW	1,5	1,5	1,5	2,2	2,2	3,0	3,0	3,0	4,0
	Chilled water tank - volume	l	210	210	210	360	360	520	520	520	720
	Hot water tank - volume	l	210	210	210	360	360	520	520	520	720

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

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



MULTIPLO SCREW: Multifunction chillers for outdoor installation, equipped with screw compressors and axial fans.
Cooling Capacity: **189,0 ÷ 1084,0 kW**
Heating Capacity: **232,0 ÷ 1304,0 kW**

IDEA® RC Hi-Tech

multiplo screw

rcgroupairconditioning

R134a SHELL A/C

MAIN FEATURES
- Multifunction chiller
- 15 models available, for a wide selection opportunity..
- Average step of 60kW.
- EER up to
- COP up to
- ESEER up to
- Twin-screw compressors.
- Double refrigerant circuit.
- R134a refrigerant charge.
- Shell and tube heat exchangers.
- AC axial fans.
- Double air circuit.
- Electronic expansion valves.
- Suitable for indoor installation.

MAIN BENEFITS
- Defrosting dynamics control system IDEA®.
- Availability of pumping groups.
- Availability of partial heat recovery system.
- Availability of kit for the reduction of the noise.
- Availability of EC fans for a higher efficiency.
- Easily of maintenance.

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

IDEA® DEFROSTING SYSTEM
"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷15°C
Ambient temperature: -20÷50°C

WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 20÷63°C
Ambient temperature: -10÷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
- 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.
- 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 200 V2 U04 up to model 530 V2 U08 included.
- 2-pole 3-phase electric motor with Star / Delta starting from model 580 V2 U10 up to model 1070 V2 U14.
- Steps capacity control, 0-50-100% for each compressor.
- Crankcase heater.
- Terminal box with IP54 enclosure class.
- Rubber supports.

EVAPORATOR (for chilled water production)
From model 200 V2 U04 up to model 280 V2 U06
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Antifreeze heater.

From model 330 V2 U08 up to model 1070 V2 U14
- 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.

GAS/AIR HEAT EXCHANGER (heat exchanger for exhaustion)
- 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.
- Sub-cooling circuit to allow a significant increase in cooling capacity. The circuit is active only when the heat exchanger operates as an air cooled condenser.
- Frame in galvanized steel.

CONDENSER (for hot water production)
From model 200 V2 U04 up to model 280 V2 U06
- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Single circuit on water side and independent circuits, one for each compressor, on refrigerant side.
- Anticondensate insulation made of polyurethane.
- Temperature sensors on water inlet and outlet.
- Antifreeze heater.

From model 330 V2 U08 up to model 1070 V2 U14
- 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.

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

REFRIGERANT CIRCUIT
Component for each refrigerant circuit:
- Electronic expansion valve (one valve for each heat exchanger) that 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.
- Reversing valve for refrigeration cycle inversion.
- Sight glass.
- Filter dryer on liquid line.
- Solenoid valves on liquid lines.
- Service valves.
- 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.
- Check valves.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters. Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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.
- Magnetothermic switch or fuses for each compressor.
- Magnetothermic switches for fans or water pumps (if scheduled).

- Contactors for each load.
- Compressor Part-Winding start system from model 200 V2 U04 up to model 530 V2 U08 included.
- Compressor Star / Delta start system from model 580 V2 U10 up to model 1070 V2 U14.
- Transformer for auxiliary circuit and microprocessor supply.
- Ambient temperature sensor.
- 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 supplied as standard with counter flange.
- The hydraulic connections with grooved end are supplied as standard with flexible joint and adapter pipe.

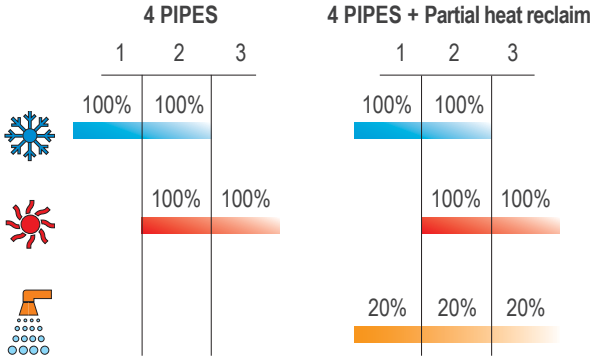
WORKING LOGIC

MULTIPLO SCREW is suitable for independent or simultaneous production of chilled water and hot water for 4-pipe plants. The unit is equipped with two screw compressors operating on two independent refrigerant circuits that allow, therefore, to satisfy differentiated thermal and cooling loads.

On request, the two circuits, can be equipped with plate type heat exchangers (desuperheaters) for domestic hot water production. Please note that the thermal power produced for the domestic water, corresponds to 15÷30% of the chiller thermal power, according to the domestic water temperature. The production of domestic hot water is subject to the operation of the machine in cooling only, heating only or contemporary (cooling + heating).

The unit cooling and heating functions are enabled by selectors placed on the electric board, while the domestic hot water production is always active. According to the request, MULTIPLO SCREW can produce chilled water and(or hot water in different percentage, as indicated in the working diagrams.

MULTIPLO SCREW can produce chilled water or hot water with variable loads up to 25% of the nominal.
With request of simultaneous production of hot water and chilled water, the two compressors can partialize their operation so as to obtain different working conditions as per following table.



MULTIPLO SCREW					
Cool %	Heat %	Compressor (1)	Compressor (1) Capacity Control	Compressor (2)	Compressor (2) Capacity Control
25	-	●	-	-	-
50	-	●	-	●	-
75	-	●	●	●	-
100	-	●	●	●	●
-	25	●	-	-	-
-	50	●	-	●	-
-	75	●	●	●	-
-	100	●	●	●	●
25	25	●	-	-	-
25	50	●	-	●	-
25	75	●	-	●	●
25	100	x	x	x	x
50	25	●	-	●	-
50	50	●	-	●	-
50	75	●	●	●	-
50	100	●	●	●	●
75	25	●	●	●	-
75	50	●	-	●	●
75	75	●	-	●	●
75	100	x	x	x	x
100	25	x	x	x	x
100	50	●	●	●	●
100	75	x	x	x	x
100	100	●	●	●	●
Circuit 1 defrosting		●	●	x	x
Circuit 2 defrosting		x	x	●	●

● component on;
- component off;
x not possible operating condition.

OPTIONAL ACCESSORIES

MULTIPLO SCREW SIZE	200 V2 U04	240 V2 U04	280 V2 U06	330 V2 U08	370 V2 U08	410 V2 U08	430 V2 U08	530 V2 U08
744 - CW Pumping group (1 pump)	●	●	●	●	●	●	●	●
758 - Pumping group AR-LN (1 pump)	●	●	●	●	●	●	●	●
748 - CW Pumping group (2 pumps)	●	●	●	●	●	●	●	●
766 - Pumping group AR-LN (2 pumps)	●	●	●	●	●	●	●	●
746 - HW Pumping group (1 pump)	●	●	●	●	●	●	●	●
759 - Pumping group AC-LN (1 pump)	●	●	●	●	●	●	●	●
750 - HW Pumping group (2 pumps)	●	●	●	●	●	●	●	●
767 - Pumping group AC-LN (2 pumps)	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●	●
Condenser flexible joint with adapter for flange connection	●	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●	●
Coil in special execution	●	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●	●

MULTIPLO SCREW SIZE	580 V2 U10	660 V2 U10	780 V2 U12	870 V2 U12	920 V2 U12	950 V2 U12	1070 V2 U14
744 - CW Pumping group (1 pump)	●	●	●	●	●	●	●
758 - Pumping group AR-LN (1 pump)	●	●	●	●	●	●	●
748 - CW Pumping group (2 pumps)	●	●	●	●	●	●	●
766 - Pumping group AR-LN (2 pumps)	●	●	●	●	●	●	●
746 - HW Pumping group (1 pump)	●	●	●	●	●	●	●
759 - Pumping group AC-LN (1 pump)	●	●	●	●	●	●	●
750 - HW Pumping group (2 pumps)	●	●	●	●	●	●	●
767 - Pumping group AC-LN (2 pumps)	●	●	●	●	●	●	●
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	●	●	●	●	●	●	●
Condenser flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Condenser flexible joint with adapter for flange connection	●	●	●	●	●	●	●
251 - Coils protection nets	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Coil in special execution	●	●	●	●	●	●	●
450 - Desuperheater	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
605 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Service valve on compressor group suction	●	●	●	●	●	●	●
650 - Compressor thermal relay	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●
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

MULTIPLO SCREW TECHNICAL DATA

	MULTIPLO SCREW SIZE		200 V2 U04	240 V2 U04	280 V2 U06	330 V2 U08	370 V2 U08	410 V2 U08	430 V2 U08	530 V2 U08
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**199**	**237**	**282**	**333**	**371**	**411**	**434**	**528**
	Unit power input	kW	67,5	79,8	94,6	112,1	125,3	137,5	146,1	177,8
	Evaporator water flow rate	m³/h	59,5	71,3	83,0	96,0	109,0	121,0	129,0	160,0
	Evaporator pressure drop	kPa	97,3	116,0	143,0	156,0	192,0	212,0	225,0	266,0
	Only heating - Heating capacity (2)	**kW**	**232**	**279**	**327**	**402**	**445**	**494**	**521**	**633**
	Unit power input	kW	72,3	84,8	102,2	115,2	125,7	136,5	150,1	180,3
	Condenser water flow rate	m³/h	40,4	48,4	56,9	69,8	77,4	85,9	90,5	110
	Condenser pressure drop	kPa	17	22	23	61	60	60	73	75
	Cooling + Heating (3)									
	Cooling capacity	**kW**	**190**	**229**	**265**	**344**	**386**	**430**	**436**	**543**
	Heating capacity	**kW**	**256**	**308**	**358**	**447**	**502**	**560**	**578**	**718**
	Unit power input	kW	74,0	86,4	104,2	118,6	130,6	144,6	158,0	191,0
	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 steps	n.	4	4	4	6	6	6	6	6
	Axial fans	n.	4	4	6	8	8	8	8	8
	Total air flow	m³/h	93124	89644	144498	193536	193536	193536	187992	187992
	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	84	112	124	171	171	171	171	171
	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	160,6	180,6	226,4	236,2	267,2	301,2	319,2	361,2
	Unit starting current (LRA)	A	365,6	401,6	497,4	414,2	500,2	661,2	670,2	842,2
	EER (1)	kW/kW	2,95	2,97	2,98	2,97	2,96	2,99	2,97	2,97
	COP (2)	kW/kW	3,21	3,29	3,20	3,49	3,54	3,62	3,47	3,51
	ESEER		3,47	3,51	3,51	3,50	3,49	3,50	3,49	3,54
	Sound power level [Lw] (4)	dB(A)	91,6	92,1	92,3	92,5	92,9	97,2	97,2	97,7
	Average sound pressure level [Lpm] (5)	dB(A)	72,3	72,8	72,3	71,7	72,1	76,4	76,4	76,9
	Net weight	kg	3415	3530	4206	6168	6264	6522	6534	6828
	Hydraulic connections									
	Evaporator/Condenser IN/OUT - OD (6)	Ø mm	88,9	88,9	88,9	168,3	168,3	219,1	219,1	219,1
OPT	Chilled/hot water pumping group	kW	2,2	2,2	2,2	3,0	3,0	5,5	5,5	5,5
	Chilled/hot water pumping group LN	kW	2,2	2,2	2,2	3,0	3,0	5,5	5,5	5,5
LNO KIT 100%	**Only cooling - Cooling capacity (1)**	**kW**	**199**	**237**	**282**	**333**	**371**	**411**	**434**	**528**
	Unit power input	kW	67,5	79,8	94,6	112,1	125,3	137,5	146,1	177,8
	Only heating - Heating capacity (2)	**kW**	**232**	**279**	**327**	**402**	**445**	**494**	**521**	**633**
	Unit power input	kW	72,3	84,8	102,2	115,2	125,7	136,5	150,1	180,3
	Total air flow	m³/h	93124	89644	144498	193536	193536	193536	187992	187992
	EER (1)	kW/kW	2,95	2,97	2,98	2,97	2,96	2,99	2,97	2,97
	COP (2)	kW/kW	3,21	3,29	3,20	3,49	3,54	3,62	3,47	3,51
	Sound power level [Lw] (4)	dB(A)	89,6	90,1	90,3	90,5	90,9	95,2	95,2	95,7
	Average sound pressure level [Lpm] (5)	dB(A)	70,3	70,8	70,3	69,7	70,1	74,4	74,4	74,9
LNO KIT 85%	**Only cooling - Cooling capacity (1)**	**kW**	**196**	**233**	**278**	**328**	**365**	**404**	**427**	**519**
	Unit power input	kW	67,6	80,3	94,9	111,6	125,0	138,4	147,2	180,8
	Only heating - Heating capacity (2)	**kW**	**232**	**279**	**327**	**402**	**445**	**494**	**521**	**633**
	Unit power input	kW	71,2	83,5	100,6	112,9	123,3	134,2	148,0	178,3
	Total air flow	m³/h	79155	76197	122823	164505	164505	164505	159793	159793
	EER (1)	kW/kW	2,90	2,90	2,93	2,94	2,92	2,92	2,90	2,87
	COP (2)	kW/kW	3,26	3,34	3,25	3,56	3,61	3,68	3,52	3,55
	Sound power level [Lw] (4)	dB(A)	86,6	87,1	87,3	87,5	87,9	92,2	92,2	92,7
	Average sound pressure level [Lpm] (5)	dB(A)	67,3	67,8	67,3	66,7	67,1	71,4	71,4	71,9
LNO KIT 70%	**Only cooling - Cooling capacity (1)**	**kW**	**192**	**228**	**273**	**322**	**358**	**394**	**416**	**506**
	Unit power input	kW	65,1	76,8	91,6	108,4	120,9	131,8	140,1	170,4
	Only heating - Heating capacity (2)	**kW**	**232**	**279**	**327**	**402**	**445**	**494**	**521**	**633**
	Unit power input	kW	72,3	84,8	102,2	115,2	125,7	136,5	150,1	180,3
	Total air flow	m³/h	65186	62750	101148	135475	135475	135475	131594	131594
	EER (1)	kW/kW	2,95	2,97	2,98	2,97	2,96	2,99	2,97	2,97
	COP (2)	kW/kW	3,21	3,29	3,20	3,49	3,54	3,62	3,47	3,51
	Sound power level [Lw] (4)	dB(A)	83,6	84,1	84,3	84,5	84,9	89,2	89,2	89,7
	Average sound pressure level [Lpm] (5)	dB(A)	64,3	64,8	64,3	63,7	64,1	68,4	68,4	68,9

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

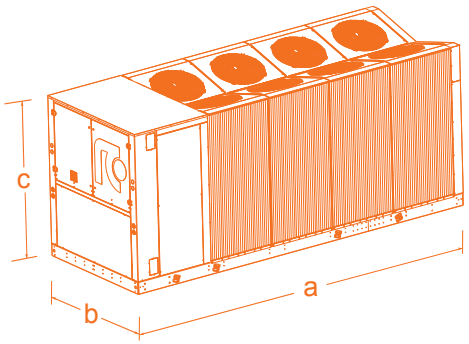
MULTIPLO SCREW TECHNICAL DATA

	MULTIPLO SCREW SIZE		580 V2 U10	660 V2 U10	780 V2 U12	870 V2 U12	920 V2 U12	950 V2 U12	1070 V2 U14
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**590**	**670**	**787**	**873**	**924**	**958**	**1084**
	Unit power input	kW	194,7	218,2	265,9	294,9	310,1	323,6	363,8
	Evaporator water flow rate	m³/h	174,0	197,0	240,0	268,0	284,0	296,0	331,0
	Evaporator pressure drop	kPa	293,0	326,0	374,0	373,0	449,0	479,0	560,0
	Only heating - Heating capacity (2)	**kW**	**698**	**794**	**941**	**1050**	**1105**	**1163**	**1304**
	Unit power input	kW	195,0	208,9	258,5	280,7	286,3	301,3	343,2
	Condenser water flow rate	m³/h	121	138	164	183	192	202	227
	Condenser pressure drop	kPa	63	60	54	71	54	61	69
	Cooling + Heating (3)								
	Cooling capacity	**kW**	**608**	**717**	**830**	**936**	**1014**	**1035**	**1155**
	Heating capacity	**kW**	**797**	**924**	**1083**	**1216**	**1292**	**1332**	**1492**
	Unit power input	kW	207,3	224,3	274,6	302,6	300,6	320,4	364,3
	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 steps	n.	6	6	6	6	6	6	6
	Axial fans	n.	10	10	12	12	12	12	14
	Total air flow	m³/h	241920	241920	281988	281988	281988	271824	317128
	Air circuits	n.	2	2	2	2	2	2	2
	Refrigerant		R134a	R134a	R134a	R134a	R134a	R134a	R134a
	Total refrigerant charge (optional excluded)	kg	215	215	256	256	256	341	397
	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	406	453	520,8	582,8	613,8	661,8	764,6
	Unit starting current (LRA)	A	583,0	607,0	657,8	767,8	873,8	949,8	1112,6
	EER (1)	kW/kW	3,03	3,07	2,96	2,96	2,98	2,96	2,98
	COP (2)	kW/kW	3,58	3,80	3,64	3,74	3,86	3,86	3,80
	ESEER		3,56	3,59	3,54	3,56	3,59	3,56	3,57
	Sound power level [Lw] (4)	dB(A)	97,7	100,4	101,7	101,4	99,8	99,8	102,9
	Average sound pressure level [Lpm] (5)	dB(A)	76,5	79,2	80,1	79,8	78,2	78,2	80,9
	Net weight	kg	7727	7901	9273	9329	9433	9712	11044
	Hydraulic connections								
	Evaporator/Condenser IN/OUT - OD (6)	Ø mm	219,1	219,1	219,1	219,1	219,1	219,1	219,1
OPT	Chilled/hot water pumping group	kW	5,5	7,5	7,5	11,0	11,0	11,0	11,0
	Chilled/hot water pumping group LN	kW	5,5	9,2	9,2	9,2	9,2	9,2	9,2
LNO KIT 100%	**Only cooling - Cooling capacity (1)**	**kW**	**590**	**670**	**787**	**873**	**924**	**958**	**1084**
	Unit power input	kW	194,7	218,2	265,9	294,9	310,1	323,6	363,8
	Only heating - Heating capacity (2)	**kW**	**698**	**794**	**941**	**1050**	**1105**	**1163**	**1304**
	Unit power input	kW	195,0	208,9	258,5	280,7	286,3	301,3	343,2
	Total air flow	m³/h	241920	241920	281988	281988	281988	271824	317128
	EER (1)	kW/kW	3,03	3,07	2,96	2,96	2,98	2,96	2,98
	COP (2)	kW/kW	3,58	3,80	3,64	3,74	3,86	3,86	3,80
	Sound power level [Lw] (4)	dB(A)	95,7	98,4	99,7	99,4	97,8	97,8	100,9
	Average sound pressure level [Lpm] (5)	dB(A)	74,5	77,2	78,1	77,8	76,2	76,2	78,9
LNO KIT 85%	**Only cooling - Cooling capacity (1)**	**kW**	**580**	**657**	**773**	**856**	**903**	**936**	**1060**
	Unit power input	kW	197,3	221,2	269,3	300,4	315,7	330,7	370,6
	Only heating - Heating capacity (2)	**kW**	**698**	**794**	**941**	**1050**	**1105**	**1163**	**1304**
	Unit power input	kW	192,3	206,2	255,0	277,0	283,3	298,2	338,7
	Total air flow	m³/h	205632	205632	239689	239689	239689	231050	269558
	EER (1)	kW/kW	2,94	2,97	2,87	2,85	2,86	2,83	2,86
	COP (2)	kW/kW	3,63	3,85	3,69	3,79	3,90	3,90	3,85
	Sound power level [Lw] (4)	dB(A)	92,7	95,4	96,7	96,4	94,8	94,8	97,9
	Average sound pressure level [Lpm] (5)	dB(A)	71,5	74,2	75,1	74,8	73,2	73,2	75,9
LNO KIT 70%	**Only cooling - Cooling capacity (1)**	**kW**	**568**	**641**	**753**	**831**	**874**	**903**	**1025**
	Unit power input	kW	187,5	208,8	254,4	280,7	293,3	305,1	344,0
	Only heating - Heating capacity (2)	**kW**	**698**	**794**	**941**	**1050**	**1105**	**1163**	**1304**
	Unit power input	kW	195,0	208,9	258,5	280,7	286,3	301,3	343,2
	Total air flow	m³/h	169344	169344	197392	197392	197392	190276	221989
	EER (1)	kW/kW	3,03	3,07	2,96	2,96	2,98	2,96	2,98
	COP (2)	kW/kW	3,58	3,80	3,64	3,74	3,86	3,86	3,80
	Sound power level [Lw] (4)	dB(A)	89,7	92,4	93,7	93,4	91,8	91,8	94,9
	Average sound pressure level [Lpm] (5)	dB(A)	68,5	71,2	72,1	71,8	70,2	70,2	72,9

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

DIMENSIONS (mm)

MULTIPLO SCREW	a	b	c
U04	3815	2206	2015
U06	5215	2206	2015
U08	6045	2206	2525
U10	7175	2206	2525
U12	8305	2206	2525
U14	9435	2206	2525



TRILOGY BI: Reversible heat pumps (2 pipes plant)
TRILOGY TETRA: Multifunction chillers (4 pipes plant)
TRILOGY ESA: Multifunction chillers with total heat reclaim (4 +2 pipes plant
Cooling Capacity: **45,0 ÷ 212,0 kW**
Heating Capacity: **57,6 ÷ 255,0 kW**

IDEA®
RC Hi-Tech

trilogy

rcgroupairconditioning

MAIN FEATURES
- Reversible heat pump and multifunction chiller.
- 3 versions available 15 models available, for a wide selection opportunity..
- Average step of 25kW.
- EER up to 3,24.
- COP up to 3,73.
- ESEER up to 4,53.
- Scroll compressors.
- Single refrigerant circuit.
- R410A refrigerant charge.
- Plate type heat exchanger.
- EC axial fans.
- Single air circuit.
- Electronic expansion valves.
- Suitable for outdoor installation.

MAIN BENEFITS
- Defrosting dynamics control system IDEA®.
- Availability of pumping groups.
- Availability of kit for the reduction of the noise.
- EC fans for a higher efficiency.
- Easily of maintenance.

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

IDEA® DEFROSTING SYSTEM
"Patented" defrosting system with dynamic reading of working parameters. Thanks to proprietary software it senses the real presence of brine on the coil starting defrosting cycles only in that situation. This brings a remarkable energy saving (more than 20-30% on the average) and a higher working continuity compared with traditional systems.

WORKING LIMITS IN COOLING MODE
Evaporator chilled water outlet temperature: -10÷15°C
Ambient temperature: -12÷18°C

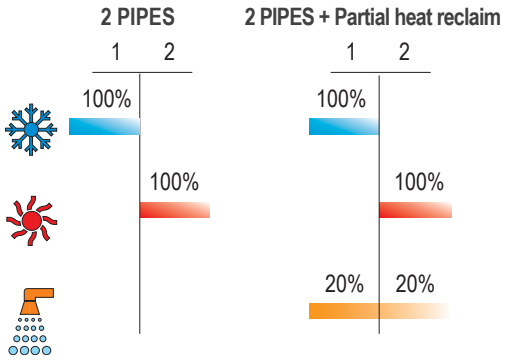
WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 30÷60°C
Ambient temperature: -10÷35°C

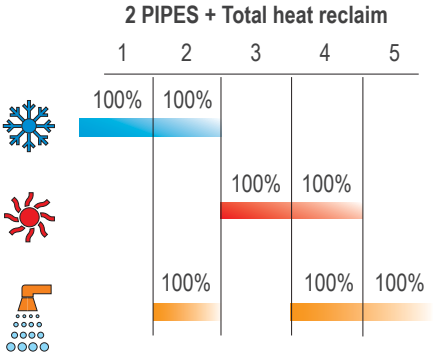
rcgroup.it
1 9 6 3 2 0 1 3
fifty cool years

WORKING LOGIC

TRILOGY BI

The production of sanitary hot water is made through partial or total heat reclaim systems and it matches the normal production of chilled or hot water according to the following schemes. In working condition 2 the system produces simultaneously chilled water and domestic hot water. In working condition no. 4 (simultaneous request of hot water for heating and domestic hot water) the system gives priority to the domestic hot water production. Only when the domestic hot water request is satisfied, the system will start producing hot water for heating.





TRILOGI BI 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.
- Technical compartment housing compressors and heat exchangers. Technical compartment and panels insulated with polyurethane for sound proofing.
- 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.

PLANT SIDE HEAT EXCHANGER

- 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.
- Antifreeze heater.

AIR/GAS HEAT EXCHANGER

- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- Brushless type synchronous EC motors 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 system.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valves.
  - One valve on plant side heat exchanger
  - One valve on source side heat exchanger (finned coil)

  The electronic expansion 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 with service valve and safety valve.
- Filter dryer on liquid line.
- Service valves on suction line and gas discharge.
- Non-return valve
- Solenoid valve on liquid line
- 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.
- Oil drainage and oil recovery systems.
- Liquid separator on suction line.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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 (fans excluded).
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls:
- Working mode selector Summer – Winter – Remote
- Enabling selector On – Off - Remote
- Power supply: 400/3/50+N.

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 supplied as standard with counter flange.
- The hydraulic connections with grooved end (Victaulic) are supplied as standard with Victaulic joint and adapter pipe.

OPTIONAL ACCESSORIES- TRILOGY BI

TRILOGY BI SIZE	44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
735 - Plant water pump	●	●	●	●	●	●	●
738 - Sanitary water pump	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
784 - Heat exchanger antifreezing heater	●	●	●	●	●	●	●
785 - Sanitary antifreezing heater	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Plant heat exchanger flexible joint with adapter for flange connection	●	●	●	●	●	●	●
453 - 100% hot sanitary water	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Total heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●
452 - 20% hot sanitary water	●	●	●	●	●	●	●
Partial heat recovery flexible joint with adapter pipe (solder type)	●	●	●	●	●	●	●
Partial heat recovery flexible joint with adapter for flange connection	●	●	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●
731 - Safety water flow switch	●	●	●	●	●	●	●
1003 - Analogic flowmeter	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
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

TRILOGY BI TECHNICAL DATA

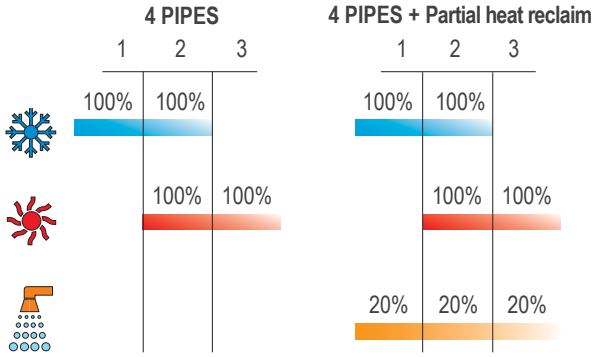
	TRILOGY BI SIZE		44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**45,0**	**57,1**	**74,6**	**101,0**	**124,0**	**152,0**	**208,0**
	Unit power input	kW	15,8	21,0	26,0	35,3	47,3	54,9	64,6
	Plant side water flow rate	m³/h	7,8	9,8	12,8	17,4	21,3	26,2	35,8
	Plant side pressure drop	kPa	27	28	25	28	33	27	22
	Only heating - Heating capacity (2)	**kW**	**57,6**	**73,7**	**95,3**	**132,0**	**162,0**	**190,0**	**250,0**
	Unit power input	kW	16,5	21,5	26,8	38,8	49,5	57,2	78,1
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2
	Axial fans	n.	2	2	2	2	2	2	3
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	Air circuits	n.	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	14	16	31	32	45	46	60
	Gas circuits	n.	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
	Max unit operating current (FLA)	A	45,3	53,3	70,4	85,0	103,8	136,8	174,2
	Unit starting current (LRA)	A	135,3	146,3	209,4	270,0	375,8	381,8	476,2
	EER (1)	kW/kW	2,84	2,72	2,87	2,86	2,62	2,77	3,22
	COP (2)	kW/kW	3,49	3,43	3,56	3,40	3,27	3,32	3,20
	ESEER		4,30	4,09	4,47	3,99	3,69	3,91	4,36
	Sound power level [Lw] (3)	dB(A)	84,7	84,9	85,1	91,8	92,6	92,8	95,8
	Average sound pressure level [Lpm] (4)	dB(A)	67,9	68	67,3	73,9	74,1	74,3	76,3
	Net weight	kg	575	610	905	1010	1180	1240	1665
	Hydraulic connections								
	Plant side exchanger IN/OUT - (ISO7/1 - R)	Ø	2"	2"	--	--	--	--	--
	Plant side exchanger IN/OUT - OD (5)	Ø mm	--	--	76,1	76,1	76,1	76,1	76,1
OPTIONAL	**Hot sanitary water**								
	Partial heat recovery system								
	Heating capacity (6)	**kW**	**16,5**	**21,0**	**27,4**	**37,2**	**45,4**	**55,8**	**76,3**
	Total heat recovery system								
	Production of hot sanitary water only								
	Heating capacity (7)	**kW**	**57,7**	**73,8**	**95,5**	**132,0**	**162,4**	**189,1**	**250,3**
	With contemporary production of chilled water								
	Heating capacity (8)	**kW**	**59,7**	**76,4**	**99,5**	**133,0**	**168,0**	**197,0**	**265,0**
	Chilled/hot water pumping group	kW	1,1	1,1	1,1	1,5	2,2	2,2	3,2
	Chilled/hot water pumping group (total reclaim)	kW	1,1	1,5	1,1	1,1	1,5	1,5	3,2
LNO KIT 100%	**Only cooling - Cooling capacity (1)**	**kW**	**45,0**	**57,1**	**74,6**	**101,0**	**124,0**	**152,0**	**208,0**
	Unit power input	kW	16,1	21,2	26,1	35,8	47,7	55,3	64,6
	Only heating - Thermal capacity (2)	**kW**	**57,6**	**73,7**	**95,3**	**132,0**	**162,0**	**190,0**	**250,0**
	Unit power input	kW	16,7	21,7	26,8	39,4	49,8	57,6	78,1
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	EER (1)	kW/kW	2,80	2,69	2,86	2,82	2,60	2,75	3,22
	COP (2)	kW/kW	3,44	3,39	3,55	3,35	3,25	3,30	3,20
	Sound power level [Lw] (3)	dB(A)	84,7	84,7	81,2	91,7	92,4	92,5	95,2
	Average sound pressure level [Lpm] (4)	dB(A)	67,8	67,9	63,4	73,9	73,9	74,1	76,0
LNO KIT 85%	**Only cooling - Cooling capacity (1)**	**kW**	**44,0**	**55,5**	**72,5**	**98,7**	**121,0**	**147,0**	**203,0**
	Unit power input	kW	16,2	21,7	27,0	36,3	48,6	56,8	66,3
	Only heating - Thermal capacity (2)	**kW**	**56,8**	**72,5**	**93,8**	**130,0**	**159,0**	**187,0**	**247,0**
	Unit power input	kW	16,4	21,3	26,6	38,5	49,1	56,8	77,4
	Total air flow	m³/h	14450	15300	21250	33490	38250	38250	58650
	EER (1)	kW/kW	2,71	2,56	2,69	2,72	2,49	2,59	3,06
	COP (2)	kW/kW	3,46	3,4	3,53	3,38	3,24	3,29	3,19
	Sound power level [Lw] (3)	dB(A)	80,9	81,0	78,6	87,9	88,8	89,0	90,0
	Average sound pressure level [Lpm] (4)	dB(A)	64,0	64,2	60,8	70,1	70,3	70,5	71,0
LNO KIT 70%	**Only cooling - Cooling capacity (1)**	**kW**	**42,5**	**53,3**	**69,7**	**95,2**	**116,0**	**140,0**	**195,0**
	Unit power input	kW	17,1	22,9	28,3	37,9	50,7	59,8	69,4
	Only heating - Thermal capacity (2)	**kW**	**55,6**	**70,8**	**91,6**	**127,0**	**156,0**	**182,0**	**242,0**
	Unit power input	kW	16,3	21,2	26,5	38,1	48,8	56,3	76,8
	Total air flow	m³/h	11900	12600	17500	27580	31500	31500	48300
	EER (1)	kW/kW	2,49	2,33	2,46	2,51	2,29	2,34	2,81
	COP (2)	kW/kW	3,42	3,34	3,46	3,33	3,20	3,23	3,15
	Sound power level [Lw] (3)	dB(A)	76,5	76,9	76,5	83,7	84,9	85,4	85,4
	Average sound pressure level [Lpm] (4)	dB(A)	59,6	60,0	58,7	65,9	66,4	66,9	66,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient temperature.
2. Referred to hot water outlet temperature 45°C;ambient air at 7°C with 90%rH.
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 domestic hot water temperature 40/45°C.
7. Referred to domestic hot water temperature 40/45°C; ambient temperature at 7°C.
8. Referred to domestic hot water temperature 40/45°C; chilled water outlet temperature at 7°C.

WORKING LOGIC

TRILOGY TETRA

The production of domestic hot water is made by the installation of a heat exchanger (optional accessory) for the partial heat reclaim. The domestic hot water is always produced regardless of the working request.



TRILOGY TETRA 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.
- Technical compartment housing compressors and heat exchangers. Technical compartment and panels insulated with polyurethane for sound proofing.
- 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.

PLANT SIDE HEAT EXCHANGER FOR COOLING

- 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.
- Antifreeze heater.

PLANT SIDE HEAT EXCHANGER FOR HEATING

- 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.
- Antifreeze heater.

AIR/GAS HEAT EXCHANGER

- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- Brushless type synchronous EC motors 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 system.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valves.
  - One valve on plant side cooling heat exchanger
  - One valve on source side heat exchanger (finned coil)

  The electronic expansion 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.
- Mechanical expansion valve for defrosting control on gas / air heat exchanger
- Sight glass.
- Liquid receiver with service valve and safety valve.
- Filter dryer on liquid line.
- Service valves on suction line and gas discharge.
- Non-return valve
- Solenoid valve on liquid line
- 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.
- Oil drainage and oil recovery systems.
- Liquid separator on suction line.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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 (except fans).
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls:
  - Enabling selector On – Off – Remote for cooling working mode
  - Enabling selector On – Off – Remote for heating working mode
- Power supply: 400/3/50+N.

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 supplied as standard with counter flange.
- The hydraulic connections with grooved end (Victaulic) are supplied as standard with Victaulic joint and adapter pipe.

OPTIONAL ACCESSORIES- TRILOGY TETRA

TRILOGY TETRA SIZE	44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
737 - Hot water pump	●	●	●	●	●	●	●
736 - Chilled water pump	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
783 - Heat exchangers antifreezing heater	●	●	●	●	●	●	●
785 - Sanitary antifreezing heater	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
Plant heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Plant heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
452 - 20% hot sanitary water	●	●	●	●	●	●	●
Partial heat recovery flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Partial heat recovery flexible joint with adapter for flange connection	-	-	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
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

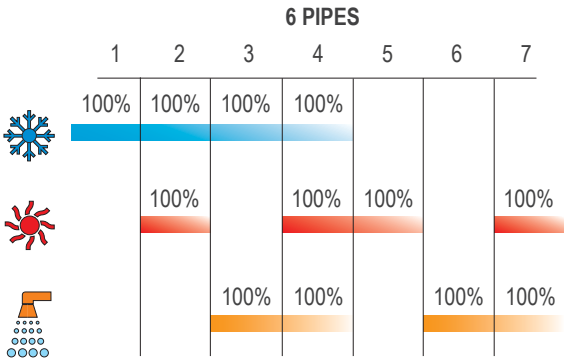
TRILOGY TETRA TECHNICAL DATA

	TRILOGY TETRA SIZE		44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**45,4**	**60,0**	**78,2**	**107,0**	**131,0**	**152,0**	**212,0**
	Unit power input	kW	14,9	21,6	26,6	36,4	48,3	55,3	65,4
	Evaporator water flow rate	m³/h	7,8	10,3	13,5	18,4	22,5	26,2	36,4
	Evaporator pressure drop	kPa	27	31	28	31	37	27	50
	Only heating - Heating capacity (2)	**kW**	**57,7**	**74,2**	**95,8**	**132,0**	**163,0**	**190,0**	**255,0**
	Unit power input	kW	16,2	20,8	25,8	37,9	48,5	55,1	69,9
	Condenser water flow rate	m³/h	10,0	12,9	16,7	23,0	28,4	33,1	44,3
	Condenser pressure drop	kPa	33	35	29	32	37	30	70
	Cooling + Heating (3)								
	Cooling Capacity	**kW**	**46,5**	**59,7**	**77,9**	**104,0**	**131,0**	**153,0**	**204,0**
	Heating Capacity	**kW**	**62,2**	**79,9**	**104,0**	**139,0**	**176,0**	**205,0**	**270,0**
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2
	Axial fans	n.	2	2	2	2	2	2	3
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	Air circuits	n.	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	16	18	35	36	50	52	75
	Gas circuits	n.	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
	Max unit operating current (FLA)	A	47,3	55,3	70,6	88,6	105,6	125,6	174,2
	Unit starting current (LRA)	A	137,3	148,3	237,6	273,6	328,6	376,6	486,2
	EER (1)	kW/kW	3,05	2,78	2,94	2,94	2,71	2,75	3,24
	COP (2)	kW/kW	3,57	3,56	3,71	3,48	3,36	3,45	3,65
	ESEER		4,40	4,00	4,50	3,92	3,71	3,86	4,37
	Sound power level [Lw] (4)	dB(A)	84,7	84,9	85,1	91,8	92,6	92,8	95,8
	Average sound pressure level [Lpm] (5)	dB(A)	67,9	68	67,3	73,9	74,1	74,3	76,3
	Net weight	kg	575	610	905	1010	1180	1240	1665
	Hydraulic connections								
	Evaporator/Condenser IN/OUT - (ISO7/1 - R)	Ø	2"	2"	--	--	--	--	--
	Evaporator/Condenser IN/OUT - OD (6)	Ø mm	--	--	76,1	76,1	76,1	76,1	76,1
OPT.	**Partial heat recovery**								
	Heating Capacity (7)	**kW**	**16,7**	**22,0**	**28,7**	**39,2**	**48,1**	**55,9**	**77,7**
	Chilled/hot water pumping group	kW	1,1	1,1	1,1	1,5	2,2	2,2	3,2
LNO KIT 100%	**Only cooling - Cooling capacity (1)**	**kW**	**45,4**	**60,0**	**78,2**	**107,0**	**131,0**	**152,0**	**212,0**
	Unit power input	kW	14,9	21,6	26,6	36,4	48,3	55,3	65,4
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,8**	**132,0**	**163,0**	**190,0**	**255,0**
	Unit power input	kW	16,2	20,8	25,8	37,9	48,5	55,1	69,9
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	EER (1)	kW/kW	3,05	2,78	2,94	2,94	2,71	2,75	3,24
	COP (2)	kW/kW	3,57	3,56	3,71	3,48	3,36	3,45	3,65
	Sound power level [Lw] (4)	dB(A)	84,7	84,7	81,2	91,7	92,4	92,5	95,2
	Average sound pressure level [Lpm] (5)	dB(A)	67,8	67,9	63,4	73,9	73,9	74,1	76,0
LNO KIT 85%	**Only cooling - Cooling capacity (1)**	**kW**	**44,2**	**58,3**	**76,0**	**104,0**	**128,0**	**147,0**	**206,0**
	Unit power input	kW	15,3	22,3	27,5	37,4	49,6	57,2	67,3
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,8**	**132,0**	**163,0**	**190,0**	**255,0**
	Unit power input	kW	16,0	20,7	25,7	37,5	47,9	54,6	69,1
	Total air flow	m³/h	14450	15300	21250	33490	38250	38250	58650
	EER (1)	kW/kW	2,88	2,61	2,76	2,78	2,58	2,57	3,06
	COP (2)	kW/kW	3,60	3,59	3,73	3,52	3,40	3,48	3,69
	Sound power level [Lw] (4)	dB(A)	80,9	81,0	78,6	87,9	88,8	89,0	90,0
	Average sound pressure level [Lpm] (5)	dB(A)	64,0	64,2	60,8	70,1	70,3	70,5	71,0
LNO KIT 70%	**Only cooling - Cooling capacity (1)**	**kW**	**42,4**	**55,8**	**72,8**	**99,9**	**123,0**	**141,0**	**198,0**
	Unit power input	kW	16,0	23,5	29,0	39,0	51,9	60,0	70,5
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,8**	**132,0**	**163,0**	**190,0**	**255,0**
	Unit power input	kW	15,9	20,5	25,5	37,1	47,5	54,1	68,5
	Total air flow	m³/h	11900	12600	17500	27580	31500	31500	48300
	EER (1)	kW/kW	2,65	2,37	2,51	2,56	2,37	2,35	2,81
	COP (2)	kW/kW	3,63	3,62	3,75	3,56	3,43	3,51	3,72
	Sound power level [Lw] (4)	dB(A)	76,5	76,9	76,5	83,7	84,9	85,4	85,4
	Average sound pressure level [Lpm] (5)	dB(A)	59,6	60,0	58,7	65,9	66,4	66,9	66,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient temperature.
2. Referred to hot water temperature 40/45°C;ambient air at 7°C with 90%rH.
3. Referred to chilled water temperature 12/7°C; hot water outlet temperature at 45°C.
4. Sound power level [Lw] according to ISO EN 9614 - 2.
5. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
6. Hydraulic connection with grooved end. The flexible joint is an optional accessory.
7. Referred to domestic hot water temperature 40/45°C;

TRILOGY ESA

Multifunction liquid chiller with simultaneous production of chilled water, hot water and domestic hot water. In working condition no. 4 and 7 the system gives priority to the domestic hot water production. Only when the domestic hot water request is satisfied, the system will start producing hot water for heating.



TRILOGY ESA 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.
- Technical compartment housing compressors and heat exchangers. Technical compartment and panels insulated with polyurethane for sound proofing.
- 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.

PLANT SIDE HEAT EXCHANGER FOR COOLING

- 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.
- Antifreeze heater.

PLANT SIDE HEAT EXCHANGER FOR HEATING

- 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.
- Antifreeze heater.

HEAT EXCHANGER FOR DOMESTIC HOT WATER

- 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.
- Antifreeze heater.

AIR/GAS HEAT EXCHANGER

- 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.
- Particular circulation on refrigerant side, in order to optimize performance in heat pump mode.
- Ambient temperature sensor
- Frame in galvanized steel.

FANS SECTION

- Axial fans with sickle-shaped blades, fan guard and optimized for low noise levels.
- Brushless type synchronous EC motors 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 system.
- IP54 enclosure class.

REFRIGERANT CIRCUIT

- Double reversing valves for refrigeration cycle inversion.
- Electronic expansion valves.
  - One valve on plant side cooling heat exchanger
  - One valve on source side heat exchanger (finned coil)

  The electronic expansion 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.
- Mechanical expansion valve for defrosting control on gas / air heat exchanger
- Sight glass.
- Liquid receiver with service valve and safety valve.
- Filter dryer on liquid line.
- Service valves on suction line and gas discharge.
- Non-return valve
- Solenoid valve on liquid line
- 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.
- Oil drainage and oil recovery systems.
- Liquid separator on suction line.
- IDEA® defrosting system.
  RC Group patented defrosting system based on a dynamic reading of the evaporating parameters.
  Through sensors the microprocessor realize the real ice presence on the gas/air heat exchanger and activates the defrosting cycle only when necessary, with consequent energy saving.
- 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 (except fans).
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls:
  - Enabling selector On – Off – Remote for cooling working mode
  - Enabling selector On – Off – Remote for heating working mode
  - Enabling selector On – Off – Remote for domestic hot water working mode
- Power supply: 400/3/50+N.

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 supplied as standard with counter flange.
- The hydraulic connections with grooved end (Victaulic) are supplied as standard with Victaulic joint and adapter pipe.

OPTIONAL ACCESSORIES- TRILOGY ESA

TRILOGY ESA SIZE	44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
737 - Hot water pump	●	●	●	●	●	●	●
736 - Chilled water pump	●	●	●	●	●	●	●
738 - Sanitary water pump	●	●	●	●	●	●	●
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
783 - Heat exchangers antifreezing heater	●	●	●	●	●	●	●
150 - LNO kit (noise reduction)	●	●	●	●	●	●	●
170 - Spring antivibration holders (kit)	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
Plant heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Plant heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
351 - Coils with pre-painted fins	●	●	●	●	●	●	●
Exhaustion Coil in special execution	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
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

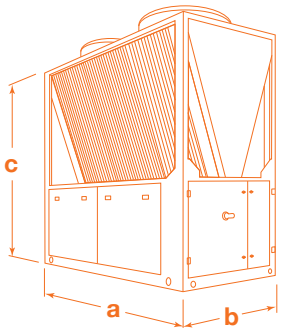
TRILOGY ESA TECHNICAL DATA

	TRILOGY ESA SIZE		44 P2 F1	58 P2 F1	76 P2 F2	100 P2 F2	124 P2 F3	150 P2 F3	210 P2 F4
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**45,4**	**58,2**	**76,5**	**102,0**	**123,0**	**154,0**	**211,0**
	Unit power input	kW	14,9	20,4	25,7	33,1	43,3	55,0	65,3
	Evaporator water flow rate	m³/h	7,8	10,0	13,2	17,5	21,0	26,5	36,3
	Evaporator pressure drop	kPa	27	29	26	29	33	28	50
	Only heating - Heating capacity (2)	**kW**	**57,7**	**74,2**	**95,7**	**132,0**	**163,0**	**190,0**	**251,0**
	Unit power input	kW	16,2	20,7	25,7	37,8	48,1	54,6	74,0
	Condenser water flow rate	m³/h	10,0	12,9	16,6	23,0	28,3	33,0	43,7
	Condenser pressure drop	kPa	33	35	29	32	37	30	60
	Cooling+Heating (3)								
	Cooling Capacity	**kW**	**46,5**	**59,5**	**77,8**	**104,0**	**129,0**	**153,0**	**203,0**
	Heating Capacity	kW	62,2	79,7	104,0	139,0	175,0	205,0	269,0
	Partial heat reclaim-Sanitary hot water (4)								
	Sanitary hot water production only								
	Heating Capacity	**kW**	**57,7**	**74,2**	**95,7**	**132,4**	**162,9**	**189,7**	**251,5**
	With contemporary production of hot water								
	Heating capacity	**kW**	**62,2**	**79,7**	**104,0**	**139,0**	**175,0**	**205,0**	**269,0**
	Water flow	m³/h	10,0	12,9	16,6	23,0	28,3	33,0	43,7
	Pressure drop	kPa	38	40	34	39	39	33	66
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2
	Axial fans	n.	2	2	2	2	2	2	3
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	Air circuits	n.	1	1	1	1	1	1	1
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	18	21	38	40	55	58	75
	Gas circuits	n.	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
	Max unit operating current (FLA)	A	47,3	55,3	70,6	88,6	105,6	125,6	174,2
	Unit starting current (LRA)	A	137,3	148,3	237,6	273,6	328,6	376,6	486,2
	EER (1)	kW/kW	3,05	2,85	2,98	3,08	2,84	2,80	3,23
	COP (2)	kW/kW	3,57	3,58	3,73	3,49	3,39	3,48	3,39
	ESEER		4,40	4,19	4,53	4,01	3,88	3,88	4,37
	Sound power level [Lw] (5)	dB(A)	84,7	84,9	85,1	91,8	92,6	92,8	95,8
	Average sound pressure level [Lpm] (6)	dB(A)	67,9	68	67,3	73,9	74,1	74,3	76,3
	Net weight	kg	630	675	1025	1125	1305	1390	1820
	Hydraulic connections								
	Evaporator/Condenser IN/OUT - (ISO7/1 - R)	Ø	2"	2"	--	--	--	--	--
	Evaporator/Condenser IN/OUT - OD (7)	Ø mm	--	--	76,1	76,1	76,1	76,1	76,1
OPT.	Chilled/hot water pumping group	kW	1,1	1,1	1,1	1,5	2,2	2,2	3,2
	Sanitary water pumping group	kW	1,1	1,5	1,1	1,1	1,5	1,5	3,2
LNO KIT 100%	**Only cooling - Cooling capacity (1)**	**kW**	**45,4**	**58,2**	**76,5**	**102,0**	**123,0**	**154,0**	**211,0**
	Unit power input	kW	14,9	20,4	25,7	33,1	43,3	55,0	65,3
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,7**	**132,0**	**163,0**	**190,0**	**251,0**
	Unit power input	kW	16,2	20,7	25,7	37,8	48,1	54,6	74,0
	Total air flow	m³/h	17000	18000	25000	39400	45000	45000	69000
	EER (1)	kW/kW	3,05	2,85	2,98	3,08	2,84	2,80	3,23
	COP (2)	kW/kW	3,57	3,58	3,73	3,49	3,39	3,48	3,39
	Sound power level [Lw] (5)	dB(A)	84,7	84,7	81,2	91,7	92,4	92,5	95,2
	Average sound pressure level [Lpm] (6)	dB(A)	67,8	67,9	63,4	73,9	73,9	74,1	76,0
LNO KIT 85%	**Only cooling - Cooling capacity (1)**	**kW**	**44,2**	**56,2**	**74,2**	**99,2**	**120,0**	**149,0**	**206,0**
	Unit power input	kW	15,3	21,1	26,7	33,9	44,3	57,1	67,3
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,7**	**132,0**	**163,0**	**190,0**	**251,0**
	Unit power input	kW	16,0	20,6	25,6	37,4	47,5	54,1	73,4
	Total air flow	m³/h	14450	15300	21250	33490	38250	38250	58650
	EER (1)	kW/kW	2,88	2,66	2,78	2,93	2,71	2,61	3,06
	COP (2)	kW/kW	3,60	3,61	3,74	3,53	3,43	3,51	3,42
	Sound power level [Lw] (5)	dB(A)	80,9	81,0	78,6	87,9	88,8	89,0	90,0
	Average sound pressure level [Lpm] (6)	dB(A)	64,0	64,2	60,8	70,1	70,3	70,5	71,0
LNO KIT 70%	**Only cooling - Cooling capacity (1)**	**kW**	**42,4**	**53,3**	**71,0**	**95,6**	**116,0**	**141,0**	**198,0**
	Unit power input	kW	16,0	22,4	28,2	35,1	45,8	60,3	70,5
	Only heating - Thermal capacity (2)	**kW**	**57,7**	**74,2**	**95,7**	**132,0**	**163,0**	**190,0**	**251,0**
	Unit power input	kW	15,9	20,4	25,5	36,9	47,0	53,7	72,8
	Total air flow	m³/h	11900	12600	17500	27580	31500	31500	48300
	EER (1)	kW/kW	2,65	2,38	2,52	2,72	2,53	2,34	2,81
	COP (2)	kW/kW	3,63	3,64	3,76	3,58	3,47	3,54	3,45
	Sound power level [Lw] (5)	dB(A)	76,5	76,9	76,5	83,7	84,9	85,4	85,4
	Average sound pressure level [Lpm] (6)	dB(A)	59,6	60,0	58,7	65,9	66,4	66,9	66,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient temperature.
2. Referred to hot water temperature 40/45°C;ambient air at 7°C with 90%rH
3. Referred to chilled water outlet temperature 7°C; hot water outlet temperature at 45°C.
4. Referred to chilled water temperature 12/7°C; hot water temperature 40/45°C;
5. Sound power level [Lw] according to ISO EN 9614 - 2.
6. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
7. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

SIZE F	a	b	c
F1	1750	950	1800
F2	2500	1100	2070
F3	2500	1100	2490
F4	3600	2000	2515



TRIPACK: Multifunction chillers for indoor installation, equipped with scroll compressors and plate heat exchangers
Cooling capacity: **54,2 ÷ 251,7 kW**
Heating Capacity: **63,8 ÷ 292,8 kW**

tripack

rcgroupairconditioning

R410A PLATE

MAIN FEATURES
- Multifunction chiller.
- 7 models available, for a wide selection opportunity..
- Average step of 28kW.
- EER up to
- COP up to
- ESEER up to
- Scroll compressors.
- Single refrigerant circuit.
- R410A refrigerant charge.
- Plate type heat exchanger.
- Electronic expansion valves.
- Suitable for indoor installation.

MAIN BENEFITS
- Units equipped with two scroll compressors on refrigerant circuit to reach a high efficiency.
- Reduces noise emission
- Easily of maintenance.

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
Ambient temperature: -12÷18°C

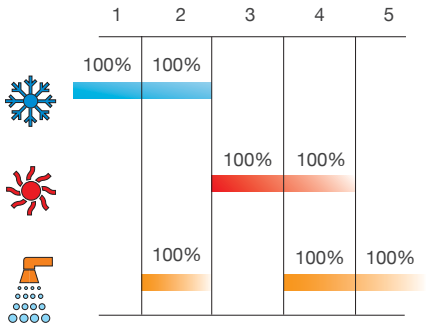
WORKING LIMITS IN HEATING MODE
Condenser hot water outlet temperature: 30÷55°C
Ambient temperature: -10÷35°C

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

WORKING LOGIC

TRIPACK

The TRIPACK is a water cooled, heat pump liquid chiller for the production of chilled water, hot water and hot domestic hot water (multifunction). In working condition 2, the production of chilled water and domestic hot water is simultaneous. In working condition n.4, the unit gives priority to the domestic hot water production. Only when this priority is satisfied the system starts automatically to produce hot water for heating.



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.

PLANT SIDE HEAT EXCHANGER

- 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.

EXHAUSTION SIDE HEAT EXCHANGER

- Copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- Temperature sensor on water outlet.
- 0÷10V proportional signal to manage the 2-way motorized valve for the condensing control (summer working mode) and evaporating control (winter working mode).

TOTAL HEAT RECOVERY HEAT EXCHANGER

- 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.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Reversing valve for refrigeration cycle inversion.
- Electronic expansion valve. 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.
- Filter dryer on liquid line.
- Liquid receiver with service valve and safety valve.
- 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.
- Oil drainage and oil recovery systems.
- 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.
- Summer / Winter working mode selector.
- 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.
  - Clock card for alarms date and time displaying and storing.
  - 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 - TRIPACK

TRIPACK SIZE	50 P2 J7	66 P2 J7	86 P2 J7	112 P2 J8	140 P2 J8	180 P2 J8	230 P2 J8
118 - Kit brine A	●	●	●	●	●	●	●
119 - Kit brine B	●	●	●	●	●	●	●
783 - Heat exchangers antifreezing heater	●	●	●	●	●	●	●
172 - Rubber support (kit)	●	●	●	●	●	●	●
Plant heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Plant heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
Sanitary hot water heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Sanitary hot water heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
Exhaustion heat exchangers flexible joint with adapter pipe (solder type)	-	-	●	●	●	●	●
Exhaustion heat exchangers flexible joint with adapter for flange connection	-	-	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●
Line current indication	●	●	●	●	●	●	●
Line tension indication	●	●	●	●	●	●	●
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

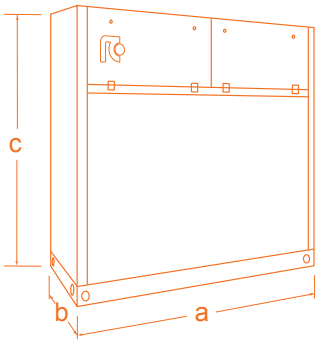
TRILOGY ESA TECHNICAL DATA

	TRIPACK SIZE		50 P2 J7	66 P2 J7	86 P2 J7	112 P2 J8	140 P2 J8	180 P2 J8	230 P2 J8
STANDARD	**Only cooling - Cooling capacity (1)**	**kW**	**54,2**	**72,3**	**92,1**	**122,1**	**150,9**	**195,9**	**251,7**
	Unit power input	kW	9,7	12,6	16,8	22,6	28,4	36,0	48,0
	Plant side water flow rate	m³/h	9,3	12,4	15,8	21,0	25,9	33,6	43,2
	Plant side pressure drop	kPa	39,5	45,3	39,2	43,3	46,6	43,6	42,8
	Only heating - Heating capacity (2)	**kW**	**63,8**	**84,0**	**109,5**	**142,4**	**177,8**	**229,6**	**292,8**
	Unit power input	kW	14,0	18,4	23,9	31,4	39,7	50,5	63,4
	Plant side water flow rate	m³/h	11,1	14,6	19,0	27,7	30,9	39,9	50,9
	Plant side pressure drop	kPa	48,3	53,3	46,5	47,2	49,2	39,1	51,0
	Cooling + Heating (3)								
	Cooling capacity	**kW**	**42,1**	**55,1**	**73,3**	**93,9**	**117,1**	**151,7**	**194,9**
	Heating capacity	**kW**	**57,6**	**75,7**	**99,8**	**128,5**	**160,6**	**207,2**	**264,9**
	Plant side water flow rate	m³/h	7,2	9,5	12,6	16,1	20,1	26,1	33,5
	Plant side pressure drop	kPa	**24,6**	**27,1**	**25,4**	**26,3**	**28,7**	**26,7**	**25,7**
	Total reclaim water flow rate	**m³/h**	10,0	13,2	17,4	22,4	28,0	36,1	46,1
	Total reclaim pressure drop	kPa	**40,2**	**43,4**	**38,8**	**38,7**	**40,4**	**32,0**	**41,9**
	Compressors		scroll	scroll	scroll	scroll	scroll	scroll	scroll
	Quantity	n.	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	12	15	20	25	28	30	35
	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 (LRA)	A	--	--	--	--	--	--	--
	Unit starting current (LRA)	A	165	177	236	266	325	399	476
	EER (1)	kW/kW	5,59	5,74	5,48	5,40	5,31	5,44	5,24
	COP (2)	kW/kW	4,56	4,57	4,58	4,54	4,48	4,55	4,62
	Sound power level [Lw] (4)	dB(A)	76,9	76,9	76,9	81,0	81,0	81,0	81,0
	Average sound pressure level [LPm] (5)	dB(A)	61,0	61,0	61,0	64,0	64,0	64,0	64,0
	Net weight	kg	720	750	860	1100	1150	1200	1230
	Hydraulic connections								
	Plant / Sanitary hot water/ Exhaustion (ISO 7/1 - R)	Ø	2"	2"	--	--	--	--	--
	Plant / Sanitary hot water/ Exhaustion - OD (6)	Ø mm	--	--	76,1	76,1	76,1	76,1	88,9

1. Referred to chilled water temperature 12/7°C; 35°C ambient temperature.
2. Referred to hot water temperature 40/45°C;ambient air at 7°C with 90%rH
3. Referred to chilled water outlet temperature 7°C; hot water outlet temperature at 45°C.
4. Sound power level [Lw] according to ISO EN 9614 - 2.
5. Average sound pressure level [L_{Pm}] 1m far according to ISO EN 3744.
6. Hydraulic connection with grooved end. The flexible joint is an optional accessory.

DIMENSIONS (mm)

	a	b	c
J7	1200	750	1700
J8	1800	1200	1740



NEXT P: Heat pump air conditioners with upflow air delivery for matching with remote air/gas exhaustion heat exchanger
Cooling Capacity: **6,4 ÷ 96,5 kW**
Heating Capacity: **6,4 ÷ 94,3 kW**

next p dx

rcgroupairconditioning

R410A · EC · AC · UP FLOW · SPLIT SYSTEM

MAIN FEATURES
- Direct expansion heat pump air conditioner
- 44 models available, for a wide selection opportunity..
- Average step of 3kW.
- EER up to 3,3
- COP up to 4,04
- Scroll compressors.
- Single and double refrigerant circuit.
- R410A Refrigerant charge.
- EC plug-fan (size H0, H1, H2, H3).
- AC plug-fan (size H4, H5, H6, H7).
- Suitable for indoor installation.
- Split-system.

MAIN BENEFITS
- Units with single and double refrigerant circuits.
- Availability of remote air/gas heat exchanger with axial fans (TEAM MATE HP series) and with plug fan (TEAM MATE HP PF series).
- Availability of electric heater.
- Availability of steam humidifier.
- Availability of hot water heating coil
- Complete set of optional accessories: filters, plenum, panels, stand.
- EC plug-fan for a higher energy efficiency.
- Easily of maintenance.

INDOOR INSTALLATION
The machines are designed for indoor installation.

SPLIT SYSTEM
The units are designed to be matched with remote air/gas heat exchangers with axial fans (TEAM MATE HP series) or plug-fan (TEAM MATE HP PF series).

WORKING LIMITS
Room air temperature:

14°C	minimum temperature with wet bulb.
24°C	maximum temperature with wet bulb.
35°C	maximum temperature with dry bulb.

Room air humidity:

20%RH	minimum relative humidity.
75%RH	maximum relative humidity.

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1 9 6 3 2 0 1 3
fifty cool years

MAIN COMPONENTS

FRAMEWORK

- Base in aluminium extrusion, painted with epoxy powders.
- Inner frame and upper frame in aluminium profile, painted with epoxy powders. The inner frame is provided with seals to ensure air tight with the panels.
- Galvanized steel sheet panels externally coated with PVC film and internally insulated with noise absorption material.
- The panels are fixed to the frame with non visible mounting system.
- Electric board in separate technical compartment on the machine front (Size H0, H1, H2, H3).
- Separate technical compartment on machine front for electric board, refrigerant and hydraulic connections and control and regulation devices (size H4, H5, H6, H7)
- Colour: RAL 9005 for base and frame
- Similar to RAL7015 for panels, with hammered finish
- Air intake from the front through honeycomb type grille and air delivery from the top.
- Washable air pre-filters with G2 efficiency, with cells in synthetic fibre (size H0 excluded).

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.

FILTER SECTION

- Size H0
  - Washable air filters with G3 efficiency, with cells in synthetic fibre and metallic frame (EN 779-2002).
- Size H1, H2, H3, H4, H5, H6, H7
  - Washable air filters with G4 efficiency, with cells in synthetic fibre and metallic frame (EN 779-2002).

GAS/AIR HEAT EXCHANGER SECTION

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops.
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for DC version machines.
- Frame in galvanized steel.
- Condensate tray in peraluman with PVC flexible discharge pipe.

FANS SECTION

- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fans), directly coupled to external rotor electric motor.
  - Size H0, H1, H2, H3:
    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.
  - Size H4, H5, H6, H7:
    Fans with AC type electric motor fed through an autotransformer that allows the manual selection of 7 rotation speed.
- Temperature sensors on air intake.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Refrigerant circuit reverse valve.
- Thermostatic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Liquid receiver with accessories.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.
- Water/gas exhaustion heat exchanger, copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- 2-way motorized valve with proportional control (0÷10V) for condensing/evaporating control and emergency manual control.
- 0÷10V proportional signal to manage the condensing/evaporating control system of the 2-way motorized valve.

ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:

- Main switch with door lock safety.
- Magnetothermic switch for each compressor.
- Magnetothermic switches for fans.
- Contactors for each load.
- The supply fans equipped with EC electric motor are not supplied with contactors.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Seasonal Summer/Winter electric switch placed on the MP.COM terminal.
- Power supply:
  - 230/1/50 for model 006 P1 S H0.
  - 400/3/50 for the other models.

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.

TO BE MATCHED WITH REMOTE AIR/GAS HEAT EXCHANGERS

The units are designed to be matched with remote air/gas heat exchangers with axial fans (TEAM MATE HP) or plug-fan (TEAM MATE HP PF) series.

TEAM MATE HP

pg: 155

TEAM MATE HP PF

pg: 159

OPTIONAL ACCESSORIES

NEXT P DX	006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1	021 P1	023 P1	025 P1	029 P1
SIZE	H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3	H3	H3	H4	H4
VERSION	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
TEAM MATE HP remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
215 - Disposal F5 efficiency air filter	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-
849 - Condensate discharge system	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
808 - Sandwich panels	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal pannel	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

NEXT P DX	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2	032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2
SIZE	H4	H5	H5	H5	H5	H5	H5	H5	H5	H5	H5	H6	H6	H6	H6
VERSION	S	S	S	S	S	D	D	S	D	S	D	S	D	S	D
TEAM MATE HP remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	●	●	●	●	●	●	●	-	●	-	●	-	●	-
215 - Disposal F5 efficiency air filter	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
849 - Condensate discharge system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
808 - Sandwich panels	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal pannel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

NEXT P DX	052 P2	052 P2	060 P2	060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2
SIZE	H6	H6	H6	H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7
VERSION	S	D	S	D	S	D	S	D	S	D	S	D	S	D
TEAM MATE HP remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●
TEAM MATE HP PF remote air/gas exhaustion heat exchanger	●	●	●	●	●	●	●	●	●	●	●	●	●	●
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	-	●	-	●	-	●	-	●	-	●	-	●	-
215 - Disposal F5 efficiency air filter	●	●	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
849 - Condensate discharge system	●	●	●	●	●	●	●	●	●	●	●	●	●	●
808 - Sandwich panels	●	●	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal pannel	●	●	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	●	●	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	-	-	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA NEXT P DX

	NEXT P DX		006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1
	SIZE		H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3
	VERSION		S	S	S	S	S	S	S	S	S	S	S
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**6,4**	**7,4**	**8,7**	**7,0**	**8,2**	**9,7**	**10,8**	**11,7**	**13,9**	**16,3**	**17,3**
	Sensible	**kW**	**5,8**	**6,6**	**7,5**	**7,0**	**8,2**	**9,4**	**9,9**	**11,7**	**13,7**	**15,1**	**17,3**
	SHR	kW/kW	0,90	0,89	0,86	1,00	1,00	0,97	0,91	1,00	0,99	0,93	1,00
	Unit power input	kW	2,1	2,5	3,1	2,2	2,7	3,2	3,7	3,9	4,7	5,3	5,5
	Heating capacity (2)	**kW**	**6,4**	**7,4**	**9,0**	**6,4**	**7,6**	**9,4**	**10,7**	**10,9**	**13,9**	**15,9**	**16,0**
	Unit power input	kW	1,8	2,1	2,6	1,7	2,1	2,5	2,9	2,8	3,6	4,2	4,4
	Supply fans	n.	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m^3/h	1580	1800	2000	2273	2653	2653	2653	3955	3955	3955	5460
	Nominal external static pressure	Pa	30	30	30	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	186	100	30	211	132	132	132	96	96	96	256
	Scroll compressors	n.	1	1	1	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	1	1
	Air filters	n.	1	1	1	1	1	1	1	1	1	1	2
	Efficiency		G3	G3	G3	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	2,4	2,4	2,4	4,8	4,8	4,8	4,8	5,8	5,8	5,8	7,3
	Gas circuits	n.	1	1	1	1	1	1	1	1	1	1	1
	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	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) (4)	A	13,5	7,0	8,3	7,7	10,4	11,4	12,4	12,6	14,9	16,4	13,3
	Unit starting current (LRA) (4)	A	60,7	39,0	47,3	31,0	42,4	50,4	47,4	47,6	56,6	68,6	65,5
	Energy efficiency index (5)												
	EER (1)	kW/kW	3,09	3,02	2,83	3,23	3,01	3,06	2,95	3,02	2,97	3,08	3,17
	COP (2)	kW/kW	3,57	3,56	3,47	3,81	3,64	3,73	3,69	3,87	3,90	3,75	3,64
	Sound level - ISO 3744 (6)												
	On air delivery	dB(A)	55,7	58,3	60,4	56,7	59,7	59,7	59,7	64,7	64,7	64,7	65,2
	On air intake	dB(A)	50,7	52,5	54,6	49,7	50,6	51,9	51,9	53,9	53,9	55,5	55,7
	Irradiated	dB(A)	39,5	41,5	43,6	39,7	41,9	42,4	42,4	46,6	46,6	46,8	47,2
	Net weight	kg	165	165	165	191	194	195	196	252	254	255	313
	Remote air/gas exhaustion heat exchanger - OPTIONAL (7)	n.	1	1	1	1	1	1	1	1	1	1	1
	TEAM MATE HP STD	Mod.	M 11	M 11	M 11	M 11	M 11	M 14	M 14	M 14	M 17	M 20	M 25
	Refrigerant connections												
	Gas delivery	ODS Ø	12	12	12	12	12	12	12	22	22	22	22
	Liquid return	ODS Ø	12	12	12	12	12	12	12	12	12	12	16

	NEXT P DX		021 P1	023 P1	025 P1	029 P1	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2
	SIZE		H3	H3	H4	H4	H4	H5	H5	H5	H5	H5	H5
	VERSION		S	S	S	S	S	S	S	S	S	D	D
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**18,8**	**21,6**	**24,2**	**27,5**	**32,7**	**34,2**	**36,7**	**40,7**	**47,1**	**22,7**	**29,5**
	Sensible	**kW**	**18,7**	**20,0**	**24,2**	**26,4**	**29,3**	**34,2**	**36,2**	**38,0**	**41,7**	**22,7**	**29,5**
	SHR	kW/kW	0,99	0,93	1,00	0,96	0,90	1,00	0,99	0,93	0,89	1,00	1,00
	Unit power input	kW	6,6	7,0	8,2	9,0	10,2	11,1	12,5	13,7	16,0	7,8	10,4
	Heating capacity (2)	**kW**	**18,2**	**21,4**	**23,3**	**27,1**	**32,1**	**32,4**	**35,9**	**40,0**	**46,9**	**21,7**	**28,1**
	Unit power input	kW	4,9	5,6	6,3	7,1	8,3	8,6	9,6	11,0	12,8	5,8	8,2
	Supply fans	n.	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m^3/h	5460	5460	7160	7440	7440	10440	10440	10440	10440	7110	10440
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	256	256	95	50	50	136	136	136	136	172	136
	Scroll compressors	n.	1	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	2	2
	Air filters	n.	2	2	2	2	2	2	2	2	2	2	2
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	7,3	7,3	8,9	8,9	8,9	15,1	15,2	15,3	15,4	9,5	9,8
	Gas circuits	n.	1	1	1	1	1	1	1	1	1	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+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) (4)	A	16,5	16,5	18,5	23,5	24,5	25,9	28,9	34,9	37,9	18,1	24,8
	Unit starting current (LRA) (4)	A	76,5	102,5	97,5	113,5	120,5	121,9	121,9	143,9	177,9	53,1	66,2
	Energy efficiency index (5)												
	EER (1)	kW/kW	2,87	3,08	2,94	3,06	3,21	3,08	2,94	2,98	2,95	2,91	2,83
	COP (2)	kW/kW	3,68	3,81	3,68	3,81	3,89	3,77	3,75	3,65	3,66	3,72	3,44
	Sound level - ISO 3744 (6)												
	On air delivery	dB(A)	65,2	65,2	69,2	72,2	72,2	74,9	74,9	74,9	74,9	69,1	74,9
	On air intake	dB(A)	58,4	56,3	58,1	60,7	60,7	62,6	62,9	63,2	63,5	57,7	62,6
	Irradiated	dB(A)	48,2	47,4	51,1	54,1	54,1	56,8	56,8	56,8	56,8	51	56,8
	Net weight	kg	316	317	433	433	434	490	490	490	498	469	471
	Remote air/gas exhaustion heat exchanger - OPTIONAL (7)	n.	1	1	1	1	1	1	1	1	1	2	2
	TEAM MATE HP STD	Mod.	M 25	M 30	M 30	M 35	M 45	M 45	M 45	M 50	M 60	M 14	M21
	Refrigerant connections												
	Gas delivery	ODS Ø	22	22	22	28	28	28	28	28	28	2x22	2x22
	Liquid return	ODS Ø	16	16	16	16	16	22	22	22	22	2x12	2x12

THE COOLING CAPACITY DOES NOT CONSIDER THE SUPPLY FAN MOTOR THERMAL LOAD

1. Characteristics referred to entering air at 27°C with 47%rH; ambient temperature at 35°C
2. Characteristics referred to entering air at 20°C; ambient temperature at 7°C with 90% rH.
3. Machine refrigerant charge. Exhaust air exchanger, connections pipes and optional are excluded.
4. Corresponding to the nominal external static pressure.
5. The Energy Efficiency Indexes consider also the remote air cooled condenser as shown in the table.
6. Noise level at 1 meter in free field (nominal external static pressure).
7. For matching to other remote exchangers please refer to RC WORLD selection program.

TECHNICAL DATA NEXT P DX

	NEXT P DX		032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2	052 P2	052 P2	060 P2
	SIZE		H5	H5	H5	H5	H6	H6	H6	H6	H6	H6	H6
	VERSION		S	D	S	D	S	D	S	D	S	D	S
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**32,7**	**32,0**	**38,0**	**37,3**	**40,2**	**39,4**	**44,4**	**45,5**	**48,7**	**49,1**	**56,2**
	Sensible	**kW**	**32,7**	**32,0**	**36,8**	**36,5**	**40,2**	**39,4**	**42,3**	**42,7**	**48,1**	**48,3**	**53,2**
	SHR	kW/kW	1,00	1,00	0,97	0,98	1,00	1,00	1,00	0,94	0,99	0,98	0,95
	Unit power input	kW	11,3	11,6	13,3	13,7	13,2	13,6	15,2	14,5	16,5	16,3	18,1
	Heating capacity (2)	**kW**	**32,2**	**31,3**	**37,4**	**36,3**	**37,7**	**36,6**	**42,1**	**43,1**	**46,7**	**46,7**	**54,3**
	Unit power input	kW	9,4	9,4	10,6	10,5	9,9	9,8	11,0	11,1	12,4	12,4	14,0
	Supply fans	n.	1	1	1	1	2	2	2	2	2	2	2
	Air flow	m^3/h	10440	10440	10440	10440	11310	11310	11310	11310	13480	13480	14500
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	136	136	136	136	313	313	313	313	170	170	94
	Scroll compressors	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Air filters	n.	2	2	2	2	3	3	3	3	3	3	3
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	10,3	10,3	10,5	10,5	19,8	19,8	19,8	19,8	20,4	20,4	20,7
	Gas circuits	n.	1	2	1	2	1	2	1	2	1	2	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	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (4)	A	27,5	27,5	33,9	33,9	33,4	33,4	33,4	33,4	36,4	36,4	46,9
	Unit starting current (LRA) (4)	A	79,9	79,9	93,9	93,9	93,4	93,4	119,4	119,4	115,4	115,4	136,9
	Energy efficiency index (5)												
	EER (1)	kW/kW	2,90	2,76	2,86	2,73	3,04	2,89	2,93	3,14	2,96	3,02	3,10
	COP (2)	kW/kW	3,41	3,33	3,52	3,45	3,80	3,72	3,82	3,90	3,78	3,78	3,88
	Sound level - ISO 3744 (6)												
	On air delivery	dB(A)	74,9	74,9	74,9	74,9	67,3	67,3	67,3	67,3	70,8	70,8	72,5
	On air intake	dB(A)	62,6	62,6	64	64	61,3	61,3	59	59	60,3	60,3	62,2
	Irradiated	dB(A)	56,8	56,8	57	57	52,4	52,4	50,7	50,7	53	53	54,8
	Net weight	kg	467	471	470	474	581	585	583	587	686	694	686
	Remote air/gas exhaustion heat exchanger - OPTIONAL (7)	n.	1	2	1	2	1	2	1	2	1	2	1
	TEAM MATE HP STD	Mod.	M 45	M 20	M 50	M 25	M 50	M 25	M 50	M 30	M 60	M 30	M 70
	Refrigerant connections												
	Gas delivery	ODS Ø	28	2x22	28	2x22	28	2x22	28	2x28	35	2x28	35
	Liquid return	ODS Ø	16	2x12	16	2x12	22	2x16	22	2x16	22	2x16	22

	NEXT P DX		060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2
	SIZE		H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7
	VERSION		D	S	D	S	D	S	D	S	D	S	D
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**56,3**	**58,1**	**57,7**	**69,8**	**69,3**	**77,1**	**78,5**	**85,1**	**85,3**	**97,5**	**96,5**
	Sensible	**kW**	**53,2**	**57,8**	**57,7**	**67,1**	**66,9**	**76,0**	**76,8**	**82,2**	**82,3**	**87,5**	**87,1**
	SHR	kW/kW	0,94	0,99	1,00	0,96	0,97	0,99	0,98	0,97	0,96	0,90	0,90
	Unit power input	kW	18,0	18,2	18,2	21,2	21,3	25,0	24,8	27,1	27,6	31,7	32,1
	Heating capacity (2)	**kW**	**54,4**	**54,7**	**54,3**	**65,2**	**65,0**	**72,6**	**73,6**	81,1	80,6	94,9	94,3
	Unit power input	kW	14,0	13,5	13,5	16,3	16,3	18,7	19,2	20,4	21,0	25,0	25,0
	Supply fans	n.	2	2	2	2	2	2	2	2	2	2	2
	Air flow	m^3/h	14500	16000	16000	17610	17610	20870	20870	22040	22040	22040	22040
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	94	50	50	346	346	136	136	50	50	50	50
	Scroll compressors	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Air filters	n.	3	3	3	4	4	4	4	4	4	4	4
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	20,7	21,3	21,3	28,1	28,1	28,1	28,1	28,1	28,1	28,4	28,4
	Gas circuits	n.	2	1	2	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	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (4)	A	46,9	47,0	47,0	49,6	49,6	57,8	57,8	69,8	69,8	75,8	75,8
	Unit starting current (LRA) (4)	A	136,9	137,0	137,0	145,6	145,6	150,8	150,8	178,8	178,8	215,8	215,8
	Energy efficiency index (5)												
	EER (1)	kW/kW	3,13	3,19	3,17	3,30	3,25	3,09	3,16	3,14	3,09	3,08	3,01
	COP (2)	kW/kW	3,89	4,04	4,01	4,01	4,00	3,89	3,83	3,97	3,84	3,79	3,77
	Sound level - ISO 3744 (6)												
	On air delivery	dB(A)	72,5	75,4	75,4	73,1	73,1	77,9	77,9	79,7	79,7	79,7	79,7
	On air intake	dB(A)	62,2	63,8	63,8	62,5	62,5	65,9	65,9	67,5	67,5	67,7	67,7
	Irradiated	dB(A)	54,8	57,3	57,3	55,3	55,3	59,8	59,8	61,6	61,6	61,6	61,6
	Net weight	kg	694	701	709	792	802	798	808	805	815	834	844
	Remote air/gas exhaustion heat exchanger - OPTIONAL (7)	n.	2	1	2	1	2	1	2	1	2	1	2
	TEAM MATE HP STD	Mod.	M 35	M 70	M 35	M 95	M 45	M 95	M 50	M 110	M 50	M 130	M 60
	Refrigerant connections												
	Gas delivery	ODS Ø	2x28	35	2x28	42	2x35	42	2x35	42	2x35	42	2x35
	Liquid return	ODS Ø	2x16	22	2x16	22	2x22	22	2x22	28	2x22	28	2x22

THE COOLING CAPACITY DOES NOT CONSIDER THE SUPPLY FAN MOTOR THERMAL LOAD

1. Characteristics referred to entering air at 27°C with 47%rH; ambient temperature at 35°C
2. Characteristics referred to entering air at 20°C; ambient temperature at 7°C with 90% rH.
3. Machine refrigerant charge. Exhaust air exchanger, connections pipes and optional are excluded.
4. Corresponding to the nominal external static pressure.
5. The Energy Efficiency Indexes consider also the remote air cooled condenser as shown in the table.
6. Noise level at 1 meter in free field (nominal external static pressure).
7. For matching to other remote exchangers please refer to RC WORLD selection program.

OPTIONAL ACCESSORIES TECHNICAL DATA - NEXT P DX

	NEXT P DX		006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1
	SIZE		H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3
	VERSION		S	S	S	S	S	S	S	S	S	S	S
OPTIONAL	Remote air/gas exhaustion heat exchanger (7)	n.	1	1	1	1	1	1	1	1	1	1	1
	TEAM MATE HP LNO	Mod.	M 11	M 11	M 14	M 11	M 14	M 17	M 17	M 20	M 25	M 30	M 30
	TEAM MATE HP ELN	Mod.	M 11	M 11	M 14	M 11	M 14	M 17	M 17	M 20	M 25	M 30	M 30
	Electric heater												
	Power input	**kW**	**2,6**	**2,6**	**2,6**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	1	2
	Humidifier												
	Steam capacity	kg/h	2	2	2	3	3	3	3	3	3	3	3
	Power input	kW	1,4	1,4	1,4	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3
	Heating coil												
	Heating capacity (8)	**kW**	**10,3**	**11,1**	**11,9**	**16,6**	**18,3**	**18,3**	**18,3**	**25,1**	**25,1**	**26,9**	**39,1**

	NEXT P DX		021 P1	023 P1	025 P1	029 P1	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2
	SIZE		H3	H3	H4	H4	H4	H5	H5	H5	H5	H5	H5
	VERSION		S	S	S	S	S	S	S	S	S	D	D
OPTIONAL	Remote air/gas exhaustion heat exchanger (7)	n.	1	1	1	1	1	1	1	1	1	2	2
	TEAM MATE HP LNO	Mod.	M 30	M 35	M 45	M 45	M 50	M 50	M 60	M 70	M 70	M 20	M26
	TEAM MATE HP ELN	Mod.	M 30	M 35	M 45	M 45	M 50	M 50	M 60	M 70	M 70	M 20	M26
	Electric heater												
	Power input	**kW**	**5,1**	**5,1**	**9,0**	**9,0**	**9,0**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	3	3	8	8	8	8	8	8	8	8	8
	Power input	kW	2,3	2,3	6	6	6	6	6	6	6	6	6
	Heating coil												
	Heating capacity (8)	**kW**	**39,1**	**39,1**	**49,5**	**50,7**	**50,7**	**72,3**	**72,3**	**72,3**	**72,3**	**56,2**	**71,9**

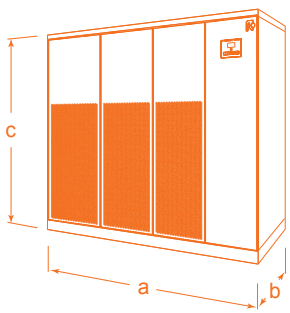
	NEXT P DX		032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2	052 P2	052 P2	060 P2
	SIZE		H5	H5	H5	H5	H6	H6	H6	H6	H6	H6	H6
	VERSION		S	D	S	D	S	D	S	D	S	D	S
OPTIONAL	Remote air/gas exhaustion heat exchanger (7)	n.	1	2	1	2	1	2	1	2	1	2	1
	TEAM MATE HP LNO	Mod.	M 50	M 25	M 70	M 30	M 60	M 30	M 70	M 35	M 95	M 50	M 95
	TEAM MATE HP ELN	Mod.	M 50	M 25	M 70	M 30	M 60	M 30	M 70	M 35	M 95	M 50	M 95
	Electric heater												
	Power input	**kW**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	8	8	8	8	15	15	15	15	15	15	15
	Power input	kW	6	6	6	6	11,3	11,3	11,3	11,3	11,3	11,3	11,3
	Heating coil												
	Heating capacity (8)	**kW**	**72,3**	**72,3**	**72,3**	**72,3**	**91,0**	**91,0**	**91,4**	**91,4**	**102,0**	**102,0**	**107,0**

	NEXT P DX		060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2
	SIZE		H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7
	VERSION		D	S	D	S	D	S	D	S	D	S	D
OPTIONAL	Remote air/gas exhaustion heat exchanger (7)	n.	2	1	2	1	2	1	2	1	2	1	2
	TEAM MATE HP LNO	Mod.	M 45	M 95	M 45	M 130	M 50	M 130	M 70	M 140	M 70	T 185	M 95
	TEAM MATE HP ELN	Mod.	M 45	M 95	M 45	M 130	M 50	M 130	M 70	M 140	M 70	T 185	M 95
	Electric heater												
	Power input	**kW**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	15	15	15	15	15	15	15	15	15	15	15
	Power input	kW	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3
	Heating coil												
	Heating capacity (8)	**kW**	**107,0**	**114,0**	**114,0**	**131,0**	**131,0**	**146,0**	**146,0**	**152,0**	**152,0**	**152,0**	**152,0**

7. For matching to other remote exchangers please refer to RC WORLD selection program.
8. Characteristics referred to entering air at 20°C with hot water at 75-60°C.

DIMENSIONS (mm)

SIZE H	a	b	c
H0	655	420	1680
H1	650	650	1925
H2	785	650	1925
H3	1085	750	1925
H4	1320	860	1980
H5	1620	860	1980
H6	2155	860	1980
H7	2690	860	1980



NEXT P: Heat pump air conditioners with upflow air delivery with built-in water/gas exhaustion heat exchanger
Cooling Capacity: **7,5 ÷ 117,0 kW**
Heating Capacity: **7,3 ÷ 104,0 kW**

next p dw

rcgroupairconditioning

R410A PLATE EC AC UP FLOW

MAIN FEATURES
- Direct expansion heat pump air conditioner
- 44 models available, for a wide selection opportunity..
- Average step of 3kW.
- EER up to 7,03.
- COP up to 5,28.
- Scroll compressors.
- Single and double refrigerant circuit.
- R410A Refrigerant charge.
- Built-in water-gas plate type exhaustion heat exchanger.
- EC plug-fans (size H0, H1, H2, H3).
- AC plug-fans (size H4, H5, H6, H7).
- Suitable for indoor installation.
- Split-system.

MAIN BENEFITS
- Units with single and double refrigerant circuits.
- Availability of steam humidifier.
- Availability of hot water heating coil
- Complete set of optional accessories: filters, plenum, panels, stand.
- EC plug-fans for a higher energy efficiency.
- Easily of maintenance.

INDOOR INSTALLATION
The machines are designed for indoor installation.

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

WORKING LIMITS
Room air temperature:
14°C minimum temperature with wet bulb.
24°C maximum temperature with wet bulb.
35°C maximum temperature with dry bulb.

Room air humidity:
20%RH minimum relative humidity.
75%RH maximum relative humidity.

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

MAIN COMPONENTS

FRAMEWORK

- Base in aluminium extrusion, painted with epoxy powders.
- Inner frame and upper frame in aluminium profile, painted with epoxy powders. The inner frame is provided with seals to ensure air tight with the panels.
- Galvanized steel sheet panels externally coated with PVC film and internally insulated with noise absorption material.
- The panels are fixed to the frame with non visible mounting system.
- Electric board in separate technical compartment on the machine front (Size H0, H1, H2, H3).
- Separate technical compartment on machine front for electric board, refrigerant and hydraulic connections and control and regulation devices (size H4, H5, H6, H7)
- Colour: RAL 9005 for base and frame
- Similar to RAL7015 for panels, with hammered finish
- Air intake from the front through honeycomb type grille and air delivery from the top.
- Washable air pre-filters with G2 efficiency, with cells in synthetic fibre (size H0 excluded).

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.

FILTER SECTION

- Size H0
  - Washable air filters with G3 efficiency, with cells in synthetic fibre and metallic frame (EN 779-2002).
- Size H1, H2, H3, H4, H5, H6, H7
  - Washable air filters with G4 efficiency, with cells in synthetic fibre and metallic frame (EN 779-2002).

GAS/AIR HEAT ECHANGER SECTION

- Heat exchanger coil with internally corrugated copper tubes and high efficiency aluminium fins, specifically developed to provide high heat transfer and lower pressure drops.
  - With single refrigerant circuit for S version machines.
  - With double refrigerant circuit for DC version machines.
- Frame in galvanized steel.
- Condensate tray in peraluman with PVC flexible discharge pipe.

FANS SECTION

- Centrifugal fans with backward curved blades, single suction and without scroll housings (Plug-fan), directly coupled to external rotor electric motor.
  - Size H0, H1, H2, H3:
    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.
  - Size H4, H5, H6, H7:
    Fans with AC type electric motor fed through an autotransformer that allows the manual selection of 7 rotation speed.
- Temperature sensors on air intake.

REFRIGERANT CIRCUIT

Components for each refrigerant circuit:

- Refrigerant circuit reverse valve.
- Thermostatic expansion valve.
- Sight glass.
- Filter dryer on liquid line.
- Pressure transducers with indication, control and protection functions, on low and high refrigerant pressure.
- High pressure safety switch with manual reset.
- Liquid receiver with accessories.
- Refrigerant circuit with copper tubing with anticondensate insulation of the suction line.
- Plastic capillary hoses for pressure sensors connection.
- R410A refrigerant charge.
- Water/gas exhaustion heat exchanger, copper brazed plate type with cover plates, plates and connections in AISI 316 stainless steel.
- 2-way motorized valve with proportional control (0÷10V) for condensing/evaporating control and emergency manual control.
- 0÷10V proportional signal to manage the condensing/evaporating control system of the 2-way motorized valve.

ELECTRICAL PANEL

In accordance with EN60204-1 norms complete with:

- Main switch with door lock safety.
- Magnetothermic switch for each compressor.
- Magnetothermic switches for fans.
- Contactors for each load.
- The supply fans equipped with EC electric motor are not supplied with contactors.
- Transformer for auxiliary circuit and microprocessor supply.
- Panel with machine controls.
- Seasonal Summer/Winter electric switch placed on the MP.COM terminal.
- Power supply:
  - 230/1/50 for model 006 P1 S H0.
  - 400/3/50 for the other models.

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.

OPTIONAL ACCESSORIES

NEXT P DW	006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1	021 P1	023 P1	025 P1	029 P1
SIZE	H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3	H3	H3	H4	H4
VERSION	S	S	S	S	S	S	S	S	S	S	S	S	S	S	S
101 - EC fan	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	-	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
215 - Disposal F5 efficiency air filter	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	-	-
849 - Condensate discharge system	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
808 - Sandwich panels	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal panel	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	●	●	●	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	-	-	-	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	-	-	-	-	-	-	-	-	-	-	-	-	-	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

NEXT P DW	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2	032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2
SIZE	H4	H5	H5	H5	H5	H5	H5	H5	H5	H5	H5	H6	H6	H6	H6
VERSION	S	S	S	S	S	D	D	S	D	S	D	S	D	S	D
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	●	●	●	●	●	●	●	-	●	-	●	-	●	-
215 - Disposal F5 efficiency air filter	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
849 - Condensate discharge system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
808 - Sandwich panels	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

OPTIONAL ACCESSORIES

NEXT P DW	052 P2	052 P2	060 P2	060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2	029 P1
SIZE	H6	H6	H6	H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7	H4
VERSION	S	D	S	D	S	D	S	D	S	D	S	D	S	D	S
101 - EC fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
220 - Electronic expansion valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
260 - Liquid solenoid valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
321 - Steam humidifier	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
310 - Electric heater	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
505 - ON-OFF Hot gas reh.system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
509 - Hot water heating coil + 3 way valve	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
606 - Compr. power factor capacitor - 0,9	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
865 - Phase control relay	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
610 - Noise deading cup on compressor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
211 - Capacity control	●	-	●	-	●	-	●	-	●	-	●	-	●	-	●
215 - Disposal F5 efficiency air filter	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
810 - Floor stand Hmax=350 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
811 - Floor stand Hmax=450 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
812 - Floor stand Hmax=510 mm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
848 - Condensate discharge system (kit)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
849 - Condensate discharge system	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
808 - Sandwich panels	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
807 - Blind frontal panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
805 - Bottom panel	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
909 - Clogged filters alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
910 - Air flow loss alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
911 - Water presence alarm	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
906 - Outlet air temperature indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
904 - Temperature/Humidity sensor	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
843 - Motorized damper with frame	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
830 - Air discharge plenum with grilles	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
831 - Plenum with frontal grille and sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
761 - Air supply plenum with 5 closed sides	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
832 - Air supply plenum with F6 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
833 - Air supply plenum with F7 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
835 - Air supply plenum with F9 filters	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
836 - Air supply plenum with sound absorber	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
907 - Current indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
908 - Voltage indication	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
912 -Air flow loss alarm EC Fan	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
913 - Additional water sensor (kit)	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
919 - Clock card	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
922 - Driver 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	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●

● available accessory; - not available accessory

TECHNICAL DATA NEXT P DW

	NEXT P DW		006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1
	SIZE		H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3
	VERSION		S	S	S	S	S	S	S	S	S	S	S
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**7,5**	**8,8**	**11,0**	**8,3**	**9,8**	**11,6**	**13,1**	**14,2**	**17,2**	**19,8**	**20,0**
	Sensible	**kW**	**6,3**	**7,2**	**9,0**	**8,1**	**9,4**	**10,1**	**10,8**	**13,7**	**15,0**	**16,5**	**19,2**
	SHR	kW/kW	0,83	0,81	0,82	0,97	0,96	0,87	0,82	0,96	0,87	0,83	0,96
	Unit power input	kW	1,2	1,4	1,9	1,2	1,5	1,8	2,0	2,1	2,6	3,1	3,4
	Water flow - Water/gas exhaustion heat exchanger	m3/h	0,7	0,9	1,1	0,8	1,0	1,1	1,3	1,4	1,7	1,9	2,0
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	6	8	10	7	10	8	10	8	11	15	4
	Heating capacity (2)	**kW**	**7,3**	**8,6**	**9,6**	**7,5**	**8,9**	**11,0**	**12,7**	**12,9**	**16,0**	**18,9**	**18,8**
	Unit power input	kW	1,6	1,9	2,1	1,4	1,8	2,3	2,7	2,6	3,3	3,9	3,8
	Water flow - Water/gas exhaustion heat exchanger	m3/h	0,6	0,8	0,8	0,7	0,8	1,0	1,1	1,2	1,4	1,7	1,7
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	5	7	7	6	8	7	9	6	9	12	3
	Supply fans	n.	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m3/h	1580	1800	2000	2273	2653	2653	2653	3955	3955	3955	5460
	Nominal external static pressure	Pa	30	30	30	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	186	110	80	215	118	118	118	282	282	282	600
	Scroll compressors	n.	1	1	1	1	1	1	1	1	1	1	1
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	1	1
	Air filters	n.	1	1	1	1	1	1	1	1	1	1	2
	Efficiency		G3	G3	G3	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	2,7	2,7	2,7	5,1	5,1	5,1	5,1	6,3	6,3	6,3	8,0
	Gas circuits	n.	1	1	1	1	1	1	1	1	1	1	1
	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	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) (4)	A	13,5	7,0	8,3	5,9	7,7	8,7	9,7	9,0	11,3	12,8	12,8
	Unit starting current (LRA) (4)	A	60,7	39,0	47,3	29,2	39,7	47,7	44,7	44,0	53,0	65,0	65,0
	EER (1)	kW/kW	6,49	6,49	5,76	7,03	6,46	6,48	6,45	6,83	6,69	6,49	5,88
	COP (2)	kW/kW	4,57	4,49	4,66	5,28	4,95	4,78	4,65	5,04	4,80	4,87	4,95
	Sound level - ISO 3744 (5)												
	On air delivery	dB(A)	55,7	58,3	60,4	56,7	59,7	59,7	59,7	64,7	64,7	64,7	65,2
	On air intake	dB(A)	50,7	52,5	54,6	49,7	50,6	51,9	51,9	53,9	53,9	55,5	55,7
	Irradiated	dB(A)	39,5	41,5	43,6	39,7	41,9	42,4	42,4	46,6	46,6	46,8	47,2
	Net weight	kg	169	169	171	195	198	201	202	260	262	263	324

	NEXT P DW		021 P1	023 P1	025 P1	029 P1	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2
	SIZE		H3	H3	H4	H4	H4	H5	H5	H5	H5	H5	H5
	VERSION		S	S	S	S	S	S	S	S	S	D	D
STANDARD	**Cooling capacity (1)**												
	Total	**kW**	**22,3**	**24,5**	**29,3**	**32,7**	**38,2**	**40,4**	**44,8**	**52,6**	**56,4**	**28,0**	**35,6**
	Sensible	**kW**	**20,2**	**21,1**	**26,5**	**28,4**	**31,4**	**37,7**	**39,5**	**44,8**	**45,4**	**25,4**	**34,1**
	SHR	kW/kW	0,91	0,86	0,90	0,87	0,82	0,93	0,88	0,85	0,80	0,91	0,96
	Unit power input	kW	4,1	4,7	5,3	5,8	6,5	7,2	8,0	11,1	9,5	4,5	6,4
	Water flow - Water/gas exhaustion heat exchanger	m3/h	2,2	2,5	2,9	3,2	3,7	3,9	4,4	5,3	5,5	2,7	3,4
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	5	6	6	8	11	7	8	11	8	5	8
	Heating capacity (2)	**kW**	**21,5**	**24,2**	**28,1**	**31,9**	**36,9**	**36,7**	**40,8**	**43,5**	**52,9**	**24,6**	**30,9**
	Unit power input	kW	4,5	5,2	6,1	6,9	7,8	8,0	9,1	10,3	12,3	5,5	7,5
	Water flow - Water/gas exhaustion heat exchanger	m3/h	1,9	2,2	2,6	2,9	3,3	3,4	3,7	3,8	4,7	2,2	2,8
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	4	4	5	6	8	6	7	7	7	3	5
	Supply fans	n.	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m3/h	5460	5460	7160	7440	7440	10440	10440	10440	10440	7110	10440
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	600	600	95	50	50	136	136	136	136	172	136
	Scroll compressors	n.	1	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	2	2
	Air filters	n.	2	2	2	2	2	2	2	2	2	2	2
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	8,0	8,0	9,9	9,9	9,9	16,4	16,5	16,6	17,0	10,6	10,9
	Gas circuits	n.	1	1	1	1	1	1	1	1	1	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+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) (4)	A	16,0	16,0	18,5	23,5	24,5	25,9	28,9	35,2	37,9	18,1	24,5
	Unit starting current (LRA) (4)	A	76,0	102,0	97,5	113,5	120,5	121,9	121,9	144,2	177,9	53,1	65,9
	EER (1)	kW/kW	5,43	5,20	5,55	5,67	5,87	5,61	5,57	4,76	5,92	6,29	5,56
	COP (2)	kW/kW	4,78	4,64	4,58	4,62	4,71	4,56	4,48	4,22	4,30	4,49	4,12
	Sound level - ISO 3744 (5)												
	On air delivery	dB(A)	65,2	65,2	69,2	72,2	72,2	74,9	74,9	74,9	74,9	69,1	74,9
	On air intake	dB(A)	58,4	56,3	58,1	60,7	60,7	62,6	62,9	63,2	63,5	57,7	62,6
	Irradiated	dB(A)	48,2	47,4	51,1	54,1	54,1	56,8	56,8	56,8	56,8	51	56,8
	Net weight	kg	327	328	448	448	449	515	515	515	528	492	494

THE COOLING CAPACITY DOES NOT CONSIDER THE SUPPLY FAN MOTOR THERMAL LOAD

1. Characteristics referred to entering air at 27°C with 47%rH; ambient temperature at 35°C
2. Characteristics referred to entering air at 20°C; ambient temperature at 7°C with 90% rH.
3. Machine refrigerant charge. Optional are excluded.
4. Corresponding to the nominal external static pressure.
5. Noise level at 1 meter in free field (nominal external static pressure).

TECHNICAL DATA NEXT P DW

	NEXT P DW		032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2	052 P2	052 P2	060 P2
	SIZE		H5	H5	H5	H5	H6	H6	H6	H6	H6	H6	H6
	VERSION		S	D	S	D	S	D	S	D	S	D	S
	Cooling capacity (1)												
	Total	**kW**	**38,4**	**38,4**	**45,3**	**45,3**	**48,8**	**49,0**	**54,3**	**54,5**	**59,8**	**60,1**	**67,6**
	Sensible	**kW**	**35,3**	**35,3**	**39,7**	**39,8**	**43,9**	**44,0**	**46,2**	**46,3**	**52,6**	**52,7**	**57,7**
	SHR	kW/kW	0,92	0,92	0,88	0,88	0,90	0,90	0,85	0,85	0,88	0,88	0,85
	Unit power input	kW	7,3	7,3	8,5	8,5	8,3	8,2	9,2	9,1	10,6	10,5	11,5
	Water flow - Water/gas exhaustion heat exchanger	m3/h	3,8	3,8	4,5	4,5	4,8	4,8	5,3	5,3	5,9	5,9	6,6
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	12	9	17	13	10	8	12	10	14	12	12
	Heating capacity (2)	**kW**	**35,3**	**34,4**	**40,5**	**39,5**	**42,3**	**41,2**	**47,5**	**46,3**	**51,8**	**50,5**	**60,2**
	Unit power input	kW	8,8	8,7	9,8	9,7	9,1	9,1	10,3	10,3	11,6	11,5	13,3
	Water flow - Water/gas exhaustion heat exchanger	m3/h	3,2	3,1	3,6	3,5	3,9	3,7	4,3	4,2	4,7	4,5	5,4
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	9	6	11	8	7	5	9	6	11	8	9
	Supply fans	n.	1	1	1	1	2	2	2	2	2	2	2
	Air flow	m3/h	10440	10440	10440	10440	11310	11310	11310	11310	13480	13480	14500
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	136	136	136	136	313	313	313	313	170	170	94
STANDARD	Scroll compressors	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Air filters	n.	2	2	2	2	3	3	3	3	3	3	3
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	11,3	11,4	11,5	11,6	21,1	21,3	21,1	21,3	21,7	21,9	22,3
	Gas circuits	n.	1	2	1	2	1	2	1	2	1	2	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	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (4)	A	27,5	27,5	33,9	33,9	33,4	33,4	33,4	33,4	36,4	36,4	46,9
	Unit starting current (LRA) (4)	A	79,9	79,9	93,9	93,9	93,4	93,4	119,4	119,4	115,4	115,4	136,9
	EER (1)	kW/kW	5,24	5,25	5,32	5,32	5,90	5,96	5,90	5,97	5,66	5,74	5,87
	COP (2)	kW/kW	4,03	3,94	4,15	4,08	4,64	4,55	4,59	4,51	4,46	4,38	4,52
	Sound level - ISO 3744 (5)												
	On air delivery	dB(A)	74,9	74,9	74,9	74,9	67,3	67,3	67,3	67,3	70,8	70,8	72,5
	On air intake	dB(A)	62,6	62,6	64	64	61,3	61,3	59	59	60,3	60,3	62,2
	Irradiated	dB(A)	56,8	56,8	57	57	52,4	52,4	50,7	50,7	53	53	54,8
	Net weight	kg	488	494	491	497	606	614	608	616	711	723	716

	NEXT P DW		060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2
	SIZE		H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7
	VERSION		D	S	D	S	D	S	D	S	D	S	D
	Cooling capacity (1)												
	Total	**kW**	**67,7**	**70,3**	**70,4**	**82,4**	**82,6**	**94,4**	**94,4**	**106,0**	**106,0**	**117,0**	**117,0**
	Sensible	**kW**	**57,8**	**63,1**	**63,1**	**72,2**	**72,3**	**83,6**	**83,6**	**92,3**	**92,3**	**95,2**	**95,2**
	SHR	kW/kW	0,85	0,90	0,90	0,88	0,88	0,89	0,89	0,87	0,87	0,81	0,81
	Unit power input	kW	11,5	11,6	11,5	13,9	13,8	16,4	16,4	22,2	22,2	19,2	19,1
	Water flow - Water/gas exhaustion heat exchanger	m3/h	6,6	6,8	6,9	8,0	8,0	9,2	9,2	10,7	10,7	11,4	11,4
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	11	13	12	17	16	17	17	9	9	14	14
	Heating capacity (2)	**kW**	**58,3**	**60,8**	**58,8**	**70,4**	**68,1**	**80,2**	**80,2**	**85,6**	**85,6**	**104,0**	**101,0**
	Unit power input	kW	13,2	12,7	12,6	15,0	14,8	17,5	17,5	20,1	20,1	23,6	23,3
	Water flow - Water/gas exhaustion heat exchanger	m3/h	5,2	5,6	5,4	6,5	6,2	7,4	7,4	7,5	7,5	9,3	8,9
	Pressure drops - Water/gas exhaustion heat exchanger	kPa	7	10	8	13	10	12	12	6	6	11	10
	Supply fans	n.	2	2	2	2	2	2	2	2	2	2	2
	Air flow	m3/h	14500	16000	16000	17610	17610	20870	20870	22040	22040	22040	22040
	Nominal external static pressure	Pa	50	50	50	50	50	50	50	50	50	50	50
	Supply fans max external static pressure	Pa	94	50	50	346	346	136	136	50	50	50	50
STANDARD	Scroll compressors	n.	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Air filters	n.	3	3	3	4	4	4	4	4	4	4	4
	Efficiency		G4	G4	G4	G4	G4	G4	G4	G4	G4	G4	G4
	Refrigerant		R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A	R410A
	Total refrigerant charge (optional excluded)	kg	22,4	22,9	23,0	29,7	29,8	30,0	30,7	30,6	30,7	30,9	31,0
	Gas circuits	n.	2	1	2	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	400/3/50+N	400/3/50+N	400/3/50+N
	Max unit operating current (FLA) (4)	A	46,9	47,0	47,0	49,6	49,6	57,8	58,4	70,4	69,7	75,8	75,8
	Unit starting current (LRA) (4)	A	136,9	137,0	137,0	145,6	145,6	150,8	151,4	179,4	178,8	215,8	215,8
	EER (1)	kW/kW	5,90	6,08	6,12	5,94	6,00	5,76	5,76	4,77	4,77	6,08	6,11
	COP (2)	kW/kW	4,41	4,77	4,65	4,70	4,61	4,59	4,59	4,25	4,25	4,40	4,33
	Sound level - ISO 3744 (5)												
	On air delivery	dB(A)	72,5	75,4	75,4	73,1	73,1	77,9	77,9	79,7	79,7	79,7	79,7
	On air intake	dB(A)	62,2	63,8	63,8	62,5	62,5	65,9	65,9	67,5	67,5	67,7	67,7
	Irradiated	dB(A)	54,8	57,3	57,3	55,3	55,3	59,8	59,8	61,6	61,6	61,6	61,6
	Net weight	kg	726	731	741	822	834	833	854	849	861	878	890

THE COOLING CAPACITY DOES NOT CONSIDER THE SUPPLY FAN MOTOR THERMAL LOAD

1. Characteristics referred to entering air at 27°C with 47%rH; ambient temperature at 35°C
2. Characteristics referred to entering air at 20°C; ambient temperature at 7°C with 90% rH.
3. Machine refrigerant charge. Optional are excluded.
4. Corresponding to the nominal external static pressure.
5. Noise level at 1 meter in free field (nominal external static pressure).

OPTIONAL ACCESSORIES TECHNICAL DATA - NEXT P DW

	NEXT P DW		006 P1	008 P1	010 P1	007 P1	009 P1	011 P1	013 P1	014 P1	015 P1	017 P1	019 P1
	SIZE		H0	H0	H0	H1	H1	H1	H1	H2	H2	H2	H3
	VERSION		S	S	S	S	S	S	S	S	S	S	S
OPTIONAL	**Electric heater**												
	Power input	**kW**	**2,6**	**2,6**	**2,6**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**	**5,1**
	Capacity steps	n.	1	1	1	1	1	1	1	1	1	1	2
	Humidifier												
	Steam capacity	kg/h	2	2	2	3	3	3	3	3	3	3	3
	Power input	kW	1,4	1,4	1,4	2,3	2,3	2,3	2,3	2,3	2,3	2,3	2,3
	Heating coil												
	Heating capacity (6)	**kW**	**10,3**	**11,1**	**11,8**	**16,6**	**18,3**	**18,3**	**18,3**	**25,1**	**25,1**	**26,9**	**39,1**

	NEXT P DW		021 P1	023 P1	025 P1	029 P1	033 P1	038 P1	040 P1	045 P1	049 P1	026 P2	028 P2
	SIZE		H3	H3	H4	H4	H4	H5	H5	H5	H5	H5	H5
	VERSION		S	S	S	S	S	S	S	S	S	D	D
OPTIONAL	**Electric heater**												
	Power input	**kW**	**5,1**	**5,1**	**9,0**	**9,0**	**9,0**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	3	3	8	8	8	8	8	8	8	8	8
	Power input	kW	2,3	2,3	6	6	6	6	6	6	6	6	6
	Heating coil												
	Heating capacity (6)	**kW**	**39,1**	**39,1**	**49,5**	**50,7**	**50,7**	**72,3**	**72,3**	**72,0**	**72,3**	**56,2**	**72,1**

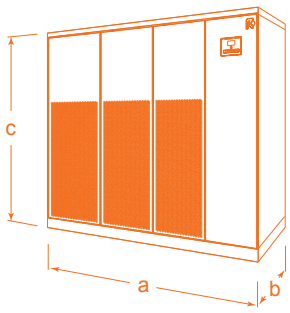
	NEXT P DW		032 P2	032 P2	036 P2	036 P2	042 P2	042 P2	048 P2	048 P2	052 P2	052 P2	060 P2
	SIZE		H5	H5	H5	H5	H6	H6	H6	H6	H6	H6	H6
	VERSION		S	D	S	D	S	D	S	D	S	D	S
OPTIONAL	**Electric heater**												
	Power input	**kW**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	8	8	8	8	15	15	15	15	15	15	15
	Power input	kW	6	6	6	6	11,3	11,3	11,3	11,3	11,3	11,3	11,3
	Heating coil												
	Heating capacity (6)	**kW**	**72,3**	**72,3**	**72,3**	**72,3**	**91,0**	**91,0**	**91,4**	**91,4**	**102,0**	**102,0**	**107,0**

	NEXT P DW		060 P2	064 P2	064 P2	072 P2	072 P2	082 P2	082 P2	092 P2	092 P2	100 P2	100 P2
	SIZE		H6	H6	H6	H7	H7	H7	H7	H7	H7	H7	H7
	VERSION		D	S	D	S	D	S	D	S	D	S	D
OPTIONAL	**Electric heater**												
	Power input	**kW**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**	**13,5**
	Capacity steps	n.	2	2	2	2	2	2	2	2	2	2	2
	Humidifier												
	Steam capacity	kg/h	15	15	15	15	15	15	15	15	15	15	15
	Power input	kW	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3	11,3
	Heating coil												
	Heating capacity (6)	**kW**	**107,0**	**114,0**	**114,0**	**131,0**	**131,0**	**146,0**	**146,0**	**151,0**	**151,0**	**152,0**	**152,0**

6. Characteristics referred to entering air at 20°C with hot water at 75-60°C.

DIMENSIONS (mm)

SIZE H	a	b	c
H0	655	420	1680
H1	650	650	1925
H2	785	650	1925
H3	1085	750	1925
H4	1320	860	1980
H5	1620	860	1980
H6	2155	860	1980
H7	2690	860	1980



TEAM MATE HP: Remote air/gas heat exchangers equipped with axial fans
Capacity: **12,0 ÷ 307,0 kW**

team mate hp

rcgroupairconditioning

R410A R407c R134a A/C SPLIT SYSTEM

MAIN FEATURES
- Air/gas exhaustion heat exchanger.
- 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.
- Thermostatic expansion valve.
- Suitable for outdoor installation.
- Split-system.

MAIN BENEFITS
- Designed for the perfect match with RC Group air conditioners for comfort and with RC Group air cooled heat pump 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.

SPLIT SYSTEM
- The units are designed for the perfect match with RC Group air conditioners for comfort and with RC Group air cooled heat pump motoevaporating units.
- Availability of support leg for vertical air flow.

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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.
- Thermostatic expansion valve.
- Liquid and moisture indicator.
- Dryer and anti-acid gas filter.
- Solenoid valve
- Non return valve

ELECTRICAL PANEL

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

TECHNICAL DATA TEAM MATE HP

	TEAM MATE HP		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**	**14,9**	**18,4**	**20,7**	**24,7**	**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**
	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	54	58	70	76	107	116	125	158
	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 HP LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**10,8**	**13,1**	**16,2**	**18,2**	**21,8**	**28,7**	**32,6**	**41,6**
	With refrigerant charge R407C	**kW**	**10,8**	**13,1**	**16,2**	**18,2**	**21,8**	**28,7**	**32,6**	**41,6**
	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 HP ELN	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**9,6**	**11,5**	**14,1**	**16,1**	**19,5**	**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**
	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 HP

	TEAM MATE HP		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**
	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	181	194	222	250	280	330	360	484
	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 HP LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**49,6**	**54,8**	**64,6**	**87,4**	**96,8**	**117,0**	**132,0**	**176,0**
	With refrigerant charge R407C	**kW**	**49,6**	**54,8**	**64,6**	**87,4**	**96,8**	**117,0**	**132,0**	**176,0**
	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 HP 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**	**83,0**	**101,0**	**113,0**	**153,0**
	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

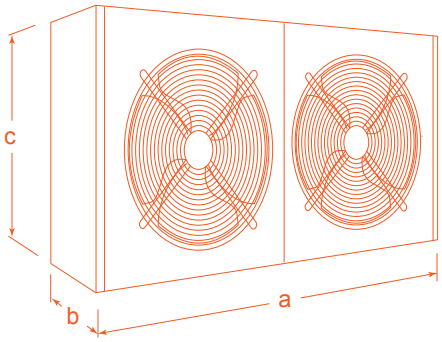
	TEAM MATE HP		T 210	T 250	T 280
STANDARD	**Capacity (1)**				
	With refrigerant charge R410A	**kW**	**232,0**	**276,0**	**307,0**
	With refrigerant charge R407C	**kW**	**231,0**	**273,0**	**304,0**
	Unit power input	kW	3,2	4,2	4,2
	Axial fans	n.	6	8	8
	Total air flow	m³/h	54000	74600	72000
	Air circuits	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	534	644	704
	Refrigerant connections				
	Liquid line – ODS	Ø mm	35	42	42
	Gas line – ODS	Ø mm	42	54	54
TEAM MATE HP LNO	**Capacity (1)**				
	With refrigerant charge R410A	**kW**	**203,0**	**243,0**	**268,0**
	With refrigerant charge R407C	**kW**	**203,0**	**243,0**	**268,0**
	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 HP 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**
	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 [L_{Pm}] 1m far according to ISO EN 3744.

DIMENSIONS (mm)

TEAM MATE HP	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 HP PF: Remote air/gas heat exchangers equipped with plug fan
Capacity: **12,0 ÷ 155,0 kW**

team mate hp pf

R410A R407c R134a EC SPLIT SYSTEM

MAIN FEATURES

- Air/gas exhaustion heat exchanger.
- 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.
- Thermostatic expansion valve.
- Suitable for indoor installation.
- Split-system.

MAIN BENEFITS

- Designed for the perfect match with RC Group air conditioners for comfort and with RC Group air cooled heat pump motoevaporating units.
- 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.

SPLIT SYSTEM

The units are designed for the perfect match with RC Group air conditioners for comfort and with RC Group air cooled heat pump motoevaporating units.

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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-fans).
- 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.
- Thermostatic expansion valve.
- Liquid and moisture indicator.
- Dryer and anti-acid gas filter.
- Solenoid valve
- Non return valve

ELECTRICAL PANEL

In accordance with EN60204-1 norms, suitable for outdoor installation, 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 HP 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**	**15,8**	**18,4**	**21,9**	**25,3**	**35,5**	**40,2**	**46,9**
	With refrigerant charge R407C	**kW**	**12,0**	**15,6**	**18,2**	**21,6**	**25,0**	**35,1**	**39,8**	**46,5**
	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	148	153	158	168	218	230	292	318
	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 HP PF LNO	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**10,9**	**14,1**	**16,3**	**19,1**	**22,3**	**31,1**	**35,5**	**40,9**
	With refrigerant charge R407C	**kW**	**10,8**	**13,9**	**16,1**	**18,9**	**22,1**	**30,8**	**35,1**	**40,6**
	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 HP PF ELN	**Capacity (1)**									
	With refrigerant charge R410A	**kW**	**9,6**	**12,3**	**14,1**	**16,3**	**19,2**	**26,4**	**30,4**	**34,6**
	With refrigerant charge R407C	**kW**	**9,5**	**12,1**	**13,9**	**16,1**	**19,0**	**26,2**	**30,1**	**34,3**
	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

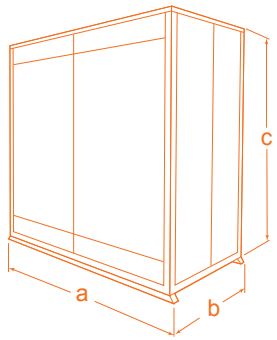
	TEAM MATE HP PF		T 58	T 69	T 86	T108	T114	T144
STANDARD	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**62,6**	**73,7**	**91,9**	**114,0**	**123,0**	**155,0**
	With refrigerant charge R407C	**kW**	**62,0**	**73,1**	**91,0**	**113,0**	**122,0**	**154,0**
	Unit power input	kW	2,2	2,4	3,3	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	397	431	529	641	571	689
	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 HP PF LNO	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**55,3**	**64,4**	**81,4**	**102,0**	**108,0**	**136,0**
	With refrigerant charge R407C	**kW**	**54,8**	**63,9**	**80,6**	**100,0**	**107,0**	**135,0**
	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 HP PF ELN	**Capacity (1)**							
	With refrigerant charge R410A	**kW**	**47,6**	**54,6**	**70,1**	**88,1**	**92,0**	**116,0**
	With refrigerant charge R407C	**kW**	**47,2**	**54,2**	**69,5**	**87,0**	**91,3**	**115,0**
	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 [Lpm] 1m far according to ISO EN 3744.

DIMENSIONS (mm)

TEAM MATE HP 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 heat pump 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.

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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

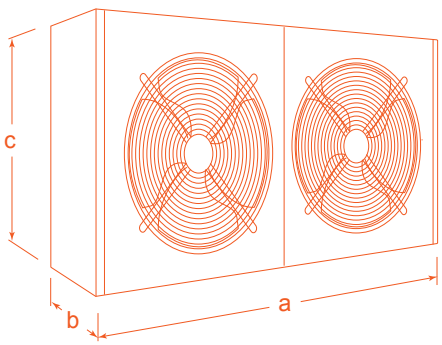
1. Characteristics referred to entering air at 35°C with hot water inlet temperature 45°C – 20% glycol.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.

(*) Available also with 230/1/50 power supply. Refer to the wiring diagram of the unit.

DIMENSIONS (mm)

DRY COOLER	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 heat pump 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.

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.

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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-fans).
- 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

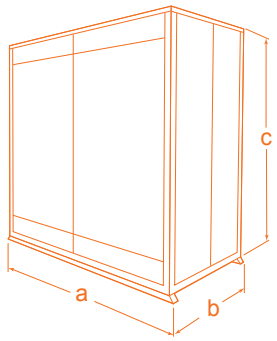
1. Characteristics referred to entering air at 35°C with hot water inlet temperature 45°C – 20% glycol.
2. Sound power level [Lw] according to ISO EN 9614 - 2
3. Average sound pressure level [Lpm] 1m far according to ISO EN 3744.

(*) Available also with 230/1/50 power supply. Refer to the wiring diagram of the unit.

DIMENSIONS (mm)

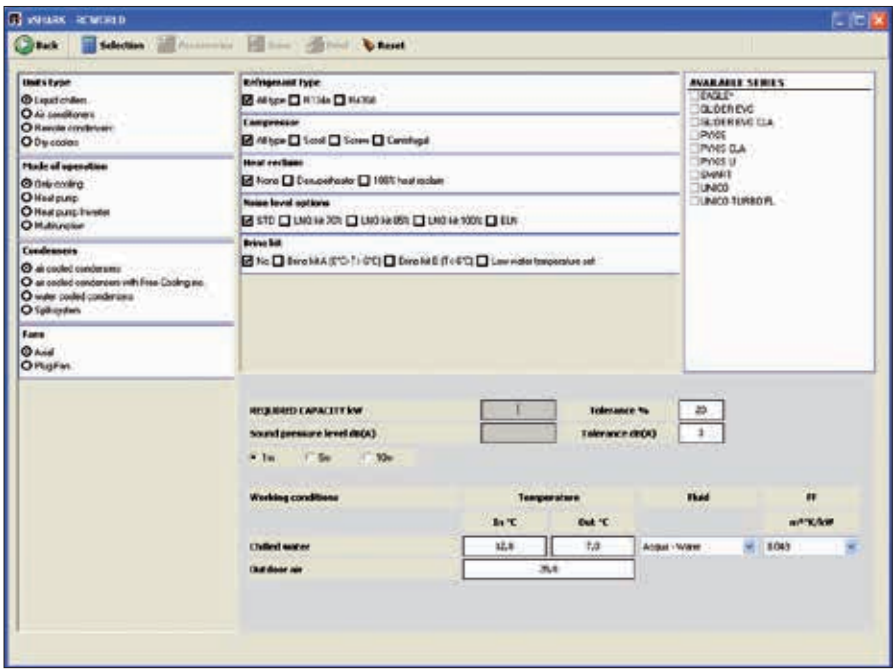
DRY COOLER PF	a	b	c
T 14	890	880	900
T 17	890	880	900
T 21	890	880	900
T 24	1190	880	900
T 33	1190	880	900
T 38	1390	880	1300
T 44	1390	880	1300
T 58	1840	880	1300
T 69	1840	880	1300
T 86	2290	880	1300
T108	1840	880	1800
T114	2290	880	1300
T144	1840	880	1800

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



RCWORLD
RC Hi-Tech

RC WORLD: RC Group products selection software



rc world

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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.

MAIN NEW FEATURES

- Introduction of the 2014 product range.
- Improved unit selection mode.

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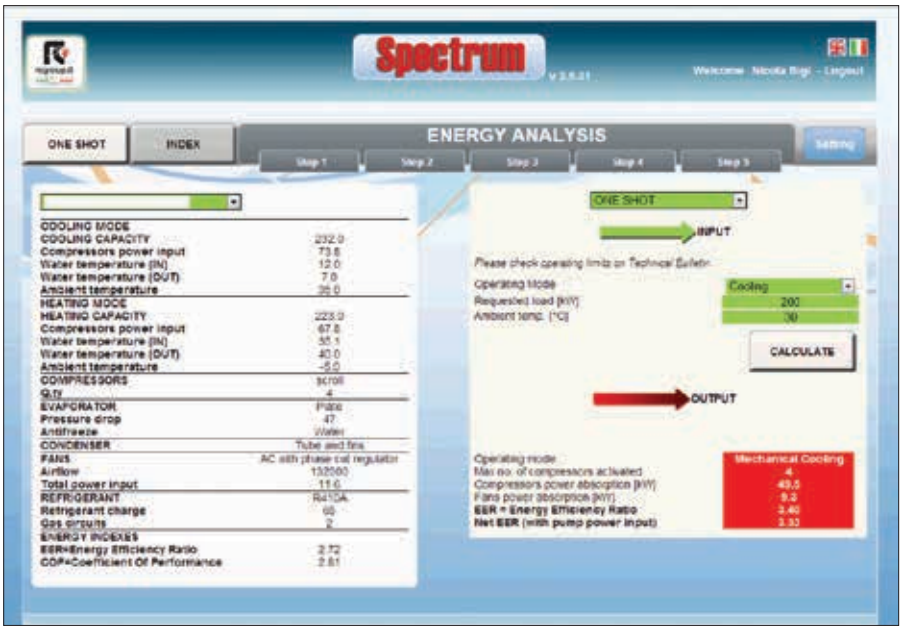
SPECTRUM
RC Hi-Tech

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

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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 optimize operational logic.

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SEQUENCER: Sequencer for chillers, heat pumps and multifunction units

SEQUENCER
RC Hi-Tech

sequencer

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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

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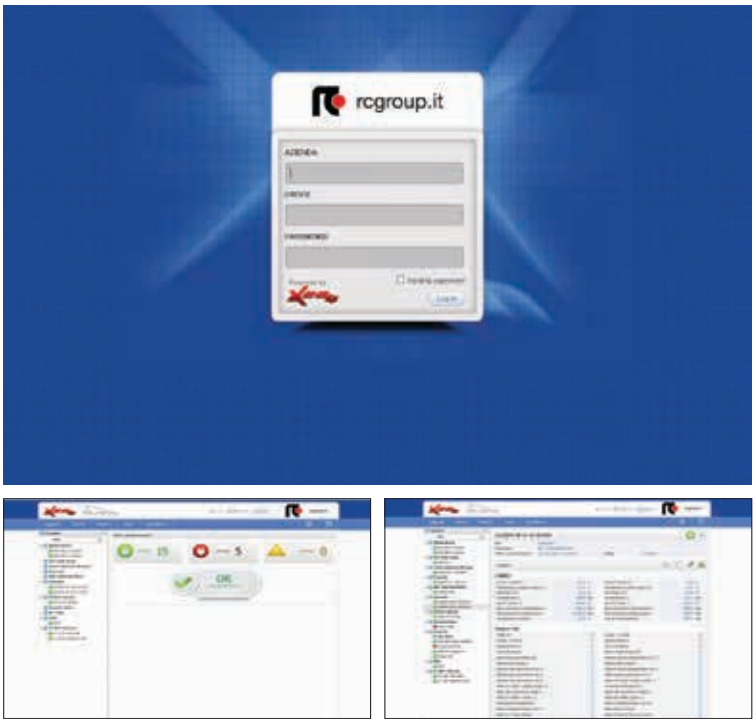
Powered by

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



rilheva

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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 analyze 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

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Heat Pumps & Multifunctions 2014

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