CLINT®

CLIMATIZZAZIONE INTEGRATA

PRODUCTS GUIDE

About us

Total Flexibility, and the Ability to Deliver Highly Specific Answers

Twenty years experience in the sector and a strong entrepreneurial spirit are CLINT's distinctive features. A winning combination, to offer the market fully flexible, high technology solutions.
CLINT's strong point is a capacity to provide targeted, customized answers to very specific needs, especially for large installations.
By combining its experience in centralized, hydronic air-conditioning systems with advanced plant technology and a number of innovative R&D solutions, CLINT designs, builds and customizes an integrated, comprehensive range of machines for centralized air-conditioning of residential, commercial and industrial buildings, complemented by a widespread pre- and post- sales assistance network covering the whole of Italy and most major European countries.

air experience®

Company organization

Production Cycle Control is at the Heart of Our Philosophy

The company's production, spreading over 3 plants, is split between modern assembly lines and work islands. Medium/small cooling units and fan coil units are mostly produced on assembly lines, large refrigerating units and roof-top systems in specially equipped areas. In both cases, the whole production process is subject to thorough checks and controls, both at the end and at intermediate steps.
Each unit must go through strict testing, simulating operational conditions on the customer's site even in the most demanding situations.
Pressure,temperature, sound level, vibrations: everything is checked to make sure it complies with set parameters. The company is also strongly geared for maximum customer satisfaction and offers a vast service network relying on very skilled professionals who can carry out unit start-up on customer's premises, if required, to adjust the machines to any system they are connected to, in line with its requirements.

Attention to the environment

Being a Modern Firm also Means Operating in Respect for the Environment

CLINT believes in searching for innovative solutions and developing materials and cooling fluids that comply with the strictest directives on environmental matters; but also in high COP, and thus low energy consumption machines.
All cooling fluids used by CLINT comply with the Kyoto and Montreal Protocols directives, they offer DPO=0 (Ozone Destruction Potential=0)
and are used in cooling circuits designed to cut down energy dissipation and space, and eliminate gas leak to the environment.
R407C, R134a and R410A are the refrigerants used by CLINT in its cooling units for residential, commercial and industrial air conditioning systems.
On top of that, CLINT service staff is trained to carry out maintenance operations on the machines or dismantle them at the end of their useful life without any gas loss to the environment.

Technological progress

We Believe in Innovation that Produces Real Benefit

Quality of life achieved through research and development of new technologies. The commercial and technological challenges met by CLINT in over twenty years activity have in time led, thanks to its customer satisfaction policy, to great attention for individual customers needs and special care in planning and manufacturing details, while producing state of the art solutions. They also made the company aware that, in order to provide real benefit for the final user, it had to adopt a working philosophy of production without pollution, and manufacture very low environmental impact machines, both on the materials and operational consumption front.
CLINT was eventually able to produce units that are quite simply in a class of tehir own.
From the Compact Line machines, offering compact hydraulic circuits, complete and opti-

mized for installation in residential areas where noiselessness and looks are decisive factors; to the Idroinverter line, equipped with Inverter compressor, that permit to the unit to perfectly adapts its capacity to the variable thermal load of the user plant; to the EnergyPower line, producing hot water for sanitary use even when conditioning requirements for interiors have already been satisfied, to the range in class “A” wich allows substantial energy savings, with E.E.R. values of over 3,1; the multicompressor MultiPower line, capable to reduce cooling power to perfectly fit any air conditioning need, with considerable energy savings compared to traditional systems.

Our products range

We Provide Effective Solutions for All Air-conditioning Needs

CLINT offers a complete and integrated range of machines for centralized air conditioning of residential, commercial and industrial building. The rich production combines a wide range of added value solutions for market and individual customers needs.
From fan coil units to chillers and roof-tops, CLINT’s skill and professionalism can grant customers top production standards, attention to details, best COP levels, noiselessness: a guarantee of ideal comfort from CLINT.
The vast selection of water chillers and heat pumps from 5 to 1500 kW makes up an essential part of CLINT’s production.
Included in the Compavy « core businnes » are also roof-top systems, independent conditioning units for commercial and industrial buildings and fan coil units, available in 3 different designes to best satisfy the architectural requirements of any interior.

Projected into the future

An Increasingly Competitive Market Finds Us Ready for New Challenges

Managers, engineers, designers, developers and tradesman work to answer to customers needs, comply with the strictest regulations, meet technological challenges and realize machines that are more and more made for man.
CLINT, making the best of human ressources, has created an ideal atmosphere, a perfect harmony between Company and Customer, where the challenges of an ever evolving market are met with the greatest commitment and determination.
CLINT and its highly entrepreneurial management make up a dynamic and well assorted team, ready to take up a key rôle on the most demanding markets, anticipating needs and trend while ensuring maximum customer satisfaction, to offer not just products but the best solutions available for customer needs.

A fully certified system

We Are Strongly Committed to Quality

CLINT believes in customer satisfaction as an added value for its products. The company pursues this objective through research and development of special solutions to grant customers the best results in time, improved performance and higher COP, accompained by high quality training of its service professionals and great attention for the increasingly demanding requirements of an ever evolving market. As background and guiding line, and also guarantee of our standards of quality, are the certifications obtained for production and management optimization:

CE: To prove that all products coming from CLINT's manufacturing plants are made according to European Community directives and regulations.

BV: A certification for pressurized fluids, attesting the correct production, in CLINT's case, of refrigeration circuits, together with hydraulic ones, in compressor equipped units.

UNI EN ISO 9001:2000: Way back in 1999, CLINT was the first Italian Company in the sector to obtain it, comfirming its attention for the correct running of industrial processes. This was also perhaps due to an inborn vocation for international markets, especially middle European ones, very keen on

EUROVENT: Attesting the reliability of Company's data on product performance, to guarantee the actual quality of CLINT's products and services to its customers.

G.I. HOLDING GROUP

Company organization

We Made a Name for Ourselves in the Air-conditioning Sector, Actually More than One

Born from the merging of single product companies operating in the air conditioning, air treatment an dprocess cooling sectors, CLINT is a G.I. HOLDING S.p.A. Group trademark. An industrial group bringing together a number of first rate companies in the thermotechnic sector at international level.
The G.I. HOLDING S.p.A. Group is characterized by its sector specialization with a distinctive, synergistic use of the various companies high level experience and advanced technology.
Each company exploit its own know-how and specialized skills: within the group, CLINT provides water chillers, roof-tops, fan coil units and terminal units aimed at markets where the demand for air conditioning systems is one the increase, especially where centralized hydronic systems can generate an added value that traditional direct expansion machines cannot provide.

Our references

We Managed to Win the Trust of Many Important Establishments

Having been ready to catch some prestigious opportunities for comfort products applications, CLINT can now claim a series of important achievements at international level, showing the quality and efficacy of its engineering solutions.

IPERAL Valchiavenna
Shopping Mall, Prata Camportaccio,
Sondrio, Italy

- Hospital of MONDOVÌ, Cuneo, Italy
- Hospital LUIGI SACCO, Milano, Italy
- BRITVIC SOFT DRINKS, Glebe Farm Industries Estate, Rugby, United Kingdom
- LANGSTONE PLASTIC, Burmuda Park, Nuneaton, United Kingdom
- RAI Experimental Centre, Aosta, Italy
- Thermal Centre of BORMIO, Sondrio, Italy
- PORSCHE FACTORY, Zuffenhausen-Stuttgart, Germany
- University in KÖLN, Germany
- Université Paris X NANTERRE, Paris, France
- University of BARI, Italy
- I.N.P.S. Offices, Cosenza, Italy
- ARCIMBOLDI'S Theatre, Milano, Italy
- Atelier GUCCI, Paris, France
- ROLEX Headquarters, Genève
- IPERAL Shopping Mall, Morbegno, Sondrio, Italy
- IPERAL Shopping Mall FUENTES, Piantedo, Sondrio, Italy
- DANIELI S.P.A. Headquarters, Buttrio, Udine, Italy
- ARBEITKAMMER, Villach, Austria
- GENERAL SERVICES OFFICER, New Dehli, India
- MARCEGAGLIA S.P.A., Gazoldo degli Ippoliti, Mantova, Italy
- University of MODENA E REGGIO EMILIA, Modena, Italy
- ENEA, Casaccia Researches Centre, Roma, Italy
- ALEXFERT FERTILIZERS CO., Alexandria, Egypt
- AUDI ZENTRUM, Asti, Catanzaro, Italy
- JSC VYKSA STEEL WORKS, Nizhgerodsky Region, Vyksia, Russian Federation
- FIAT-MIRAFIORI Plant, Torino, Italy
- NUOVO PIGNONE Plant, Porto Salvo, Vibo Valentia, Italy
- MAGNA SPECIALIST CONFECIONERS, Telford, Shropsire, United Kingdom
- A.D.R. LEONARDO DA VINCI Airport, Fiumicino, Roma, Italy
- MEDIA BIT Village, Torino, Italy
- RETAL CZECH, Melnik, Czech Republic
- TILAB, Researches Centre TELECOM ITALIA S.p.A., Torino, Italy
- HOTEL YAVOR, Sunny Beach Black Sea, Bulgary

New Exhibition Pole
MILAN'S TRADE FAIR
Rho-Pero, Milano, Italy

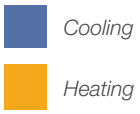
TECHNOPLANTS
Aerospace Application
Caselle, Torino - Nola, Napoli - Italy

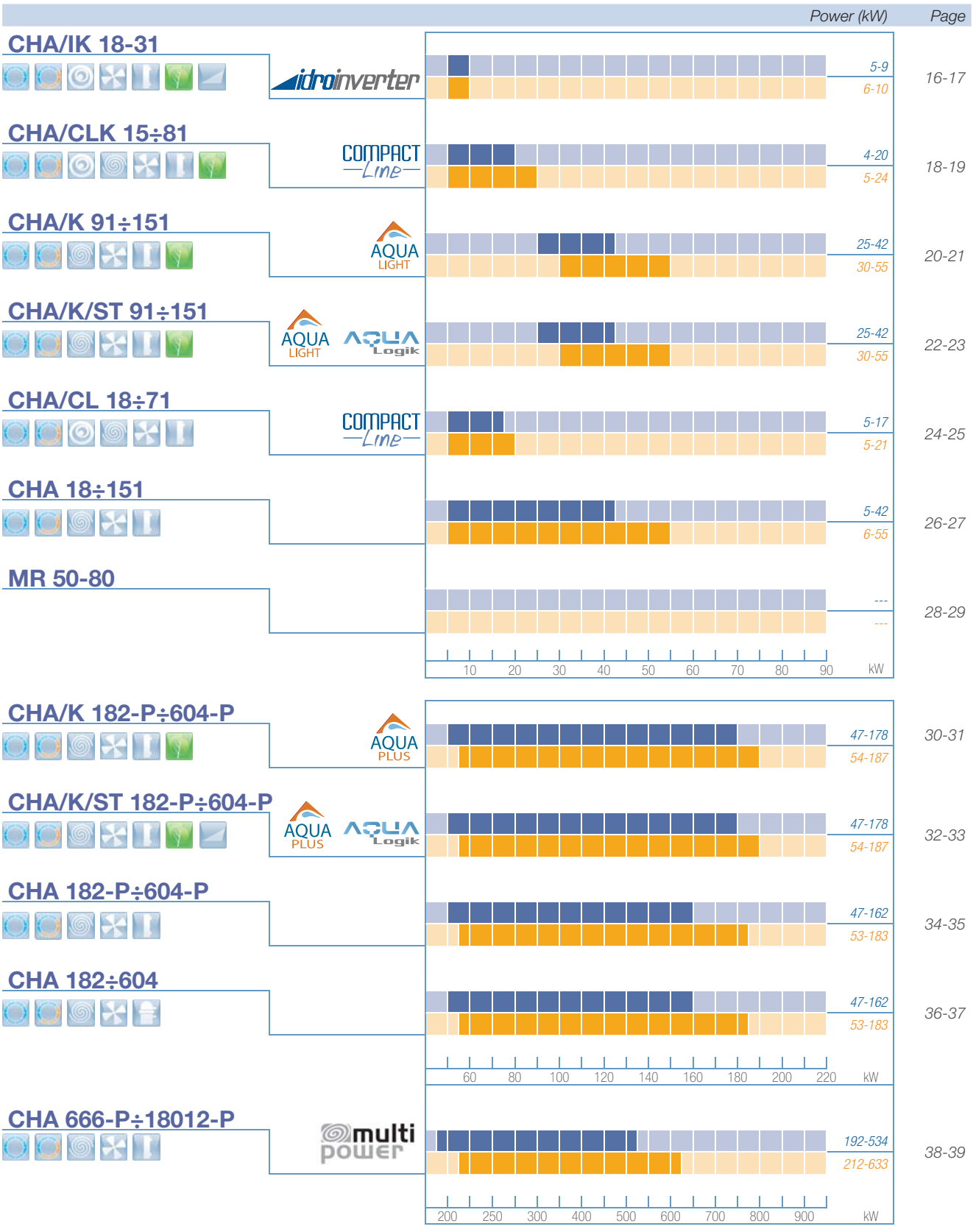
- Gallerie LAFAYETTE, Paris, France
- CHALVIGNAC PRUHLO Distillation, Jarnac Champagne, France
- MINISTRY OF FINANCE, Sofia, Bulgary
- SWISS EMBASSY, Washington DC, U.S.A.
- MOPCO UREA PLANT, Damietta, Egypt
- INTERGREEN UK LTD, Salding, Linolnshire, United Kingdom
- SAGEM COMMUNICATION, France
- STADE DE FRANCE, Paris
- FERRARI Car showroom, Prato, Italy
- FELTRINELLI bookstore, Roma, Italy
- THERMO LOGISTIK-MUELSEN, St. Jacob, Germany
- FA. HAASE ENERGIETECHNIK AG, Neumuenster, Germany
- MONTE DEI PASCHI DI SIENA Bank, Bari, Italy
- JACKSON, MS Federal Courthouse, USA
- AMPERE, AQUA, ART, Wien, Austria
- ALSTOM POWER LTD, Derbyshire, United Kingdom
- RESA SYSTEMS GMBH, Saarwellingen, Germany
- Istituto SUPERIORE di SANITÀ, Roma, Italy
- Ministry of theTREASURY, Roma, Italy
- SWISS RE Italia, Roma, Italy
- SCHOKOLADENWERK BERGGOLD GMBH, Poessnek, Germany
- SINALCO INTERNATIONAL GMBH, Germany
- TONSTUDIO SUNSHINE-MUSIC, Wien, Austria
- VERPAKKINGS INDUSTRIES, Netherlands
- CP KELCO OY, Äänekoski, Finland
- BC-TECHNOLOGY GMBH, Frankfurt/Main, Germany
- BOEHLER SCHWEISSTECHNIK, Kapfenberg, Austria
- ABN AMBRO BANK, Hoorn, Nedtherlands

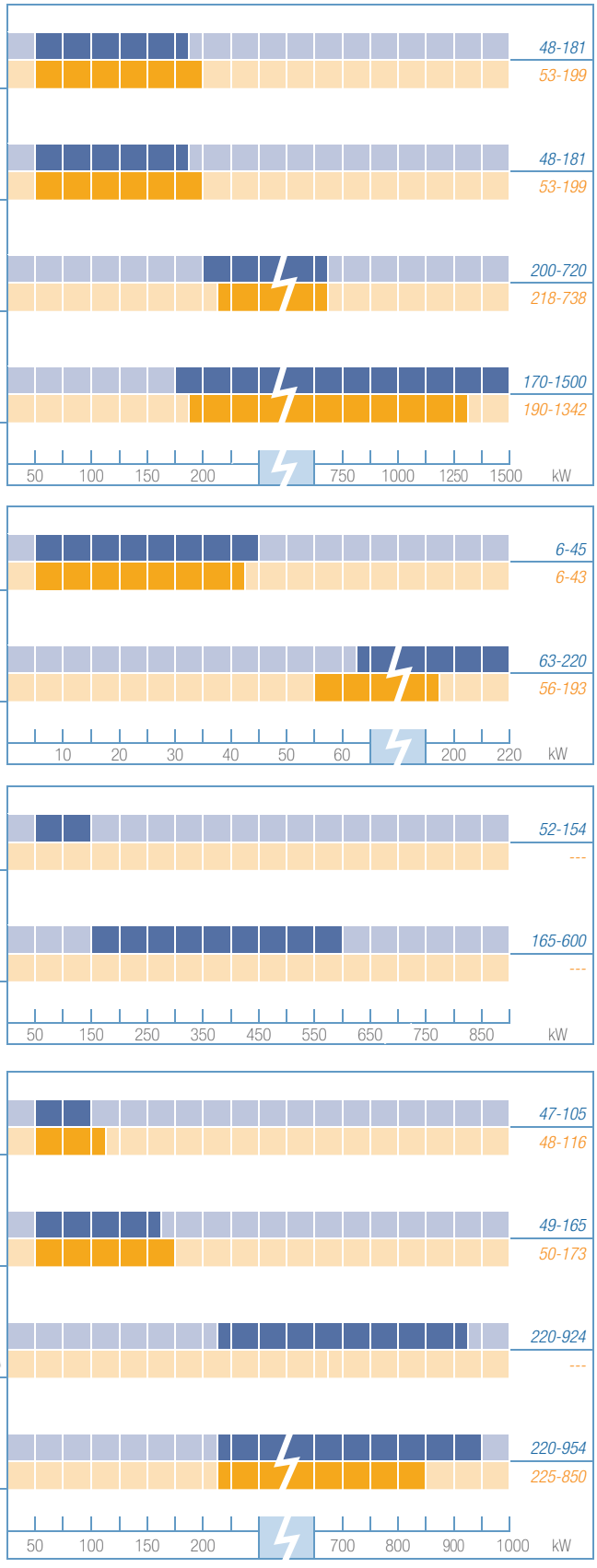
our solutions

CHAPTER 1

Aircooled liquid chillers and heat pumps with axial fans.







LEGENDA

Versions:
- Only cooling
- Heating/Cooling
- High ESP fans

Compressor:
- Rotary
- Scroll
- Semi-hermetic
- Screw

Fans:
- Axial
- Radial

Exchanger
- Shall and tube
- Plate

Refrigerant:
- R410A
- R134a
- H_2O

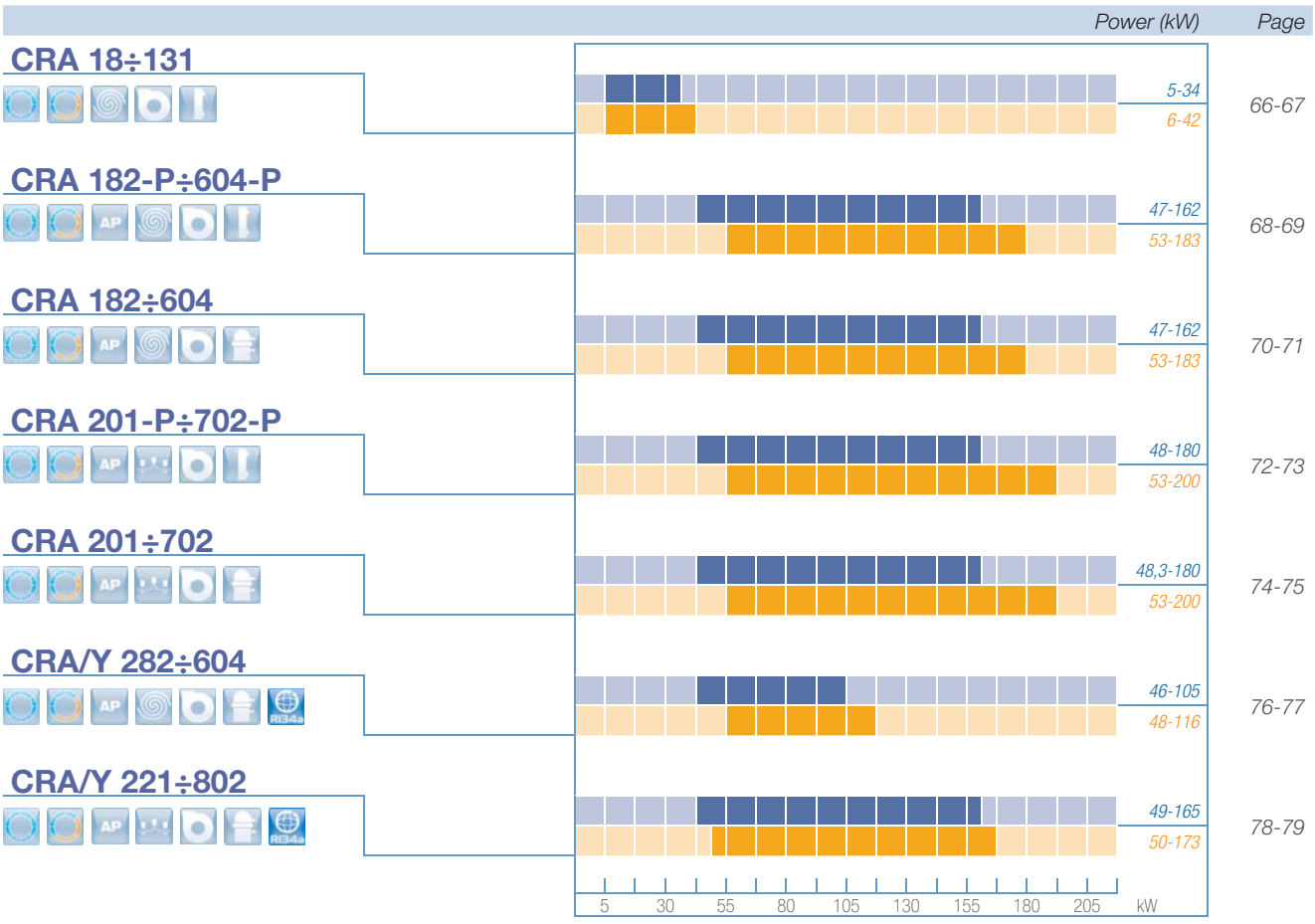
Solutions:
- Inverter
- High-temperature
- Free/cooling
- DHW
- Humidification Deshumidification
- Electrical Heater

CHAPTER 2

Aircooled liquid chillers and heat pumps with radial fans.

Cooling

Heating



G.I. HOLDING S.p.A. is not responsible for possible mistakes of this catalogue and can change, without previous notice, the present data.

LEGENDA

Versions:
- Only cooling
- Heating/Cooling
- High ESP fans

Compressor:
- Rotary
- Scroll
- Semi-hermetic
- Screw

Fans:
- Axial
- Radial

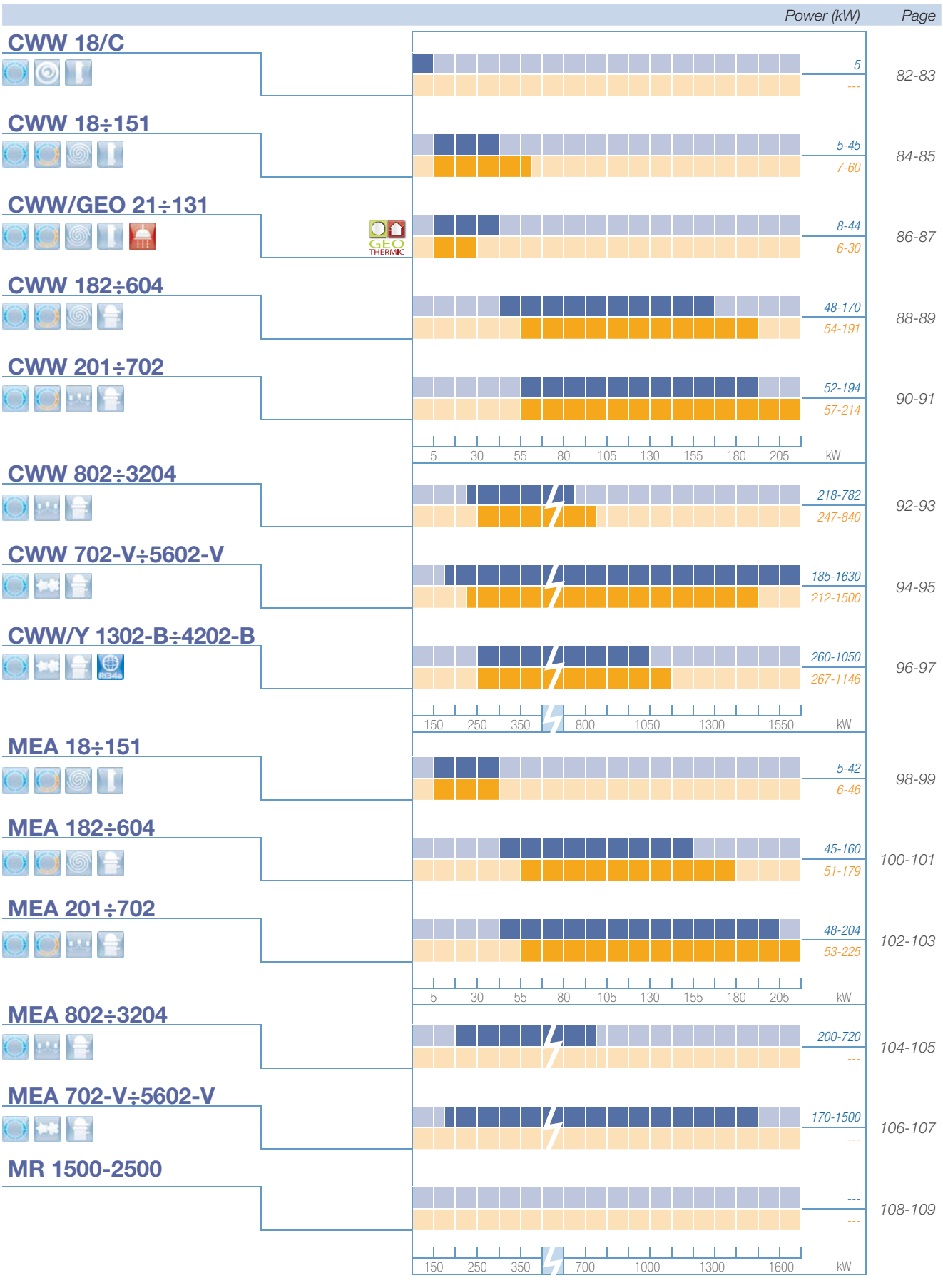
Exchanger
- Shall and tube
- Plate

Refrigerant:
- R410A
- R134a
- H2O

Solutions:
- Inverter
- High-temperature
- Free/cooling
- DHW
- Humidification Deshumidification
- Electrical Heater

CHAPTER 3

Water cooled liquid chillers and heat pump for remote condensing.

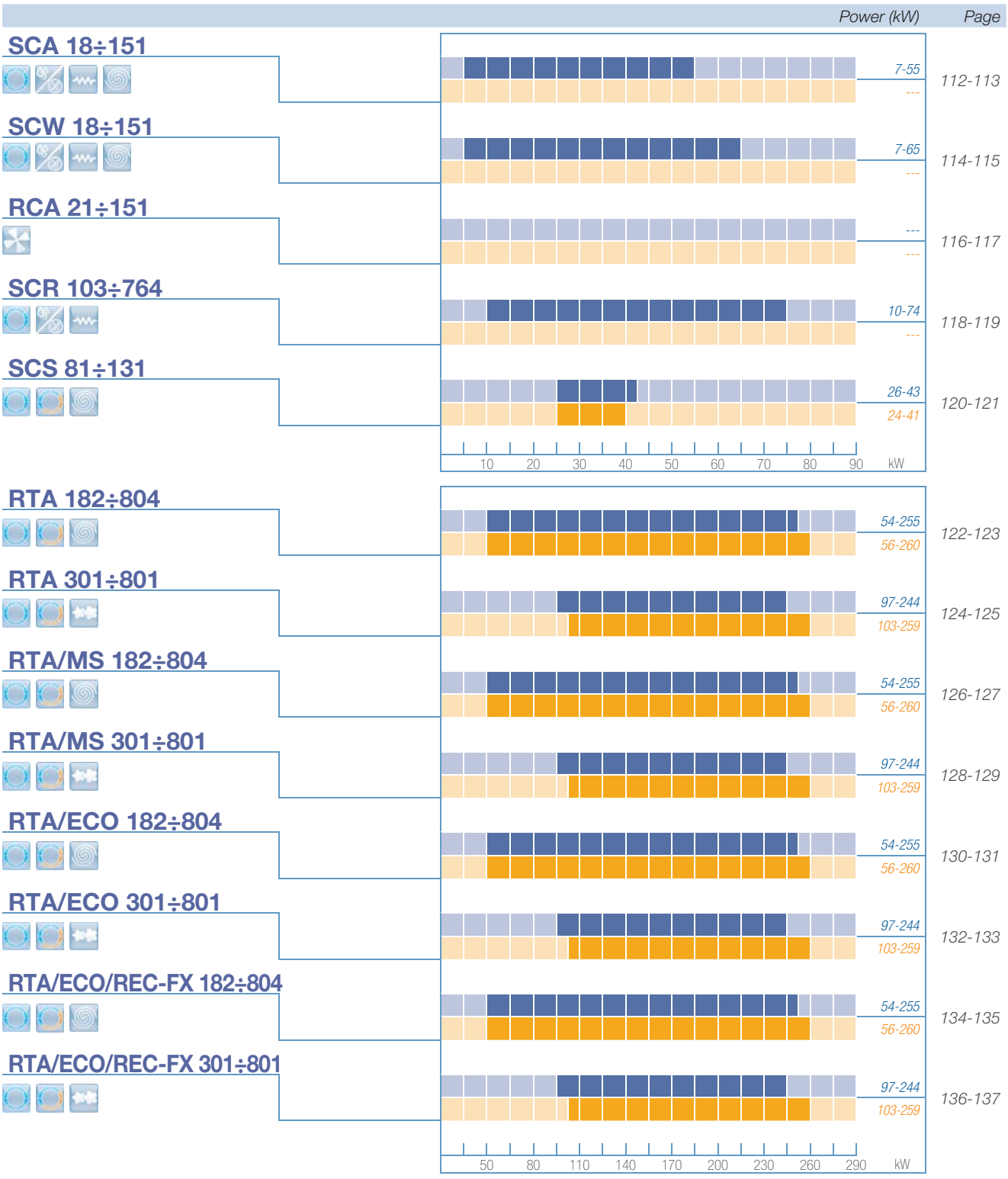


CHAPTER 4

Packaged air condenser and condensing units.

Cooling

Heating



LEGENDA

Versions:
- Only cooling
- Heating/Cooling
- AP High ESP fans

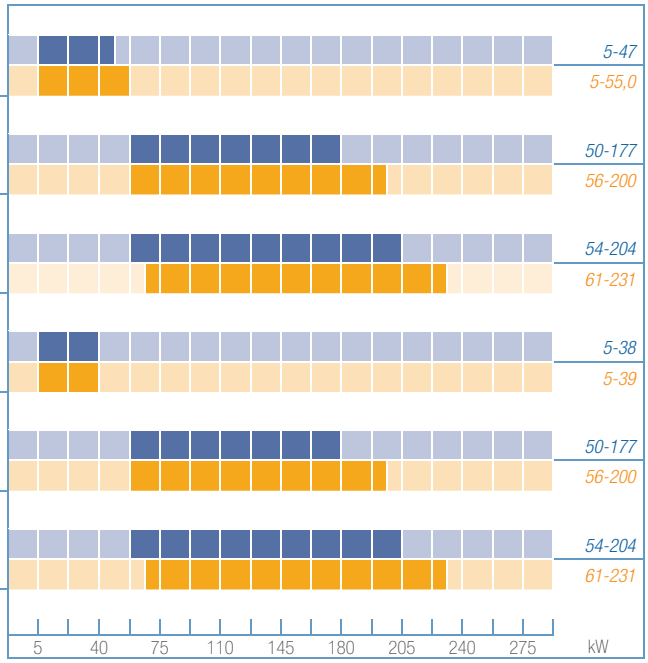
Compressor:
- Rotary
- Scroll
- Semi-hermetic
- Screw

Fans:
- Axial
- Radial

Exchanger
- Shall and tube
- Plate

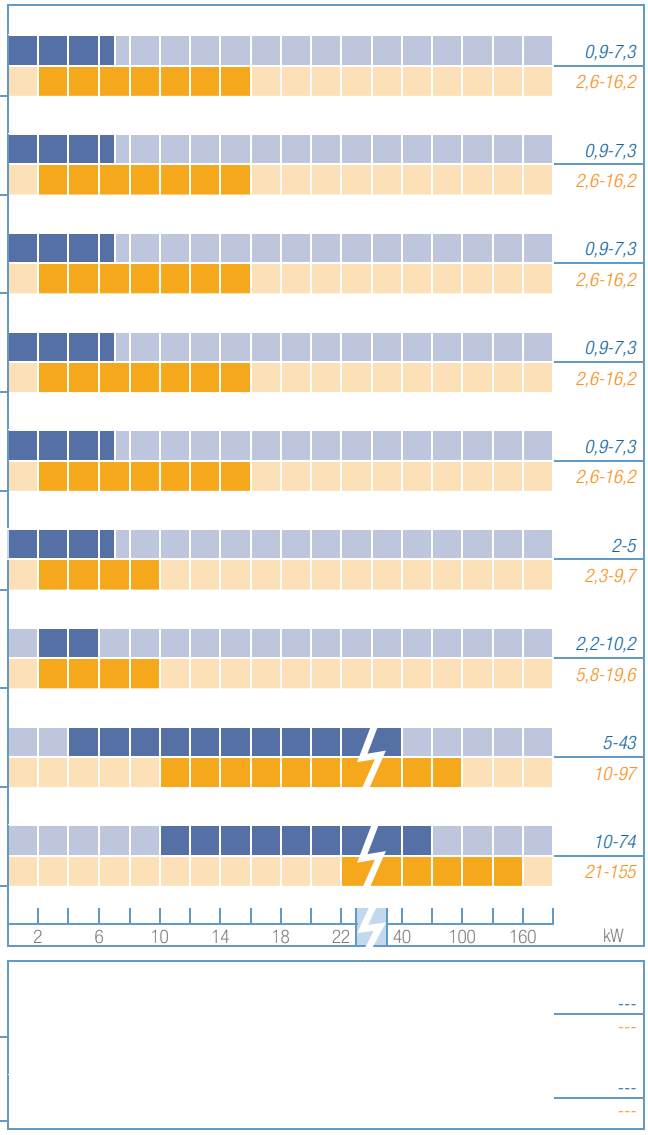
Refrigerant:
- R410A
- R134a
- H2O

Solutions:
- Inverter
- HT High-temperature
- FC Free/cooling
- DHW
- Humidification Deshumidification
- Electrical Heater



CHAPTER 5

Terminal units.



1

CLIMATIZZAZIONE INTEGRATA

Aircooled liquid chillers and heat pumps with axial fans.

1

INDEX	Page

CHA/IK 18-31

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, INVERTER ROTARY COMPRESSORS PLATE EXCHANGERS AND PUMP KIT.

FROM 5 kW TO 9 kW.

idroinverter

UNIT DESCRIPTION

CHA/IK 18-31 IDROINVERTER series, is the winning choice for ideal comfort in residential and commercial environments, equipped with R410A refrigerant and INVERTER compressors is a unit extremely functional and reliable. Thanks to the inverter device, it is able to manage the compressor running speed with a continuos modulation, keeping stable and constant the water tempetarure supplied to the user plant. The unit perfectly adapts its capacity to the variable thermal load of the plant, where terminal units are installed. With this technology we obtain various and important advantages, such as high seasonal medium E.S.E.E.R. values, the reduction of the starting current values, the exlusion of inertial water tank as the power supplied is costantly the same as the power required, exeptional silent unit as the fans adequate their speed to the real load of the plant, with benefits aboveall during the night-time. The continuos adjustment of the capacity, by managing the running speed of the compressor, avoids frequent compressor start/stop, enhancing its life time; morover the compressor can start with lower frequency of the power supplied and with lower peaks of current. IdroInverter gives an higher reliability and the compressor's risk of damage is reduced considerably. Moreover, an innovative control device can avoid unit's block caused by accidental overloads; when active, this device reduces the cooling capacity, keeping the unit running.

VERSIONS

CHA/IK
Cooling only

CHA/IK/WP
Reversible heat pump

FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Rotary INVERTER compressor complete with overload protection (klixon) embedded in the motor and crankcase, installed on rubber vibrations absorbing.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser in copper tubes and aluminium finned coil, complete with moisture drain pan in the heat pump version.
- Evaporator in AISI 316 stainless steel brazewelded plates type. The evaporator is insulated with flexible closed cells material. On the heat pump units is always installed a antifreeze heater.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor contact.
- Compressor Inverter controller: allows to check the power of the compressor, the pressure of condensation and the external temperature. IDROINVERTER units are equipped with a logic able to dynamically vary machine operating parameters, adapting them to real system load requirements.
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes circulator, safety valve, gauge and expansion vessel.

ACCESSORIES

Loose accessories:

CR	Remote control panel
IS	RS 485 serial interface
RP	Reti protezione batteria

TECHNICAL DATA

R410A

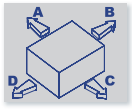
CHA/IK			18	31
Cooling	Cooling capacity (1)	kW	5,0	9,0
	Absorbed power (1)	kW	1,7	3,0
Heating	Heating capacity (2)	kW	5,5	10,0
	Absorbed power (2)	kW	1,8	3,2
Compressors	Quantity	n°	1	1
	Type		Rotary INVERTER	Rotary INVERTER
Condenser	Fans	n°	1	1
	Air flow	m³/s	0,89	0,82
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50	230/1/50
	Max. running current	A	9	18
	Max. inrush current	A	11	20
Water circuit	Water flow	l/s	0,27	0,42
	Pump nominal power	kW	0,2	0,2
	Available static pressure	kPa	48	42
	Expansion vessel	l	2	2
	Water connections	"G	3/4"	3/4"
Sound pressure (3)	STD	dB(A)	47	49
Weights	Transport weight	Kg	90	98
	Operating weight	Kg	91	99

DIMENSIONS

CHA/IK			18	31
L	STD	mm	870	870
P	STD	mm	320	320
H	STD	mm	1100	1100

DIMENSIONAL

CLEREANCE AREA



CHA/IK	18 - 31	
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) D SIDE: Fan side.
N.B. Weights of WP versions are indicated on the technical book.

CHA/CLK 15÷81

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, ROTARY/SCROLL COMPRESSORS, PLATE EXCHANGERS AND PUMP KIT.

FROM 4 kW TO 20 kW.

COMPACT Line

UNIT DESCRIPTION

The Compact Line series, the winning choice for ideal comfort in residential and commercial environments, is enhanced by a new line of products equipped with R410A refrigerant fluid.
In addition to the excellence of the range for its compact sizes, quietness and optimised water circuit, the Compact Line series gains another winning feature: R410A refrigerant fluid. High efficiency with reduced heat exchange surfaces compared to those usable with conventional refrigerant fluids and safeguarding the environment thanks to the lower quantities of refrigerant used make the CHA/CLK range the ideal product for residential and commercial-type applications. Thus increasingly compact and high-tech units, to offer you ideal comfort in all seasons.

VERSIONS

CHA/CLK
Cooling only with tank and pump

CHA/CLK/WP
Reversible heat pump with tank and pump

FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Rotary/Scroll compressor complete with overload protection (klixon) embedded in the motor and crankcase, if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser in copper tubes and aluminium finned coil, complete with drain pan for WP version.
- Evaporator in AISI 316 stainless steel brazewelded plates type, built-in the storage tank.
- R410A refrigerant.
- Electrical panel. Includes: main switch with door lock device, fuses, compressor contact and pump contact (41÷71).
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: water differential pressure switch, insulated tank, circulator or pump, safety valve, gauge and expansion vessel inserted in the storage tank.

ACCESSORIES

Loose accessories:

PB	Low pressure switch
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser

TECHNICAL DATA

R410A

CHA/CLK			15	18	21	25	31	41	51	61	71	81
Cooling	Cooling capacity (1)	kW	4,2	5,1	6,4	7,5	8,6	10,4	12,2	15,3	18,6	20,5
	Absorbed power (1)	kW	1,4	1,7	2,1	2,5	2,9	3,5	4,0	5,0	6,0	6,6
Heating	Heating capacity (2)	kW	5,0	6,0	8,0	8,7	10,3	12,4	14,8	18,8	21,9	24,4
	Absorbed power (2)	kW	1,7	2,0	2,6	2,9	3,5	4,2	4,8	6,2	7,1	8,0
Compressori	Quantity	n°	1	1	1	1	1	1	1	1	1	1
	Type		<---------- Rotary ---------->				<---------- Scroll ---------->					
Condenser	Fans	n°	1	1	1	1	1	1	2	2	2	2
	Air flow	m³/s	0,97	0,97	0,89	0,89	0,82	0,82	1,94	1,78	1,78	1,64
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230 / 1 / 50 ---------->						<--------- 400 / 3+N / 50 -------->			
	Max. running current	A	7	9	11	13	15	19	12	13	15	17
	Max. inrush current	A	39	43	62	62	79	86	58	61	78	106
Water circuit	Water flow	l/s	0,20	0,24	0,31	0,36	0,41	0,50	0,58	0,73	0,89	0,98
	Pump nominal power	kW	0,20	0,20	0,20	0,20	0,20	0,21	0,30	0,30	0,30	0,30
	Available static pressure	kPa	52	48	35	45	41	42	140	123	90	80
	Storage water volume	l	<---------- 25 ---------->						<---------- 50 ---------->			
	Expansion vessel	l	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	49	49	49	49	51	52	52	52	52	52
Weights	Transport weight	Kg	96	98	106	110	118	120	192	194	196	198
	Operating weight	Kg	121	123	131	135	143	145	242	244	246	248

DIMENSIONS

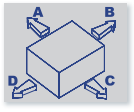
CHA/CLK			15	18	21	25	31	41	51	61	71	81
L	STD	mm	870	870	870	870	870	870	1160	1160	1160	1160
P	STD	mm	320	320	320	320	320	320	500	500	500	500
H	STD	mm	1100	1100	1100	1100	1100	1100	1270	1270	1270	1270

DIMENSIONAL

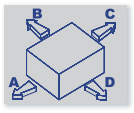
15 ÷ 41

51 ÷ 81

CLEREANCE AREA



CHA/CLK 15 ÷ 41		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA/CLK 51 ÷ 81		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) D SIDE: Fan side.
N.B. Weights of WP versions are indicated on the technical book.

CHA/K 91÷151

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 25 kW TO 42 kW.

AQUA LIGHT

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/K 91÷151 AQUA-LIGHT series, with R410A refrigerant, are intended to satisfy the needs of small and medium domestic and service sector environments.
With a peraluman structure, corrosion-resistant over time, these units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Available in the versions with or without pumping group, these units are equipped with particular technical and design adjustments that enable an immediate and efficient use, in addition to remarkably quiet operation.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA/K
Cooling only

CHA/K/SP
Cooling only with tank and pump

CHA/K/WP
Reversible heat pump

CHA/K/WP/SP
Reversible heat pump with tank and pump

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch and an antifreeze heater for WP versions.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Microprocessor control and regulation system.
- Water circuit includes: insulated tank, circulator or pump, safety valve, gauge and plant expansion vessel.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
PS	Circulating pump
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R410A

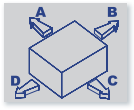
CHA/K			91	101	131	151
Cooling	Potenza frigorifera (1)	kW	24,8	28,6	33,4	42,2
	Absorbed power (1)	kW	8,3	10,7	11,7	14,5
Heating	Heating capacity (2)	kW	30,6	36,7	41,6	55,3
	Absorbed power (2)	kW	9,7	11,8	12,8	17,3
Compressors	Quantity	n°	1	1	1	1
	Type		<- - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - ->			
Evaporator	Water flow	l/s	1,18	1,37	1,60	2,02
	Pressure drops	kPa	39	51	37	39
	Water connections	"G	1"	1"	1"	1"
Condenser	Fans	n°	1	2	2	2
	Air flow	m³/s	2,13	4,40	4,40	4,40
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - - 400 / 3+N / 50 - - - - - - - - - - >			
	Max. running current	A	18	22	27	34
	Max. inrush current	A	111	118	118	198
Version with tank and pump	Pump nominal power	kW	0,55	0,55	0,55	0,75
	Available static pressure	kPa	212	169	178	161
	Storage water volume	l	< - - - - - - - - - - 300 - - - - - - - - - - >			
	Expansion vessel	l	8	8	8	8
	Water connections	"G	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	51	52	52	52
Weights	Transport weight (4)	Kg	220	235	265	279
	Transport weight (5)	Kg	223	238	268	282
	Operating weight (4)	Kg	310	325	355	369
	Operating weight (5)	Kg	613	628	658	672

DIMENSIONS

CHA/K			91	101	131	151
L	STD	mm	1850	1850	1850	1850
P	STD	mm	1000	1000	1000	1000
H	STD	mm	1300	1300	1300	1300

DIMENSIONAL

CLEREANCE AREA



CHA/K 91 ÷ 151		
A (*)	mm	800
B	mm	800
C	mm	500
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CHA/K/ST 91÷151

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGERS, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.

FROM 25 kW TO 42 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/K/ST 91÷151 AQUALIGHT series, with R410A refrigerant fluid and AQUALOGIK technology, are intended to satisfy the needs of small and medium domestic and service sector environments.
With a peraluman structure, corrosion-resistant over time, thanks to AQUALOGIK technology that optimises the water set point and modulates the pump, and the fans, don't needing so the use of the inertial tank because the units can work even with low content of water in the system; in order to permit immediate and efficient use, energy efficiency and outstanding silence in functioning.
Particular technical and design adjustments that enable an immediate and efficient use, in addition to remarkably quiet operation.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA/K/ST
Cooling only with AQUALOGIK technology

CHA/K/WP/ST
Reversible heat pump with AQUALOGIK technology

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch and an antifreeze heater for WP versions.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Microprocessor control and regulation system with AQUALOGIK technology.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- The hydraulic circuit includes variable speed ciirculation pump, safety valve, gauge and expansion vessel.

ACCESSORIES

Loose accessories:

CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R410A

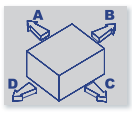
CHA/K/ST			91	101	131	151
Cooling	Cooling capacity (1)	kW	24,8	28,6	33,4	42,2
	Absorbed power (1)	kW	8,3	10,7	11,7	14,5
Heating	Heating capacity (2)	kW	30,6	36,7	41,6	55,3
	Absorbed power (2)	kW	9,7	11,8	12,8	17,3
Compressors	Quantity	n°	1	1	1	1
	Type		<- - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - ->			
Evaporator	Water flow	l/s	1,18	1,37	1,60	2,02
	Pressure drops	kPa	39	51	37	39
	Water connections	"G	1"	1"	1"	1"
Condenser	Fans	n°	1	2	2	2
	Air flow	m³/s	2,13	4,40	4,40	4,40
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3+N / 50 ---------->			
	Max. running current	A	18	22	27	34
	Max. inrush current	A	111	118	118	198
Water circuit	Pump nominal power	kW	0,55	0,55	0,75	0,75
	Available static pressure	kPa	221	181	250	181
	Expansion vessel	l	5	5	5	5
	Water connections	"G	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	51	52	52	52
Weights	Transport weight	Kg	230	245	280	294
	Operating weight	Kg	233	248	283	297

DIMENSIONS

CHA/K/ST			91	101	131	151
L	STD	mm	1850	1850	1850	1850
P	STD	mm	1000	1000	1000	1000
H	STD	mm	1300	1300	1300	1300

DIMENSIONAL

CLEREANCE AREA



CHA/K/ST	91 ÷ 151	
A (*)	mm	800
B	mm	800
C	mm	500
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CHA/CL 18÷71

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, ROTARY/SCROLL COMPRESSORS, PLATE EXCHANGERS AND PUMP KIT.

FROM 5 kW TO 17 kW.

COMPACT Line

UNIT DESCRIPTION

The Compact Line series is the perfect choice if you require the highest level of comfort in residential, commercial and city environments.
The Compact Line series is the perfect choice if you require the highest level of comfort in residential, commercial and city environments.
A small terrace or balcony, that's all the CHA/CL series needs in terms of space; installed on the building's front, it will go almost unnoticed; small, compact and smart with a peraluman body free from corrosion over long periods of time.
It is the ideal outside unit, offering small size and a built-in hydraulic circuit fully equipped and optimized, ready for installation.
Advanced technological solutions have also allowed to achieve the lowest noise operating levels; your neighbours will no longer complain, they will just envy you!

VERSIONS

CHA/CL
Cooling only with tank and pump

CHA/CL/WP
Reversible heat pump with tank and pump

FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Rotary/Scroll compressor complete with overload protection (klixon) embedded in the motor and crankcase, if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser in copper tubes and aluminium finned coil, complete with drain pan for WP version.
- Evaporator in AISI 316 stainless steel brazewelded plates type, built-in the storage tank.
- R407C refrigerant.
- Electrical panel. Includes: main switch with door lock device, fuses, compressor contact and pump contact (41÷71).
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: water differential pressure switch, insulated tank, circulator or pump, safety valve, gauge and expansion vessel inserted in the storage tank.

ACCESSORIES

Loose accessories:

PB	Low pressure switch
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser

TECHNICAL DATA

R407C

CHA/CL			18	21	25	31	41	51	61	71
Cooling	Cooling capacity (1)	kW	4,6	6,0	7,1	8,4	10,1	12,3	14,8	17,5
	Absorbed power (1)	kW	1,5	1,9	2,3	2,7	3,2	3,9	4,8	5,7
Heating	Heating capacity (2)	kW	5,5	7,6	8,3	10,1	12,1	14,7	18,3	20,8
	Absorbed power (2)	kW	1,8	2,4	2,7	3,2	3,8	4,7	5,9	6,7
Compressors	Quantity	n°	1	1	1	1	1	1	1	1
	Type		<--------- Rotary --------->			<---------- Scroll ---------->				
Condenser	Fans	n°	1	1	1	1	2	2	2	2
	Air flow	m³/s	0,97	0,89	0,89	0,82	1,94	1,78	1,64	1,64
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230 / 1 / 50 ---------->				<---------- 400/3+N/50 ---------->			
	Max. running current	A	11	16	16	17	10	12	13	15
	Max. inrush current	A	37	52	60	65	36	54	57	76
Water circuit	Water flow	l/s	0,22	0,29	0,34	0,40	0,48	0,59	0,71	0,84
	Pump nominal power	kW	0,13	0,13	0,19	0,19	0,30	0,30	0,30	0,30
	Available static pressure	kPa	49	40	51	42	179	158	152	120
	Storage water volume	l	<---------- 25 ---------->				<---------- 50 ---------->			
	Expansion vessel	l	3,4	3,4	3,4	3,4	3,4	3,4	3,4	3,4
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	49	49	49	49	51	51	51	51
Weights	Transport weight	Kg	98	106	110	118	190	192	194	196
	Operating weight	Kg	123	131	135	143	240	242	244	246

DIMENSIONS

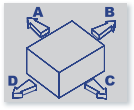
CHA/CL			18	21	25	31	41	51	61	71
L	STD	mm	870	870	870	870	1160	1160	1160	1160
P	STD	mm	320	320	320	320	500	500	500	500
H	STD	mm	1100	1100	1100	1100	1270	1270	1270	1270

DIMENSIONAL

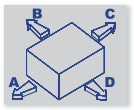
18 ÷ 31

41 ÷ 71

CLEREANCE AREA



CHA/CL 18 ÷ 31		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA/CL 41 ÷ 71		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) D SIDE: Fan side.
N.B. Weights of WP versions are indicated on the technical book.

CHA 18÷151

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 5 kW TO 42 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 18÷151 series are intended to satisfy the needs of small and medium domestic and service sector environments.
With a peraluman structure, corrosion-resistant over time, these units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Available in the versions with or without pumping group, these units are equipped with particular technical and design adjustments that enable an immediate and efficient use, in addition to remarkably quiet operation.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SP
Cooling only with tank and pump

CHA/WP
Reversible heat pump

CHA/WP/SP
Reversible heat pump with tank and pump

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch and an antifreeze heater for WP versions.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (41÷151).
- Microprocessor control and regulation system.
- Water circuit includes: insulated tank, circulator or pump, safety valve, gauge and plant expansion vessel.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
PS	Circulating pump
MR	Hydronic remote module
PB	Low pressure switch (18÷71)
CR	Remote control panel
IS	RS 485 serial interface
CV	Drain pan (only for WP 18÷71)
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

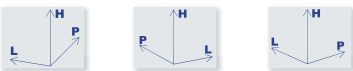
R407C

CHA			18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Cooling capacity (1)	kW	4,8	6,2	7,4	8,7	10,8	13,1	15,7	17,7	19,3	23,8	27,6	34,1	42,0
	Absorbed power (1)	kW	1,4	1,8	2,1	3,1	3,9	4,7	5,6	6,4	7,1	8,2	10,0	12,2	14,7
Heating	Heating capacity (2)	kW	5,7	7,9	8,7	10,5	12,9	15,7	19,4	21,0	23,8	29,4	35,1	42,3	55,0
	Absorbed power (2)	kW	1,6	2,2	2,3	3,4	4,1	5,0	5,8	6,5	7,8	9,5	11,0	13,3	17,3
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type		Scroll												
Evaporator	Water flow	l/s	0,23	0,30	0,35	0,42	0,52	0,63	0,75	0,85	0,92	1,14	1,32	1,63	2,01
	Pressure drops	kPa	20	23	20	18	30	27	26	21	23	31	27	25	27
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Condenser	Fans	n°	1	1	1	1	2	2	2	2	1	1	2	2	2
	Air flow	m³/s	0,97	0,89	0,89	0,82	1,94	1,78	1,64	1,64	2,69	2,50	4,00	4,00	5,38
Electrical characteristics	Power supply	V/Ph/Hz	230 / 1 / 50				400 / 3+N / 50								
	Max. running current	A	12	16	18	8	10	14	16	17	17	20	24	29	35
	Max. inrush current	A	50	64	79	49	55	71	79	106	107	131	139	179	206
Version with tank and pump	Pump nominal power	kW	0,13	0,13	0,19	0,19	0,30	0,30	0,30	0,30	0,45	0,55	0,55	0,55	0,75
	Available static pressure	kPa	41	37	50	50	150	143	129	121	190	204	193	155	153
	Available pressure with additional pump	kPa	102	97	120	118	-	-	-	-	-	-	-	-	-
	Storage water volume	l	50				150				300				
	Expansion vessel	l	2	2	2	2	5	5	5	5	8	8	8	8	8
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	51	51	51	51	52	52	52	52	52	52	53	54	55
Weights	Transport weight (4)	Kg	89	90	94	98	114	116	118	120	220	230	245	265	279
	Transport weight (5)	Kg	119	120	124	128	185	187	189	191	310	320	335	355	369
	Operating weight (4)	Kg	90	91	95	99	116	118	120	122	223	233	248	268	282
	Operating weight (5)	Kg	170	171	175	179	337	339	341	343	613	623	638	658	672

DIMENSIONS

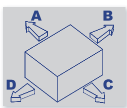
CHA			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	870	870	870	870	1160	1160	1160	1160	1850	1850	1850	1850	1850
P	STD	mm	320	320	320	320	500	500	500	500	1000	1000	1000	1000	1000
H	STD	mm	1100	1100	1100	1100	1270	1270	1270	1270	1300	1300	1300	1300	1300
	SP	mm	1460	1460	1460	1460	1790	1790	1790	1790	1300	1300	1300	1300	1300

DIMENSIONAL

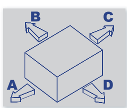


15 ÷ 31 41 ÷ 71 81 ÷ 151

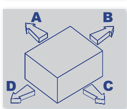
CLEREANCE AREA



CHA 18 ÷ 31		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA 41 ÷ 71		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA 81 ÷ 151		
A (**)	mm	800
B	mm	800
C	mm	500
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) D SIDE: Fan side.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CLINT

MR 50-80

REMOTE HYDRONIC MODULES.

FROM 50 lt. AND 80 lt.

UNIT DESCRIPTION

The remote hydronic modules of the MR 50-80 series are intended to solve technical problems resulting from thermal inertia in air conditioning systems for both residential and industrial use.
Installing a tank for cooled water allows units to reduce the operating cycles of the compressors, thus extending the useful life of the machines. It also results in a greater capacity of the system itself, a remarkable operational saving even using machines with reduced capacities and a greater flexibility, being able to work with temperatures other than the design temperatures. The tanks are made in peraluman and zinc-coated plate with a capacity of 50 and 80 litres.

VERSIONS

MR 50
With 50 lt. tank

MR 80
With 80 lt. tank

FEATURES

- Inertial tank
- Expansion vessel built-in the inertial tank
- Safety valve
- Gauge
- Air vent valve
- Fitting valves and system drain

TECHNICAL DATA

MR			50	80
Water circuit	Water volume	lt.	50	80
	Expansion vessel	lt.	3	3
	Safety valve	bar	3	3
	Water connections	"G	1"	1"
Weights	Transport weight	Kg	28	36
	Operating weight	Kg	78	116

DIMENSIONS

MR			50	80
L	STD	mm	240	340
P	STD	mm	320	500
H	STD	mm	1100	1270

DIMENSIONAL

CHA/K 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 47 kW TO 178 kW.

AQUA PLUS

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/K 182-P÷604-P AQUAPLUS series, with R410A refrigerant, are intended to satisfy the needs of medium-large service sector or industrial environments.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, Scroll compressors and plate-type exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA/K
Cooling only

CHA/K/SSL
Super silencied cooling only

CHA/K/WP
Reversible heat pump

CHA/K/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plate type: With one circuit on the refrigerant side and one on the water side in models 182-P ÷ 453-P; with two independent circuits on the refrigerant side and one on the water side in models 524-P÷604-P.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

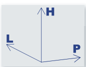
R410A

CHA/K			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
Cooling	Cooling capacity (1)	kW	47,6	54,9	63,5	72,9	83,4	95,9	110,4	126,8	147,4	177,8
	Absorbed power (1)	kW	16,1	18,8	21,8	25,0	28,3	31,6	37,9	43,3	50,1	58,2
Heating	Heating capacity (2)	kW	54,1	61,8	71,4	80,3	90,4	105,5	120,2	134,9	154,3	187,0
	Absorbed power (2)	kW	17,3	19,6	23,1	25,4	28,8	33,4	38,5	43,8	50,5	60,4
Compressors	Quantity	n°	2	2	2	2	2	3	3	3	4	4
	Type		< - - - Scroll - - - ->									
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n°	2	2	2	2	2	3	3	3	4	4
Evaporator	Water flow	l/s	2,27	2,62	3,03	3,48	3,98	4,58	5,27	6,06	7,04	8,49
	Pressure drops	kPa	45	48	43	48	43	58	46	53	48	48
	Water connections	"G	1½"	1½"	1½"	1½"	1½"	2½"	2½"	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >									
	Max. running current	A	50	61	64	76	78	94	114	117	149	157
	Max. inrush current	A	182	162	182	199	202	212	237	241	272	281
STD version and with SL accessory	Fans	n°	1	1	2	2	2	2	2	2	2	3
	Air flow	m³/s	4,8	4,7	7,1	7,1	7,3	7,1	9,7	9,7	11,4	15,0
	Sound pressure (3)	dB(A)	56	56	60	60	60	60	61	61	61	61
	SL sound pressure (3)	dB(A)	54	54	58	58	58	58	59	59	59	59
SSL version	Fans	n°	2	2	2	2	2	2	2	2	3	---
	Air flow	m³/s	4,1	3,9	5,7	5,7	6,0	7,7	9,2	8,9	11,8	---
	Sound pressure (3)	dB(A)	52	52	56	56	56	55	55	55	56	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,1	1,5	1,5	1,5	1,5	1,85
	Pump static pressure	kPa	120	110	110	110	150	150	140	130	150	120
	Tank water volume	l	400	400	400	400	400	400	400	400	600	600
	Expansion vessel	l	12	12	12	12	12	12	12	12	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight (4)	Kg	595	624	663	682	791	878	927	1036	1135	1374
	Transport weight (5)	Kg	600	630	670	690	800	890	940	1050	1150	1390
	Operating weight (4)	Kg	745	774	813	832	941	1033	1082	1191	1375	1614
	Operating weight (5)	Kg	1145	1174	1213	1232	1341	1433	1482	1591	1975	2214

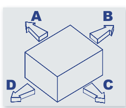
DIMENSIONS

CHA/K			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
L	STD	mm	2350	2350	2350	2350	2350	2350	2350	2350	3550	3550
	SSL	mm	2350	2350	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	1920	1920	2220	2220	2220	2220	2220	2220
	SSL	mm	1920	1920	1920	1920	2220	2220	2220	2220	---	---

DIMENSIONAL



CLEREANCE AREA



CHA/K 182-P ÷ 604-P		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/K/ST 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGERS, PUMP KIT AND AQUALOGIK CONTROL SYSTEM.

FROM 47 kW TO 178 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/K/ST 182-P÷604-P AQUAPLUS series, with R410A refrigerant, are intended to satisfy the needs of medium-large service sector or industrial environments.
Thanks to AQUALOGIK technology that optimises the water set point and modulates the pump, included of INVERTER, and the fans, don't needing so the use of the inertial tank because the units can work even with low content of water in the system; in order to permit immediate and efficient use, energy efficiency and outstanding silence in functioning.
Equipped with axial fans, Scroll compressors and plate-type exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA/K/ST
Cooling only with AQUALOGIK technology

CHA/K/SSL/ST
Super silencied cooling only with AQUALOGIK technology

CHA/K/WP/ST
Reversible heat pump with AQUALOGIK technology

CHA/K/WP/SSL/ST
Super silencied reversible heat pump with AQUALOGIK technology

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plate type: With one circuit on the refrigerant side and one on the water side in models 182-P ÷ 453-P; with two independent circuits on the refrigerant side and one on the water side in models 524-P÷604-P.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system with AQUALOGIK technology.
- The hydraulic circuit includes INVERTER circulation pump, safety valve and expansion vessel.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
DS	Desuperheater
RT	Total heat recovery

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

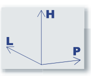
R410A

CHA/K/ST			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
Cooling	Cooling capacity (1)	kW	47,6	54,9	63,5	72,9	83,4	95,9	110,4	126,8	147,4	177,8
	Absorbed power (1)	kW	16,1	18,8	21,8	25,0	28,3	31,6	37,9	43,3	50,1	58,2
Heating	Heating capacity (2)	kW	54,1	61,8	71,4	80,3	90,4	105,5	120,2	134,9	154,3	187,0
	Absorbed power (2)	kW	17,3	19,6	23,1	25,4	28,8	33,4	38,5	43,8	50,5	60,4
Compressors	Quantity	n°	2	2	2	2	2	3	3	3	4	4
	Type		Scroll									
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	2	2
	Capacity steps	n°	2	2	2	2	2	3	3	3	4	4
Evaporator	Water flow	l/s	2,27	2,62	3,03	3,48	3,98	4,58	5,27	6,06	7,04	8,49
	Pressure drops	kPa	45	48	43	48	43	58	46	53	48	48
	Water connections	"G	1½"	1½"	1½"	1½"	1½"	2½"	2½"	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	400 / 3 / 50									
	Max. running current	A	50	61	64	76	78	94	114	117	149	157
	Max. inrush current	A	182	162	182	199	202	212	237	241	272	281
STD version and with SL accessory	Fans	n°	1	1	2	2	2	2	2	2	2	3
	Air flow	m³/s	4,8	4,7	7,1	7,1	7,3	7,1	9,7	9,7	11,4	15,0
	Sound pressure (3)	dB(A)	56	56	60	60	60	60	61	61	61	61
	SL sound pressure (3)	dB(A)	54	54	58	58	58	58	59	59	59	59
SSL version	Fans	n°	2	2	2	2	2	2	2	2	3	---
	Air flow	m³/s	4,1	3,9	5,7	5,7	6,0	7,7	9,2	8,9	11,8	---
	Sound pressure (3)	dB(A)	52	52	56	56	56	55	55	55	56	---
Circuito idraulico	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,1	1,85	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	120	110	110	100	150	125	120	110	100	70
	Expansion vessel	l	12	12	12	12	12	12	12	12	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight	Kg	610	639	678	697	806	898	947	1056	1155	1394
	Operating weight	Kg	615	645	685	705	815	910	960	1070	1170	1410

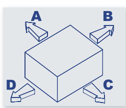
DIMENSIONS

CHA/K/ST			182-P	202-P	242-P	262-P	302-P	363-P	393-P	453-P	524-P	604-P
L	STD	mm	2350	2350	2350	2350	2350	2350	2350	2350	3550	3550
	SSL	mm	2350	2350	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	1920	1920	2220	2220	2220	2220	2220	2220
	SSL	mm	1920	1920	1920	1920	2220	2220	2220	2220	2220	---

DIMENSIONAL



CLEREANCE AREA



CHA/K /ST 182-P ÷ 604-P		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CLINT

CHA 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 47 kW TO 162 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 182-P÷604-P series are intended to satisfy the needs of medium-large service sector or industrial environments.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, Scroll compressors and plate-type exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, furnished with an internal overheat protection and crankcase.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel braze welded plates type with one or two independent circuits on the refrigerant side and on the water side. On the heat pump units is always installed an antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

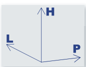
R407C

CHA			182-P	202-P	262-P	302-P	364-P	404-P	524-P	604-P
Cooling	Cooling capacity (1)	kW	46,8	54,4	71,2	82,0	96,0	111,3	140,3	161,6
	Absorbed power (1)	kW	14,9	17,2	22,4	26,1	29,4	34,2	44,8	54,0
Heating	Heating capacity (2)	kW	53,0	61,6	80,6	92,9	108,8	126,1	158,8	182,9
	Absorbed power (2)	kW	15,0	17,6	23,2	27,1	30,5	35,5	45,0	56,8
Compressors	Quantity	n°	2	2	2	2	4	4	4	4
	Type		< - - - Scroll - - - >							
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,24	2,60	3,40	3,92	4,60	5,32	6,70	7,72
	Pressure drops	kPa	31	37	39	41	33	36	47	48
	Water connections	"G	1½"	1½"	1½"	1½"	2½"	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >							
	Max. running current	A	42	46	58	58	84	93	113	139
	Max. inrush current	A	145	151	198	234	187	198	253	305
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,15	4,10	7,89	7,66	7,50	11,66	11,66	15,55
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66
	SL sound pressure (3)	dB(A)	56	56	57	57	57	57	57	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---
	Air flow	m³/s	3,55	3,45	6,05	5,65	9,20	8,50	8,50	---
	Sound pressure (3)	dB(A)	50	50	51	51	51	51	51	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	1,10	1,50	1,50	1,50	1,85
	Pump static pressure	kPa	136	125	103	137	162	146	111	102
	Storage water volume	l	400	400	400	400	600	600	600	600
	Expansion vessel	l	12	12	12	12	18	18	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight (4)	Kg	563	623	698	816	1086	1166	1225	1414
	Transport weight (5)	Kg	713	773	848	966	1326	1406	1465	1654
	Operating weight (4)	Kg	569	630	707	826	1098	1179	1240	1430
	Operating weight (5)	Kg	1113	1173	1248	1366	1926	2006	2065	2254

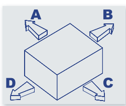
DIMENSIONS

CHA			182-P	202-P	262-P	302-P	364-P	404-P	524-P	604-P
L	STD	mm	2350	2350	2350	2350	3550	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275
	SSL	mm	1920	1920	2220	2220	2275	2275	2275	---

DIMENSIONAL



CLEREANCE AREA



CHA 182-P ÷ 604-P		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 47 kW TO 162 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 182÷604 series are intended to satisfy the needs of medium-large service sector or industrial environments.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, Scroll compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORI

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

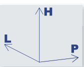
R407C

CHA			182	202	262	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	46,8	54,4	71,2	82,0	105,8	121,8	140,3	161,6
	Absorbed power (1)	kW	14,9	17,2	22,4	26,1	32,9	39,0	44,2	53,4
Heating	Heating capacity (2)	kW	53,0	61,6	80,6	92,9	119,7	137,9	158,8	182,9
	Absorbed power (2)	kW	15,0	17,6	23,2	27,1	33,5	42,0	45,0	56,2
Compressors	Quantity	n°	2	2	2	2	3	3	4	4
	Type		<- - - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - - ->							
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	3	3	4	4
Evaporator	Water flow	l/s	2,24	2,60	3,40	3,92	5,05	5,81	6,70	7,72
	Pressure drops	kPa	35	32	46	32	29	37	42	48
	Water connections	"G	1½"	2½"	2½"	2½"	<------- PN16/DN80 ------->			PN16/DN100
Electrical characteristics	Power supply	V/Ph/Hz	<------------------ 400 / 3 / 50 ------------------>							
	Max. running current	A	42	46	57	67	84	101	113	139
	Max. inrush current	A	145	151	198	234	224	267	253	305
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,15	4,10	7,89	7,66	7,50	11,66	11,66	15,55
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66
	SL sound pressure (3)	dB(A)	56	56	57	57	57	57	58	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---
	Air flow	m³/s	3,55	3,45	6,05	5,65	9,20	8,50	8,50	---
	Sound pressure (3)	dB(A)	50	50	52	51	52	51	52	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	120	113	76	75	126	113	101	79
	Storage water volume	l	190	190	470	470	470	470	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"	3"	3"
Weights	Transport weight (4)	Kg	580	640	730	850	950	1220	1280	1470
	Transport weight (5)	Kg	688	748	880	1000	1130	1400	1529	1719
	Operating weight (4)	Kg	594	655	747	871	979	1252	1316	1516
	Operating weight (5)	Kg	878	938	1350	1470	1600	1870	2189	2379

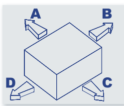
DIMENSIONS

CHA			182	202	262	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350	2350 (**)	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275
	SSL	mm	1920	1920	2220	2220	2275	2275	2275	---

DIMENSIONAL



CLEREANCE AREA



CHA 182 ÷ 604		
A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
(**) 3550 mm for WP version.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 666-P÷18012-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 192 kW TO 534 kW.

multi power

UNIT DESCRIPTION

MultiPower is an extremely flexible and reliable machine: by means of an intelligent control module it optimizes the operation times and power supplied by the Scroll compressors, following the heat load requirement of the system.
In this manner it obtains high energy efficiency with clearly high average seasonal EER values, abatement of the starting currents generated, elimination of the inertial accumulation tanks and excellent noiselessness since the fans adjust their rotation speed to the real load of the system, especially advantageous during the night. The use of components built in large series, thus highly reliable, and the management of a large number of compressors extends the machine's useful life and reduces the risk of a breakdown. In fact, the non-operation of a compressor does not jeopardize the functionality of the refrigerator which continues to work, although at a reduced power. Furthermore, the required maintenance work, precisely due to the high reliability of the machine and its components, is remarkably reduced.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

CARATTERISTICHE

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel braze welded plates type with one or two independent circuits on the refrigerant side and on the water side. On the heat pump units is always installed an antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

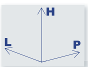
R407C

CHA			666-P	786-P	826-P	906-P	1048-P	1128-P	1208-P	13810-P	15010-P	16812-P	18012-P
Cooling	Cooling capacity (1)	kW	192	218	242	268	295	325	358	400	442	486	534
	Absorbed power (1)	kW	68	79	88	98	106	118	131	147	166	178	196
Heating	Heating capacity (2)	kW	212	241	275	316	324	374	423	456	522	558	633
	Absorbed power (2)	kW	72	82	90	98	110	121	132	151	167	182	197
Compressors	Quantity	n°	3+3	3+3	3+3	3+3	4+4	4+4	4+4	5+5	5+5	6+6	6+6
	Type		< - - - Scroll - - - >										
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	6	6	6	6	8	8	8	8	8	10	10
Evaporator	Water flow	l/s	9,17	10,42	11,56	12,80	14,09	15,53	17,10	19,11	21,12	23,22	25,51
	Pressure drops	kPa	48	46	47	49	51	46	53	56	56	57	55
	Water connections	"G	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"	3"
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >										
	Max. running current	A	153	178	188	203	232	252	272	314	344	378	406
	Max. inrush current	A	293	313	354	369	372	418	438	480	510	544	572
STD version and with SL accessory	Fans	n°	4	4	4	4	4	4	4	6	6	6	8
	Air flow	m³/s	19,4	19,4	21,2	18,4	23,6	22,8	22,8	38,4	33,3	33,3	36,6
	Sound pressure (3)	dB(A)	67	67	69	67	68	68	68	70	70	70	69
	SL sound pressure (3)	dB(A)	64	64	66	64	65	6	65	67	67	67	66
SSL version	Fans	n°	4	4	4	4	6	6	6	8	8	8	---
	Air flow	m³/s	13,6	13,6	15,3	15,3	21,6	20,8	20,8	26,4	26,4	30,5	---
	Sound pressure (3)	dB(A)	58	58	59	59	60	60	60	61	61	62	---
Unit with tank and pump	Pump nominal power	kW	3,0	3,0	4,0	4,0	5,5	5,5	5,5	5,5	7,5	7,5	7,5
	Pump static pressure	kPa	150	145	160	155	170	175	155	145	170	155	145
	Expansion vessel	l	18	18	18	18	18	18	18	18	18	18	18
	Water connections	DN	100	100	100	100	100	100	100	100	100	100	100
Weights	Transport weight	Kg	1847	1885	1944	2062	2481	2677	2737	3094	3351	3529	3684
	Operating weight	Kg	1860	1900	1960	2080	2500	2700	2760	3120	3380	3560	3720

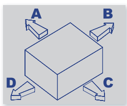
DIMENSIONS

CHA			666-P	786-P	826-P	906-P	1048-P	1128-P	1208-P	13810-P	15010-P	16812-P	18012-P
L	STD	mm	2800	2800	2800	2800	4000	4000	4000	5000	5000	5000	5000
	SSL	mm	2800	2800	2800	2800	4000	4000	4000	5000	5000	5000	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	SSL	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	---
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	SSL	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	---

DIMENSIONAL



CLEREANCE AREA



CHA 666-P ÷ 18012-P		
A	mm	500
B	mm	1800
C (*)	mm	1000
D	mm	1800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 201-P÷702-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND PLATE EXCHANGERS.

FROM 48 kW TO 181 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 201-P÷702-P series are intended to satisfy the needs of medium-large service sector or industrial environments.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, semihermetic compressors and plate-type exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection and intercepting valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel braze welded plates type with one or two independent circuits on the refrigerant side and on the water side. On the heat pump units is always installed an antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement

TECHNICAL DATA

R407C

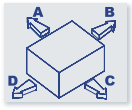
CHA			201-P	251-P	301-P	351-P	402-P	502-P	602-P	702-P
Cooling	Cooling capacity (1)	kW	48,3	59,5	70,8	89,7	100,6	124,7	141,5	180,7
	Absorbed power (1)	kW	15,6	19,8	24,5	30,6	31,2	40,6	48,0	63,2
Heating	Heating capacity (2)	kW	53,3	65,6	78,1	95,3	110,9	137,6	156,1	199,4
	Absorbed power (2)	kW	16,4	20,6	25,6	31,9	32,8	42,2	50,2	65,8
Compressors	Quantity	n°	1	1	1	1	2	2	2	2
	Type		<---------- Semi-hermetics ---------->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,31	2,84	3,38	4,29	4,81	5,96	6,76	8,63
	Pressure drops	kPa	41	43	49	46	36	44	47	55
	Water connections	"G	<---------- 1½" ---------->				<---------- 2½" ---------->			
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->							
	Max. running current	A	36	50	60	76	72	101	117	156
	Max. inrush current	A	100	116	130	157	136	168	188	237
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,1	7,9	7,6	7,9	11,7	11,1	15,6
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66
	SL sound pressure (3)	dB(A)	56	56	57	57	57	57	58	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---
	Air flow	m³/s	3,5	3,4	6,0	5,3	9,2	8,5	8,5	---
	Sound pressure (3)	dB(A)	50	50	52	52	52	52	52	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	1,10	1,50	1,50	1,50	1,85
	Pump static pressure	kPa	129	117	101	129	164	131	113	82
	Storage water volume	l	400	400	400	400	600	600	600	600
	Expansion vessel	l	12	12	12	12	18	18	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight (4)	Kg	545	605	680	830	1050	1115	1235	1410
	Transport weight (5)	Kg	695	755	830	980	1290	1355	1475	1650
	Operating weight (4)	Kg	552	612	692	844	1064	1129	1250	1426
	Operating weight (5)	Kg	1095	1155	1230	1380	1890	1955	2075	2250

DIMENSIONS

CHA			201-P	251-P	301-P	351-P	402-P	502-P	602-P	702-P
L	STD	mm	2350	2350	2350	2350	3550	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	WP	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275
	SSL	mm	1920	1920	2220	2220	2275	2275	2275	---

DIMENSIONAL

CLEREANCE AREA



CHA 201-P ÷ 702-P		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 201÷702

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 48 kW TO 181 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 201÷702 series are intended to satisfy the needs of medium-large service sector or industrial environments.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, semihermetic compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

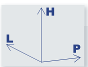
R407C

CHA			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	48,3	59,5	70,8	79,4	104,8	126,9	141,5	158,7	180,7
	Absorbed power (1)	kW	15,6	19,8	24,5	27,8	35,2	42,5	48,0	57,6	63,2
Heating	Heating capacity (2)	kW	53,3	65,6	78,1	87,6	115,6	140,0	156,1	175,1	199,4
	Absorbed power (2)	kW	16,4	20,6	25,6	29,0	36,6	44,2	50,2	60,0	65,8
Compressors	Quantity	n°	1	1	1	1	1	1	2	2	2
	Type		Semi-hermetics								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,31	2,84	3,38	3,79	5,01	6,06	6,76	7,58	8,63
	Pressure drops	kPa	35	38	42	29	26	34	40	24	33
	Water connections	"G	1½"	2½"	2½"	2½"	DN80	DN80	3"	DN100	DN100
Electrical characteristics	Power supply	V/Ph/Hz	400 / 3 / 50								
	Max. running current	A	36	50	60	61	88	98	117	126	156
	Max. inrush current	A	100	116	130	140	219	244	188	205	237
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3	3
	Air flow	m³/s	4,2	4,1	7,9	7,7	7,5	11,7	11,1	15,6	15,6
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66	66
	SL sound pressure (3)	dB(A)	56	56	57	57	58	57	58	63	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---	---
	Air flow	m³/s	3,5	3,4	6,0	5,6	9,2	8,5	8,5	---	---
	Sound pressure (3)	dB(A)	50	50	52	52	52	52	52	---	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	127	108	89	85	138	116	101	107	84
	Storage water volume	l	190	190	470	470	470	470	660	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24	24
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"	3"	3"	3"
Weights	Transport weight (4)	Kg	575	635	725	835	885	1030	1290	1400	1485
	Transport weight (5)	Kg	683	743	875	985	1065	1210	1539	1649	1734
	Operating weight (4)	Kg	587	650	742	855	915	1060	1325	1445	1530
	Operating weight (5)	Kg	873	933	1345	1455	1535	1680	2199	2309	2394

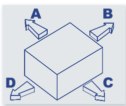
DIMENSIONS

CHA			201	251	301	321	401	501	602	642	702
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	1100	1100	1100	1100	1100	1100	1100	---	---
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275	2275
	SSL	mm	1920	1920	2220	2220	2220	2220	2220	---	---

DIMENSIONAL



CLEREANCE AREA



CHA 201 ÷ 702		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 802÷3204

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 200 kW TO 720 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 802÷3204 series are intended to satisfy the needs of large-sized service sector or industrial environments.
They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. Equipped with axial fans, semihermetic compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. The use of large condensing batteries and fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with crankcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

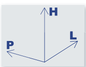
CHA			802	902	1002	1102	1202	1502	1602
Cooling	Cooling capacity (1)	kW	200	220	246	273	297	322	360
	Absorbed power (1)	kW	71	77	86	96	104	112	129
Heating	Heating capacity (2)	kW	218	238	267	295	322	346	373
	Absorbed power (2)	kW	73	79	88	99	107	115	133
Compressors	Quantity / Refrigerant circuits	n°	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2
	Type		< - - - Semi-hermetics - - - >						
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	9,56	10,51	11,75	13,04	14,19	15,38	17,20
	Pressure drops	kPa	37	44	50	45	32	34	40
	Water connections	"G	125	125	125	125	150	150	150
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >						
	Max. running current	A	178	178	196	256	276	312	320
	Max. inrush current	A	310	310	341	446	456	582	590
STD version and with SL accessory	Fans	n°	4	4	4	6	6	6	6
	Air flow	m³/s	19,4	18,3	18,3	29,4	29,4	27,8	30,6
	Sound pressure (3)	dB(A)	66	66	66	68	68	68	70
	SL sound pressure (3)	dB(A)	63	63	63	64	64	64	66
SSL version	Fans	n°	4	6	6	6	6	8	8
	Air flow	m³/s	13,6	21,9	21,9	20,5	20,5	28,9	27,1
	Sound pressure (3)	dB(A)	57	59	59	59	59	60	60
Unit with tank and pump	Pump nominal power	kW	3,0	3,0	4,0	4,0	5,5	5,5	5,5
	Pump static pressure	kPa	160	145	160	155	190	185	170
	Storage water volume	l	1100	1100	1100	2000	2000	2000	2000
	Expansion vessel	l	35	35	35	80	80	80	80
	Water connections	DN	100	100	100	100	100	100	100
Weights	Transport weight	Kg	2070	2170	2210	2580	2715	2885	2995
	Operating weight	Kg	2140	2240	2280	2680	2860	3020	3130

CHA			1604	1804	2004	2204	2404	3004	3204
Cooling	Cooling capacity (1)	kW	401	439	492	546	595	644	720
	Absorbed power (1)	kW	143	155	172	190	206	227	255
Heating	Heating capacity (2)	kW	435	477	532	590	635	692	738
	Absorbed power (2)	kW	147	159	176	196	211	232	260
Compressors	Quantity / Refrigerant circuits	n°	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2	4 / 2
	Type		< - - - Semi-hermetics - - - >						
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	19,16	20,97	23,51	26,09	28,43	30,77	34,40
	Pressure drops	kPa	55	57	48	41	38	45	42
	Water connections	"G	150	150	200	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >						
	Max. running current	A	357	357	393	512	547	632	632
	Max. inrush current	A	488	488	538	702	727	902	902
STD version and with SL accessory	Fans	n°	8	8	8	8	10	10	10
	Air flow	m³/s	38,9	36,1	36,1	38,4	45,8	50,0	47,9
	Sound pressure (3)	dB(A)	68	68	68	70	69	71	71
	SL sound pressure (3)	dB(A)	64	64	64	66	65	67	67
SSL version	Fans	n°	8	10	10	10	12	12	12
	Air flow	m³/s	27,1	33,9	33,9	38,3	46,1	46,1	43,7
	Sound pressure (3)	dB(A)	59	60	60	60	61	61	61
Unit with tank and pump	Pump nominal power	kW	5,5	7,5	7,5	7,5	7,5	7,5	7,5
	Pump static pressure	kPa	145	170	165	160	155	145	140
	Storage water volume	l	2000	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	80	80	80	80	80	80	80
	Water connections	DN	125	125	125	125	150	150	150
Weights	Transport weight	Kg	3650	3830	3980	4545	4755	4855	5120
	Operating weight	Kg	3780	3960	4210	4760	4950	5050	5330

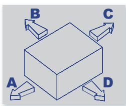
DIMENSIONS

CHA			802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204	2404	3004	3204
L	STD	mm	3350	3350	3350	4400	4400	4400	4400	5550	5550	5550	5550	6700	6700	6700
	WP	mm	3350	3350	3350	4400	4400	4400	4400	6700	6700	6700	6700	7750	7750	8900
	SSL	mm	3350	4400	4400	4400	4400	5550	5550	5550	6700	6700	6700	7750	7750	7750
	WP/SSL	mm	3350	4400	4400	4400	4400	5550	5550	6700	7750	7750	7750	8900	8900	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	WP/SSL	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	---
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	WP/SSL	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	---

DIMENSIONAL



CLEREANCE AREA



CHA 802 ÷ 3204		
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) A SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA 702-V÷5602-V

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 170 kW TO 1500 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA 702-V÷5602-V series are intended to satisfy the needs of large-sized service sector or industrial environments.
They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. Equipped with axial fans, screw compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. The use of large condensing batteries and fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit and the use of latest generation screw compressors, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting frame in galvanized steel frame further protected with polyester powder painting.
- Screw compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection andintercepting valves.
- Axial fans directly coupled to a 3-phases electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
RZ	Compressors stepless control
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valve (included in WP)
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

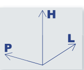
CHA			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
Cooling	Cooling capacity (1)	kW	170	198	227	259	290	338	386	433	480	541
	Absorbed power (1)	kW	67	77	87	97	107	125	141	161	171	189
Heating	Heating capacity (2)	kW	190	215	253	280	314	372	417	478	514	585
	Absorbed power (2)	kW	72	82	92	102	114	132	149	172	179	201
Compressors	Quantity / Refrigerant circuits	n°	2/2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2/2	2/2	2/2
	Type		< - - - Screw - - - >									
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	8,12	9,46	10,85	12,37	13,86	16,15	18,44	20,69	22,93	25,85
	Pressure drops	kPa	30	34	45	50	55	25	36	42	35	42
	Water connections	"G	125	125	125	125	125	150	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >									
	Max. running current	A	152	176	190	196	244	272	312	346	368	450
	Max. inrush current	A	324	373	382	409	493	499	523	694	695	793
STD version and with SL accessory	Fans	n°	4	4	4	4	6	6	8	8	8	10
	Air flow	m³/s	21,1	21,1	20,0	20,0	32,5	30,6	40,0	40,0	40,0	40,0
	Sound pressure (3)	dB(A)	68	68	68	68	69	69	70	70	70	71
	SL sound pressure (3)	dB(A)	65	65	65	65	66	66	67	67	67	68
SSL version	Fans	n°	4	4	6	6	6	8	10	10	10	12
	Air flow	m³/s	13,6	13,6	22,2	22,2	20,8	27,0	35,5	35,5	32,7	43,3
	Sound pressure (3)	dB(A)	57	57	59	59	58	59	60	60	60	61
Unit with tank and pump	Pump nominal power	kW	3,0	3,0	3,0	4,0	5,5	5,5	5,5	7,5	7,5	7,5
	Pump static pressure	kPa	180	160	140	155	165	195	165	175	170	160
	Storage water volume	l	1100	1100	1100	1100	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	35	35	35	35	80	80	80	80	80	80
	Water connections	DN	100	100	100	100	100	100	125	125	125	150
Weights	Transport weight	Kg	2120	2250	2270	2380	2730	3250	3870	3930	4105	4465
	Operating weight	Kg	2190	2320	2340	2450	2820	3380	4100	4160	4320	4680

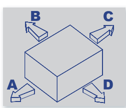
CHA			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
Cooling	Cooling capacity (1)	kW	608	687	758	828	910	992	1077	1235	1397	1500
	Absorbed power (1)	kW	212	235	259	281	306	336	368	410	473	504
Heating	Heating capacity (2)	kW	640	720	809	893	936	1046	1113	1342	---	---
	Absorbed power (2)	kW	222	245	275	300	313	350	380	430	---	---
Compressors	Quantity / Refrigerant circuits	n°	2/2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2 / 2	2/2	2/2	2/2
	Type		< - - - Screw - - - ->									
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	29,05	32,82	36,22	39,56	43,48	47,40	51,46	59,01	66,75	71,67
	Pressure drops	kPa	46	48	33	36	40	35	35	38	43	42
	Water connections	"G	200	200	200	200	200	200	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	< - - - 400 / 3 / 50 - - - >									
	Max. running current	A	460	490	538	600	630	656	724	872	1016	1082
	Max. inrush current	A	554	619	667	741	779	899	985	1067	1604	1640
STD version and with SL accessory	Fans	n°	10	10	12	12	14	14	14	18	20	20
	Air flow	m³/s	51,4	48,1	60,3	60,3	68,1	68,1	73,5	93,3	104,4	98,9
	Sound pressure (3)	dB(A)	71	70	70	70	71	71	70	71	71	71
	SL sound pressure (3)	dB(A)	68	67	67	67	68	68	67	68	68	68
SSL version	Fans	n°	12	12	14	14	14	18	18	20	---	---
	Air flow	m³/s	43,3	40,7	46,3	50,2	50,2	63,8	63,8	70,8	---	---
	Sound pressure (3)	dB(A)	61	60	61	61	61	62	61	61	---	---
Unit with tank and pump	Pump nominal power	kW	7,5	7,5	11,0	11,0	11,0	18,5	18,5	18,5	18,5	18,5
	Pump static pressure	kPa	155	130	165	140	135	205	200	180	160	150
	Storage water volume	l	2000	2000	2000	2000	2000	2000	3000	3000	3000	3000
	Expansion vessel	l	80	80	80	80	80	80	80	80	80	80
	Water connections	DN	150	150	150	150	150	200	200	200	200	200
Weights	Transport weight	Kg	4505	5045	5690	5890	6240	6940	7365	8360	9240	9750
	Operating weight	Kg	4720	5240	5900	6100	6450	7240	7650	8780	9660	10230

DIMENSIONS

CHA			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V	2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
L	STD	mm	3350	3350	3350	3350	4400	4400	5550	5550	5550	6700	6700	7750	8900	8900	10050	10050	10050	12250	13400	13400
	WP	mm	4400	4400	4400	4400	5550	5550	6700	6700	6700	7750	7750	7750	10050	10050	10050	10050	12250	13400	---	---
	SSL	mm	3350	3350	4400	4400	4400	5550	6700	6700	6700	8900	8900	8900	10050	10050	10050	12250	12250	13400	---	---
	WP/SSL	mm	4400	4400	5550	5550	5550	6700	7750	7750	7750	10050	10050	10050	10050	10050	10050	13400	13400	---	---	---
L(**)	STD	mm	4400	4400	4400	4400	5550	5550	5550	5550	5550	6700	6700	7750	8900	8900	10050	10050	10050	12250	13400	13400
	WP	mm	5550	5550	5550	5550	5550	5550	6700	6700	6700	7750	7750	7750	10050	10050	10050	10050	12250	13400	---	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	WP	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	---	---
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	WP	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100	2500	2500	---	---

DIMENSIONAL





CLEREANCE AREA

CHA 702-V ÷ 5602-V		
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) A SIDE: Electrical board side.
(**) Length with inertial tank accessory.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/HT 18÷131

AIR COOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS FOR INSTALLATIONS WITH RADIANT PANELS AND COLD RAILS.

FROM 6 kW TO 45 kW.

UNIT DESCRIPTION

The air-condensing water coolers and heat pumps of the CHA/HT 18÷131 series are used in radiant panel and cold beam systems and combined with primary air terminals. These units have been particularly designed to meet the cooling and heating needs of medium-small applications in commercial and residential buildings; they are equipped with Scroll compressors, peraluman structure and plate-type exchangers with large exchange surface, and they are available in 12 sizes, all extremely silent and reliable. The wide range of accessories, particularly the dynamic set point that adapts the temperature of the unit's output water to the thermohygrometric conditions of the room, satisfies every plant-engineering need for a range of extremely flexible machines, produced to simplify the on-site installation.

VERSIONS

CHA/HT
Cooling only

CHA/HT/WP
Reversible heat pump

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressor complete with overload protection (klixon) embedded in the motor and crankcase, if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch and an antifreeze heater for WP versions.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (41÷131).
- Microprocessor control and regulation system.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
PS	Circulating pump
ST	Dynamic set-point (excluded WP)
PB	Low pressure switch
CR	Remote control panel
IS	RS 485 serial interface
CV	Drain pan (only WP)
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

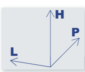
R407C

CHA/HT			18	21	25	31	41	51	61	71	81	91	101	131
Cooling	Cooling capacity (1)	kW	6,4	8,3	9,9	11,6	14,2	17,5	20,5	23,5	25,5	31,5	36,5	45,1
	Absorbed power (1)	kW	1,7	2,1	2,5	3,1	3,6	4,5	5,2	6,2	6,9	8,5	9,6	12,1
Heating	Heating capacity (2)	kW	6,2	8,0	9,5	11,0	13,6	16,5	19,8	22,2	24,5	30,3	35,0	43,2
	Absorbed power (2)	kW	1,6	2,1	2,3	2,8	3,3	4,1	4,6	5,5	6,2	7,8	8,8	10,9
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Type		<- - - - - Scroll - - - - ->											
Evaporator	Water flow	l/s	0,30	0,40	0,47	0,55	0,68	0,83	0,98	1,12	1,22	1,50	1,74	2,15
	Pressure drops	kPa	5	8	10	14	21	13	17	22	26	39	37	27
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Condenser	Fans	n°	1	1	1	2	2	2	2	1	1	2	2	2
	Air flow	m³/s	0,97	0,89	0,82	1,94	1,94	1,78	1,64	2,69	2,50	4,00	4,00	5,38
Electrical characteristics	Power supply	V/Ph/Hz	<-- 230/1/50 -->			<- - - - - 400/3+N/50 - - - - ->								
	Max. running current	A	12	16	18	8	11	14	15	18	17	21	24	30
	Max. inrush current	A	50	61	79	51	55	71	79	109	107	135	139	184
Unit with installed pump	Potenza nominale	kW	0,19	0,19	0,19	0,30	0,30	0,30	0,30	0,45	0,55	0,55	0,75	0,75
	Available static pressure	kPa	70	65	60	165	150	135	115	130	215	170	200	110
Sound pressure (3)	STD	dB(A)	51	51	52	52	52	52	52	51	52	52	52	52
Weights	Transport weight	Kg	89	90	94	112	114	116	118	210	220	245	265	279
	Operating weight	Kg	89	90	94	112	114	116	118	212	222	247	267	281

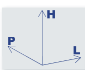
DIMENSIONS

CHA/HT			18	21	25	31	41	51	61	71	81	91	101	131
L	STD	mm	870	870	870	1160	1160	1160	1160	1850	1850	1850	1850	1850
P	STD	mm	320	320	320	500	500	500	500	1000	1000	1000	1000	1000
H	STD	mm	1100	1100	1100	1270	1270	1270	1270	1300	1300	1300	1300	1300

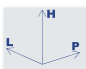
DIMENSIONAL



15 ÷ 31

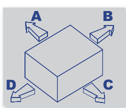


41 ÷ 71

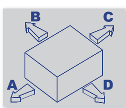


81 ÷ 151

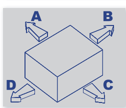
CLEREANCE AREA



CHA/HT 18 ÷ 25		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA/HT 31 ÷ 61		
A	mm	200
B	mm	200
C	mm	200
D (*)	mm	800



CHA/HT 71 ÷131		
A (**)	mm	500
B	mm	800
C	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) D SIDE: Fan side.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CLINT

1

CHA/HT 182÷604

AIR COOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS FOR INSTALLATIONS WITH RADIANT PANELS AND COLD RAILS.

FROM 63 kW TO 220 kW.

UNIT DESCRIPTION

The air-condensing water coolers and heat pumps of the CHA/HT 182÷604 series are used in radiant panel and cold beam systems and combined with primary air terminals. These units have been particularly designed to meet the cooling and heating needs of medium-large applications in commercial and industrial buildings; they are equipped with Scroll compressors and tube-bundle evaporators and are available in 7 sizes, also in the super silent version, with tank, with pump or with tank and pump. The wide range of accessories, particularly the dynamic set point that adapts the temperature of the unit's output water to the thermohygrometric conditions of the room, satisfies every plant-engineering need for a range of extremely flexible machines, produced to simplify the on-site installation.

VERSIONS

CHA/HT
Cooling only

CHA/HT/SSL
Super silencied cooling only

CHA/HT/WP
Reversible heat pump

CHA/HT/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

HR	Desuperheater
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
ST	Dynamic set-point (WP excluded)
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C

TECHNICAL DATA

R407C

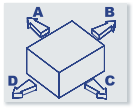
CHA/HT			182	202	262	364	404	524	604
Cooling	Cooling capacity (1)	kW	63,4	73,7	90,2	126,0	146,3	180,8	220,1
	Absorbed power (1)	kW	16,2	18,1	22,5	31,5	36,6	45,4	54,8
Heating	Heating capacity (2)	kW	55,8	64,5	79,4	111,6	129,0	158,8	193,6
	Absorbed power (2)	kW	14,1	15,8	19,3	27,3	32,0	39,0	47,2
Compressors	Quantity	n°	2	2	2	4	4	4	4
	Type		<---------- Scroll ---------->						
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	3,03	3,52	4,31	6,02	6,98	8,64	10,52
	Pressure drops	kPa	35	25	21	29	40	26	29
	Water connections	"G	2½" G	2½" G	PN16/DN80	PN16/DN80	PN16/DN100	PN16/DN100	PN16/DN125
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->						
	Max. running current	A	43	47	57	83	96	116	139
	Max. inrush current	A	146	152	197	186	201	256	305
STD version and with SL accessory	Fans	n°	2	2	2	3	3	3	4
	Air flow	m³/s	7,66	7,66	7,50	11,66	15,55	16,38	20,73
	Sound pressure (3)	dB(A)	62	62	62	62	66	66	67
	SL sound pressure (3)	dB(A)	57	57	58	57	63	63	64
SSL version	Fans	n°	2	2	3	3	---	---	---
	Air flow	m³/s	5,65	5,65	9,20	8,50	---	---	---
	Sound pressure (3)	dB(A)	51	51	52	51	---	---	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	1,85	1,85	1,85	3,0	3,0
	Pump static pressure	kPa	115	115	200	160	130	210	170
	Storage water volume	l	470	470	470	660	660	660	660
	Expansion vessel	l	18	18	18	24	24	24	24
	Water connections	"G	3"/2"	3"/2"	3"/2½"	3"/3"	3"/3"	3"/3"	4"/4"
Weights	Transport weight (4)	Kg	680	750	875	1250	1365	1415	1580
	Transport weight (5)	Kg	788	900	1025	1450	1565	1665	1880
	Operating weight (4)	Kg	697	769	905	1290	1415	1470	1680
	Operating weight (5)	Kg	1258	1370	1495	2110	2225	2325	2540

DIMENSIONS

CHA/HT			182	202	262	364	404	524	604
L	STD	mm	2350	2350	2350	3550	3550	4700	4700
P	STD	mm	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	2220	2220	2220	2220	2275	2275	2275

DIMENSIONAL

CLEREANCE AREA



CHA/HT	182 ÷ 604	
A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/FC 182÷524

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGERS.

FROM 52 kW TO 154 kW.

UNIT DESCRIPTION

The water coolers of the CHA/FC 182÷524 series offer innovative technology to meet the needs of systems for both domestic as well as industrial applications requiring the production of cooled water continuously year-round.
During the cold months, in the FREE COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensation battery, thus saving energy by not operating the unit's Scroll compressors. A 3-way valve system controlled by the electronic microprocessor controller that manages the entire unit allows, based on the temperature of the outdoor air, operation in CHILLER or FREE COOLING mode. The product range includes 7 models composed of versions with tank, with pump or with tank and pump.

VERSIONS

CHA/FC
Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to a 3-phases electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

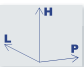
R407C

CHA/FC			182	202	262	302	364	404	524
Cooling	Cooling capacity (1)	kW	51,7	60,0	78,8	90,3	106,0	122,1	154,2
	Absorbed power (1)	kW	15,2	17,4	23,0	26,8	30,4	34,8	46,0
Free-cooling cycle	Air temperature (2)	°C	5,1	4,9	3,3	3,3	4,0	4,9	2,5
	Absorbed power (2)	kW	2,0	2,0	2,0	2,9	3,9	3,9	3,9
Compressors	Quantity	n°	2	2	2	2	4	4	4
	Type		<- - - Scroll - - ->						
	Refrigerant circuits	n°	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,68	3,10	4,08	4,67	5,48	6,32	7,98
	Pressure drops	kPa	44	53	54	48	53	48	55
	Water connections	"G	2"½	2"½	2"½	PN16/DN 80	3"	3"	PN16/DN 100
Condenser	Fans	n°	2	2	2	3	4	4	4
	Air flow	m³/s	7,11	7,02	6,61	8,30	13,03	12,25	12,03
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->						
	Max. running current	A	43	47	57	69	87	95	115
	Max. inrush current	A	146	152	197	235	190	200	255
Unit with SPU accessory	Pump nominal power	kW	0,75	0,75	1,85	1,85	1,85	3,0	3,0
	Pump static pressure	kPa	111	84	114	113	103	198	145
	Storage water volume	l	190	190	470	470	660	660	660
	Expansion vessel	l	8	8	18	18	24	24	24
	Water connections	"G	2"	2"	2"	2"½	2"½	2"½	3"
Sound pressure (3)	STD	dB(A)	61	61	61	62	63	63	63
Weights	Transport weight (4)	Kg	1030	1100	1174	1258	1648	1718	1821
	Transport weight (5)	Kg	1159	1225	1382	1502	1973	2046	2165
	Operating weight (4)	Kg	1110	1180	1274	1368	1783	1868	1981
	Operating weight (5)	Kg	1419	1485	1932	2052	2733	2818	2938

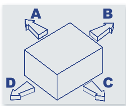
DIMENSIONS

CHA/FC			182	202	262	302	364	404	524
L	STD	mm	3550	3550	3550	3550	4700	4700	4700
P	STD	mm	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	2220	2220	2220	2220	2220	2220	2220

DIMENSIONAL



CLEREANCE AREA



CHA/FC 182 ÷ 524		
A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	1800

NOTES

(1) Chilled water (with ethilenic glycol at 30%) from 15° to 10°C, ambient air temperature 35°C.
(2) Ambient air temperature at wich the cooling capacity indicated in point (1) is reached.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) C SIDE: Electrical board side.

CLINT

CHA/FC 642÷2204

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHELL AND TUBE EXCHANGERS.

FROM 165 kW TO 600 kW.

UNIT DESCRIPTION

The water coolers of the CHA/FC 642÷2204 series offer innovative technology to meet the needs of large systems for both domestic as well as industrial applications requiring the production of cooled water continuously year-round.
During the cold months, in the FREE COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensation battery, thus saving energy by not operating the unit's semihermetic compressors. A 3-way valve system controlled by the electronic microprocessor controller that manages the entire unit allows, based on the temperature of the outdoor air, operation in CHILLER or FREE COOLING mode. The product range includes 13 models composed of versions with tank, with pump or with tank and pump.

VERSIONS

CHA/FC
Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Axial fans directly coupled to a 3-phases electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

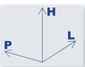
R407C

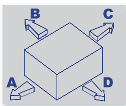
CHA/FC			642	702	802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204
Cooling	Cooling capacity (1)	kW	165	191	219	241	261	300	326	354	363	438	482	522	600
	Absorbed power (1)	kW	57,6	59,6	73,5	79,3	86,7	96,7	106	114	126	145	157	167	197
Free-cooling cycle	Air temperature (2)	°C	5,2	4,2	3,9	3,0	4,0	2,9	2,1	1,3	2,3	0,6	-0,3	-1,0	0,4
	Absorbed power (2)	kW	5,9	5,9	5,9	5,9	7,8	7,8	7,8	7,8	9,8	9,8	9,8	9,8	20,0
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	4	4	4	4
	Type		<- - - Semi-hermeticsl - - ->												
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	8,53	9,87	11,32	12,46	13,49	15,50	16,85	18,30	18,76	22,64	24,92	27,00	31,00
	Pressure drops	kPa	62	71	98	94	81	72	65	92	79	72	81	90	79
	Water connections	"G	100	100	100	100	100	100	125	125	125	125	150	150	150
Condenser	Fans	n°	6	6	6	6	8	8	8	8	10	10	10	10	10
	Air flow	m³/s	20,0	20,0	19,17	19,17	24,44	24,44	24,44	24,44	29,44	29,44	29,44	29,44	40,28
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->												
	Max. running current	A	124	144	168	168	186	240	260	296	296	336	336	480	480
	Max. inrush current	A	195	226	300	300	332	430	440	567	567	468	468	670	670
Unit with SPU accessory	Pump nominal power	kW	4,0	4,0	4,0	4,0	4,0	5,5	5,5	5,5	5,5	5,5	7,5	7,5	7,5
	Pump static pressure	kPa	172	154	117	108	109	146	145	113	124	108	129	113	106
	Storage water volume	l	660	660	1100	1100	1100	2000	2000	2000	2000	2000	2000	2000	2000
	Expansion vessel	l	24	24	35	35	35	80	80	80	80	80	80	80	80
	Water connections	"G	100	100	100	100	100	100	125	125	125	125	150	150	150
Sound pressure (3)	STD	dB(A)	66	66	66	66	66	66	66	66	67	67	67	67	71
Weights	Transport weight (4)	Kg	2730	2830	3000	3050	3240	3520	3800	4130	4480	4780	4830	5000	5350
	Transport weight (5)	Kg	3075	3165	3350	3400	3610	3890	4200	4550	4950	5350	5400	5480	5950
	Operating weight (4)	Kg	2930	3080	3270	3320	3530	3810	4100	4500	4900	5330	5405	5600	6000
	Operating weight (5)	Kg	3935	4075	4720	4770	5010	6235	6545	6950	7400	7800	7850	8030	8500

DIMENSIONS

CHA/FC			642	702	802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204
L	STD	mm	4400	4400	4400	4400	5500	5500	5500	5500	6700	6700	6700	6700	6700
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265	2265

DIMENSIONAL





CLEREANCE AREA

CHA/FC	642 ÷ 2204	
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

(1) Chilled water (with ethilenic glycol at 30%) from 15° to 10°C, ambient air temperature 35°C.
(2) Ambient air temperature at wich the cooling capacity indicated in point (1) is reached.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) A SIDE: Electrical board side.

CHA/Y 282÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 46 kW TO 105 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/Y 282÷604 series use the refrigerant HFC R134a, with minimum O.D.P. value, which allows for significant energy savings in respect of the environment. These units are particularly intended to satisfy the needs of medium/large-sized service sector or industrial rooms.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, Scroll compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

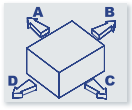
CHA/Y			282	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	46,5	53,5	68,4	79,4	93,2	105,4
	Absorbed power (1)	kW	14,4	17,6	24,5	27,5	31,2	37,4
Heating	Heating capacity (2)	kW	48,1	57,8	71,6	84,3	96,4	115,8
	Absorbed power (2)	kW	15,8	20,0	26,6	31,1	34,0	42,2
Compressors	Quantity	n°	2	2	3	3	4	4
	Type		<- Scroll ->					
	Refrigerant circuits	n°	2	2	2	2	2	2
	Capacity steps	n°	2	2	3	3	4	4
Evaporator	Water flow	l/s	2,22	2,56	3,27	3,79	4,45	5,04
	Pressure drops	kPa	34	31	13	17	23	27
	Water connections	"G	1½" G	2½" G	<- - - - - - - - - - - - - PN16/DN80 - - - - - - - - - - - - ->			
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->					
	Max. running current	A	56	66	85	100	112	133
	Max. inrush current	A	196	232	225	266	252	299
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3
	Air flow	m³/s	4,2	4,1	7,9	7,7	7,9	11,7
	Sound pressure (3)	dB(A)	61	61	62	63	62	63
	SL sound pressure (3)	dB(A)	57	57	57	58	58	58
SSL version	Fans	n°	2	2	2	2	3	3
	Air flow	m³/s	3,5	3,4	6,0	5,9	9,2	8,5
	Sound pressure (3)	dB(A)	51	51	52	53	52	53
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	129	124	159	151	143	133
	Storage water volume	l	190	190	470	470	470	470
	Expansion vessel	l	8	8	18	18	18	18
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"
Weights	Transport weight (4)	Kg	665	720	920	985	1200	1352
	Transport weight (5)	Kg	773	828	1100	1165	1380	1601
	Operating weight (4)	Kg	679	735	949	1014	1229	1383
	Operating weight (5)	Kg	963	1018	1570	1635	1850	2261

DIMENSIONS

CHA/Y			282	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350 (*)	3550	3550
P	STD	mm	1100	1100	1100	1100	1100	1100
H	STD	mm	1920	1920	2220	2220	2220	2220

DIMENSIONAL

CLEREANCE AREA



CHA/Y 282 ÷ 604		
A	mm	800
B	mm	1800
C (**)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) 3550 mm for WP version.
(**) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/Y 221÷802

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 49 kW TO 165 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/Y 221÷802 series use the refrigerant HFC R134a, with minimum O.D.P. value, which allows for significant energy savings in respect of the environment. These units are particularly intended to satisfy the needs of medium/large-sized service sector or industrial rooms.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain a level of comfort intuitively and efficiently without compromises.
Equipped with axial fans, semihermetic compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA
Cooling only

CHA/SSL
Super silencied cooling only

CHA/WP
Reversible heat pump

CHA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

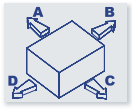
CHA/Y			221	251	301	401	442	502	602	802
Cooling	Cooling capacity (1)	kW	49,1	56,6	67,7	82,4	98,2	113,2	135,4	164,8
	Absorbed power (1)	kW	16,4	17,7	21,7	25,7	32,8	36,4	42,4	53,4
Heating	Heating capacity (2)	kW	50,5	58,1	69,8	83,6	100,2	114,2	138,4	172,8
	Absorbed power (2)	kW	15,4	16,6	20,5	24,5	30,8	34,2	40,0	51,0
Compressors	Quantity	n°	1	1	1	1	2	2	2	2
	Type		< - Semi-hermetics ->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,35	2,70	3,23	3,94	4,69	5,41	6,47	7,87
	Pressure drops	kPa	38	34	41	31	25	31	39	27
	Water connections	"G	1"½	2"½	2"½	2"½	<- PN16/DN 80 ->		3"	PN16/DN 100
Electrical characteristics	Power supply	V/Ph/Hz	< - 400 / 3 / 50 ->							
	Max. running current	A	50	74	88	94	100	149	173	192
	Max. inrush current	A	117	156	220	268	167	231	305	366
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,1	7,9	7,7	7,5	11,7	11,7	15,6
	Sound pressure (3)	dB(A)	58	58	59	59	61	61	61	64
	SL sound pressure (3)	dB(A)	54	54	55	55	57	56	57	61
SSL version	Fans	n°	2	2	2	2	3	3	3	---
	Air flow	m³/s	3,5	3,4	6,0	5,9	9,2	8,5	8,5	---
	Sound pressure (3)	dB(A)	49	49	51	51	52	51	51	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	124	117	94	81	140	129	106	100
	Storage water volume	l	190	190	470	470	470	470	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24
	Water connections	"G	1"½	1"½	2"	2"	2"½	2"½	3"	3"
Weights	Transport weight (4)	Kg	660	716	860	980	1030	1350	1380	1620
	Transport weight (5)	Kg	768	824	1010	1130	1210	1530	1628	1868
	Operating weight (4)	Kg	674	731	876	998	1059	1381	1415	1666
	Operating weight (5)	Kg	958	1014	1480	1600	1680	2000	2289	2529

DIMENSIONS

CHA/Y			221	251	301	401	442	502	602	802
L	STD	mm	2350	2350	2350	2350	2350 (*)	3550	3550	3550
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275

DIMENSIONAL

CLEREANCE AREA



CHA/Y 221 ÷ 802		
A	mm	800
B	mm	1800
C (**)	mm	800
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) 3550 mm for WP version.
(**) C SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/Y 1202-A÷4202-A

AIRCOOLED LIQUID CHILLERS, ENERGY CLASS "A" WITH AXIAL FANS, SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS

FROM 220 kW TO 924 kW.

UNIT DESCRIPTION

The CHA/Y 1202-A÷4202-A units in the energy class "A" have E.E.R. values greater than 3.1 due to reduced electrical absorption and a high efficiency of the compressor-exchanger combination.
Large-sized heat exchangers and highly efficient screw compressors allow to maintain relatively low working pressures (also due to the use of the refrigerant R134a), and all this allows the compressors of the class "A" units to undergo less stress and thus be subject to fewer breakdowns and lower maintenance costs than those installed on traditional units. Furthermore, due to their high efficiency, they can operate at full power with outdoor air temperatures up to 52 °C.
Continuous adjustment of the capacity of the compressors and thermostatic expansion valves on the entire series, which allow to reduce the refrigerating capacity to 12% of the total heat load, guarantees the constancy of the water temperature with the system under any condition.
Furthermore, the solution of inserting the compressors in an acoustically insulated service space and fitting super silent units, obtained by increasing the sizes of the exchangers, makes these units particularly suitable for installations where reduced energy consumption and extremely quiet operation are essential for the ideal execution of the system.

VERSIONS

CHA/Y
Cooling only

CHA/Y/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, cranckcase heater, sight glass, thermal protection, hot gas shut off valves and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till 0°C.
- Operating limit till outside air temperatures up to 52 °C.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

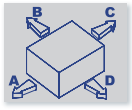
CHA			1202-A	1302-A	1502-A	1702-A	1902-A	2002-A	2602-A	3002-A	3602-A	4202-A
Cooling	Cooling capacity (1)	kW	220	245	297	341	394	432	535	652	808	924
	Absorbed power (1)	kW	70	76	95	106	124	136	172	206	248	297
	E.E.R.		3,14	3,22	3,13	3,22	3,18	3,18	3,11	3,17	3,26	3,11
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		<---------- Screw ---------->									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	<---------- Stepless ---------->									
Evaporator	Water flow	l/s	10,51	11,71	14,19	16,29	18,82	20,64	25,56	31,15	38,60	44,15
	Pressure drops	kPa	18	33	39	42	26	44	46	51	49	52
	Water connections	"G	125	125	125	125	150	150	150	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->									
	Max. running current	A	171	171	205	229	266	318	386	477	555	587
	Max. inrush current	A	246	246	263	319	341	460	497	588	770	787
STD version and with SL accessory	Fans	n°	6	6	6	6	8	8	10	12	14	14
	Air flow	m³/s	28,3	28,3	28,3	30,0	37,2	39,1	45,8	55,0	73,3	73,3
	Sound capacity (2)	dB(A)	91	91	91	91	92	92	93	94	94	94
	SL sound capacity (2)	dB(A)	88	88	88	88	89	89	90	91	91	91
	Sound pressure (3)	dB(A)	68	68	68	68	68	68	69	69	69	69
	SL sound pressure (3)	dB(A)	65	65	65	65	65	65	66	66	66	66
SSL version	Fans	n°	6	6	6	8	10	10	10	14	16	---
	Air flow	m³/s	22,2	22,2	22,2	26,6	28,9	37,5	35,5	42,8	52,8	---
	Sound capacity (2)	dB(A)	79	79	79	80	81	81	81	82	83	---
	Sound pressure (3)	dB(A)	55	55	55	56	57	57	57	57	57	---
Unit with tank and pump	Pump nominal power	kW	3,0	4,0	5,5	5,5	5,5	7,5	7,5	7,5	11,0	11,0
	Pump static pressure	kPa	180	200	230	200	180	190	170	140	170	135
	Storage water volume	l	1100	1100	1100	2000	2000	2000	2000	---	---	---
	Expansion vessel (4)	l	35	35	35	80	80	80	80	---	---	---
	Water connections	"G	100	100	100	125	125	125	150	150	200	200
Weights	Transport weight (5)	Kg	3310	3190	3240	3630	4020	4525	4810	6760	770	8060
	Transport weight (6)	Kg	3690	3590	3645	4070	4460	5015	5300	---	---	---
	Operating weight (5)	Kg	3420	3330	3350	3740	4220	4760	5010	7060	8070	8630
	Operating weight (6)	Kg	4790	4690	4745	6070	6460	7015	7300	---	---	---

DIMENSIONS

CHA			1202-A	1302-A	1502-A	1702-A	1902-A	2002-A	2602-A	3002-A	3602-A	4202-A
L	STD	mm	4400	4400	4400	5550	5550	6700	6700	10050	10050	10050
	SSL	mm	5550	5550	5550	5550	6700	8900	8900	10050	10050	---
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	SSL	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	---
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	SSL	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	---

DIMENSIONAL

CLEREANCE AREA



CHA 1202-A ÷ 4202-A		
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Sound power level according to Standard ISO 3744 and Eurovent 8/1.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) 24 l water volume for expansion vessel for only pump versions.
(5) Unit without tank and pump.
(6) Unit with tank and pump.
(*) A SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CHA/Y 1202-B÷4202-B

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 221 kW TO 954 kW.

UNIT DESCRIPTION

The water coolers and heat pumps of the CHA/Y 1202-B÷4202-B series, with R134a refrigerant, are intended to satisfy the needs of large-sized service sector or industrial environments.
They are used, in combination with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes. Equipped with axial fans, screw compressors and tube-bundle exchangers, even in the super silent version, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. The use of large condensing batteries and fans with high unit efficiency, as well as the optimization of the hydraulic and cooling circuit and the use of latest generation screw compressors, combined with a suitable sizing of the user system, allows to obtain high efficiency during operation with remarkably reduced energy consumption.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CHA/Y
Cooling only

CHA/Y/SSL
Super silencied cooling only

CHA/Y/WP
Reversible heat pump

CHA/Y/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, cranckcase heater, sight glass, thermal protection, hot gas shut off valves and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device allows also the cooling functioning of the unit by external temperature till 0°C.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

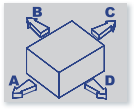
CHA/Y			1202-B	1302-B	1502-B	1702-B	1902-B	2002-B	2602-B	3002-B	3602-B	4202-B
Cooling	Cooling capacity (1)	kW	221	262	302	348	393	453	549	684	806	954
	Absorbed power (1)	kW	80	88	112	126	146	155	197	231	284	334
Heating	Heating capacity (2)	kW	225	255	289	338	390	457	536	662	767	850
	Absorbed power (2)	kW	75	78	91	105	120	134	160	191	225	260
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		<---------- Screw ---------->									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	<---------- Stepless ---------->									
Evaporator	Water flow	l/s	10,56	12,52	14,43	16,63	18,77	21,64	26,23	32,68	38,51	45,58
	Pressure drops	kPa	50	49	38	50	53	43	54	57	55	53
	Water connections	DN	100	100	125	125	125	125	150	150	200	200
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->									
	Max. running current	A	169	169	203	227	257	309	380	464	530	571
	Max. inrush current	A	244	244	261	317	332	451	491	612	766	900
STD version and with SL accessory	Fans	n°	4	4	4	4	4	4 (**)	6	6 (**)	8	10
	Air flow	m³/s	21,66	21,66	21,66	20,55	23,89	23,33	31,11	33,33	40,55	48,61
	Sound pressure (3)	dB(A)	68	68	68	68	68	67	69	69	70	69
	SL sound pressure (3)	dB(A)	65	65	65	65	65	64	65	65	66	64
SSL version	Fans	n°	4	4	4	4	4	6	8	8	10	12
	Air flow	m³/s	13,56	13,56	13,56	16,12	15,56	20,66	26,66	26,66	35,58	35,84
	Sound pressure (3)	dB(A)	57	57	57	57	57	58	59	59	59	60
Unit with tank and pump	Pump nominal power	kW	3,0	4,0	5,5	5,5	5,5	7,5	7,5	7,5	11,0	11,0
	Pump static pressure	kPa	150	170	230	195	165	195	165	130	165	130
	Storage water volume	l	1110	1110	1110	1110	1110	2000	2000	2000	2000	2000
	Expansion vessel (4)	l	35	35	35	35	35	80	80	80	80	80
	Water connections	"G	4"	4"	4"	4"	5"	5"	6"	6"	6"	8"
Weights	Transport weight (5)	Kg	2640	2730	2780	2920	3120	3800	4070	5270	5480	6250
	Transport weight (6)	Kg	2740	2820	2920	3060	3250	3930	4330	5500	5770	6600
	Operating weight (5)	Kg	3200	3310	3380	3520	3560	4290	4560	5760	6070	6880
	Operating weight (6)	Kg	4300	4410	4480	4620	4660	6290	6560	7760	8070	8880

DIMENSIONS

CHA/Y			1202-B	1302-B	1502-B	1702-B	1902-B	2002-B	2602-B	3002-B	3602-B	4202-B
L	STD	mm	3350 (***)	3350 (***)	3350 (***)	3350 (***)	4400	5550	5550	6700	6700	7750
	WP	mm	4400	4400	4400	4400	5550	6700	6700	7750	7750	8900
	SSL	mm	3350 (***)	3350 (***)	3350 (***)	4400 (***)	4400	5550	6700	6700	7750	10050
	WP/SSL	mm	4400	4400	4400	5550	5550	6700	6700	7750	8900	----
P	STD	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
	WP	mm	2200	2200	2200	2200	2200	2200	2200	2200	2200	2200
H	STD	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100
	WP	mm	2100	2100	2100	2100	2100	2100	2100	2100	2100	2100

DIMENSIONAL

CLEREANCE AREA



CHA/Y	1202-B ÷ 4202-B	
A (*)	mm	1000
B	mm	1800
C	mm	500
D	mm	1800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) 24 l water volume for expansion vessel for only pump versions.
(5) Unit without tank and pump.
(6) Unit with tank and pump.
(*) A SIDE: Electrical board side.
(**) 6 fans for CHA/Y/WP 2002-B version.
8 fans for CHA/Y/WP 3002-B version.
(***) 4400 mm for version with tank and pump.
N.B. Weights of SSL and WP versions are indicated on the technical book.


CLINT
KTK
KLIMATECHNIK
TECHNOLOGY

Aircooled liquid chillers and heat pumps with radial fans.

CRA 18÷131

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 5 kW TO 35 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps, of the CRA 18÷131 series are intended to satisfy the needs of small and medium domestic or service sector systems with particular difficulty in positioning units outside the building.
With a prepainted plate structure, these units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain an optimal level of comfort intuitively and efficiently.
Available in the versions with or without pumping group, these units are equipped with particular technical and design adjustments that enable an immediate and efficient use, in addition to remarkably quiet operation and a significant useful head of the fan.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA
Cooling only

CRA/SP
Cooling only with tank and pump

CRA/WP
Reversible heat pump

CRA/WP/SP
Reversible heat pump with tank and pump

FEATURES

- Structure in pre-painted self-supporting frame, in galvanized sheet.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Double inlet centrifugal type fans statically and dynamically balanced directly driven by a single-phase (18÷31), three-phase (41÷71); belt driven connected to a three-phase electric motor (81÷131).
- Condenser in copper tubes and aluminium finned coil, complete with drain pan for WP version.
- Evaporator in AISI 316 stainless steel brazewelded plates type. The evaporator is insulated with flexible closed cells material. On the heat pump units is always installed a water differential pressure switch and an antifreeze heater.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (41÷131).
- Microprocessor control and regulation system.
- Water circuit includes: insulated tank, circulator or pump, safety valve, gauge and plant expansion vessel.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
PS	Circulating pump
PB	Low pressure switch (18÷71)
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

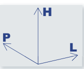
R407C

CRA			18	21	25	31	41	51	61	71	81	91	101	131
Cooling	Cooling capacity (1)	kW	4,8	6,2	7,4	8,7	10,8	13,1	15,7	17,7	19,3	23,8	27,6	34,1
	Absorbed power (1)	kW	1,6	2,0	2,2	3,4	4,7	5,5	6,4	7,2	7,7	9,9	11,5	14,5
Heating	Heating capacity (2)	kW	5,7	7,9	8,7	10,5	12,9	15,7	19,4	21,0	23,8	29,4	35,1	42,3
	Absorbed power (2)	kW	1,8	2,4	2,5	3,7	4,9	5,8	6,6	7,3	8,4	11,2	12,5	15,6
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Type		< - - - Scroll - - - >											
Evaporator	Water flow	l/s	0,23	0,30	0,35	0,42	0,52	0,63	0,75	0,85	0,92	1,14	1,32	1,63
	Pressure drops	kPa	20	23	20	18	30	27	26	21	23	31	27	25
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Condenser	Fans	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m³/s	0,90	0,87	0,87	0,86	1,80	1,78	1,78	1,78	2,50	3,37	3,33	3,33
	Available static pressure	Pa	80	80	80	80	120	120	120	120	150	150	150	150
Electrical characteristics	Power supply	V/Ph/Hz	<- - 230 / 1 / 50 - ->			< - - - 400 / 3+N / 50 - - - >								
	Max. running current	A	14	18	20	10	14	16	18	20	18	23	26	32
	Max. inrush current	A	56	70	85	55	65	81	89	116	108	140	144	188
Version with tank and pump	Pump nominal power	kW	0,13	0,13	0,19	0,19	0,30	0,30	0,30	0,30	0,45	0,55	0,55	0,55
	Available static pressure	kPa	41	37	50	50	150	143	129	121	190	204	193	155
	Storage water volume	l	50	50	50	50	150	150	150	150	150	150	150	150
	Expansion vessel	l	2	2	2	2	5	5	5	5	5	5	5	5
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	49	49	50	50	51	52	52	53	62	62	62	63
Weights	Transport weight (4)	Kg	129	131	134	139	192	200	210	212	341	349	355	370
	Transport weight (5)	Kg	170	172	175	180	256	264	274	276	405	413	420	434
	Operating weight (4)	Kg	130	132	135	140	194	202	212	214	344	352	358	373
	Operating weight (5)	Kg	220	222	225	230	406	414	424	426	555	563	570	584

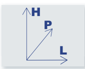
DIMENSIONS

CRA			18	21	25	31	41	51	61	71	81	91	101	131
L	STD	mm	900	900	900	900	900	900	900	900	1500	1500	1500	1500
P	STD	mm	550	550	550	550	690	690	690	690	800	800	800	800
H	STD	mm	1425	1425	1425	1425	1725	1725	1725	1725	1425	1425	1425	1425

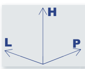
DIMENSIONAL



18 ÷ 31

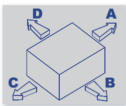


81 ÷ 131

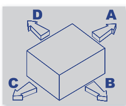


41 ÷ 71

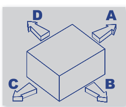
CLEREANCE AREA



CRA 18 ÷ 31		
A (*)	mm	800
B	mm	800
C	mm	800
D	mm	200



CRA 41 ÷ 71		
A (*)	mm	800
B	mm	1000
C	mm	800
D	mm	200



CRA 81 ÷ 131		
A	mm	200
B	mm	1200
C	mm	800
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) A SIDE: Electrical board side.
D SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CLINT

CRA 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 47 kW TO 162 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps, of the CRA 182-P÷604-P series are intended to satisfy the needs of medium-large services sector or industrial systems with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, Scroll compressors and plate-type exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA
Cooling only

CRA/AP
Cooling only with high ESP fans

CRA/WP
Reversible heat pump

CRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Centrifugal type fans coupled to 3-phase electric motors by V belt and various pulley.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel braze welded plates type with one or two independent circuits on the refrigerant side and on the water side. On the heat pump units is always installed an antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

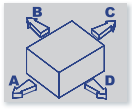
CRA			182-P	202-P	262-P	302-P	364-P	404-P	524-P	604-P
Cooling	Cooling capacity (1)	kW	46,8	54,4	71,2	82,0	96,0	111,3	140,3	161,6
	Absorbed power (1)	kW	16,0	18,2	25,0	28,4	32,0	38,6	47,8	60,0
Heating	Heating capacity (2)	kW	53,0	61,6	80,6	92,9	108,8	126,1	158,8	182,9
	Absorbed power (2)	kW	16,2	18,8	25,6	29,5	32,9	39,1	48,6	64,0
Compressors	Quantity	n°	2	2	2	2	4	4	4	4
	Type		<---------- Scroll ---------->							
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,24	2,60	3,40	3,92	4,60	5,32	6,70	7,72
	Pressure drops	kPa	31	37	39	41	33	36	47	48
	Water connections	"G	1½"	1½"	1½"	1½"	2½"	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->							
	Max. running current	A	45	49	65	75	91	103	123	153
	Max. inrush current	A	148	154	205	241	194	208	263	319
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6
	Available static pressure	Pa	140	140	140	130	115	125	125	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64
High ESP Version	Fans	n°	1	1	2	2	2	3	3	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	---
	Available static pressure	Pa	240	265	285	270	255	265	265	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	1,20	1,50	1,50	1,50	1,85
	Pump static pressure	kPa	136	125	103	137	162	146	111	102
	Storage water volume	l	400	400	400	400	600	600	600	600
	Expansion vessel	l	12	12	12	12	18	18	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight (4)	Kg	600	665	780	900	1170	1250	1350	1540
	Transport weight (5)	Kg	820	885	1000	1120	1510	1590	1690	1880
	Operating weight (4)	Kg	606	672	789	910	1182	1263	1365	1556
	Operating weight (5)	Kg	1220	1285	1400	1520	2110	2190	2290	2480

DIMENSIONS

CRA			182-P	202-P	262-P	302-P	364-P	404-P	524-P	604-P
L	STD	mm	2350	2350	2350	2350	3550	3550	3550	3550
	AP	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	AP	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	2005	2005	2005	2005	2005	2005	2005	2005
	AP	mm	2005	2005	2005	2005	2005	2005	2005	---
H (*)	STD	mm	2205	2205	2205	2205	2205	2205	2205	2205
	AP	mm	2205	2205	2205	2205	2205	2205	2205	---

DIMENSIONAL

CLEREANCE AREA



CRA 182-P ÷ 604-P		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CRA 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 47 kW TO 162 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps, of the CRA 182÷604 series are intended to satisfy the needs of medium-large services sector or industrial systems with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, Scroll compressors and tube-bundle exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA
Cooling only

CRA/AP
Cooling only with high ESP fans

CRA/WP
Reversible heat pump

CRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Centrifugal type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

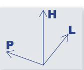
R407C

CRA			182	202	262	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	46,8	54,4	71,2	82,0	105,8	121,8	140,3	161,6
	Absorbed power (1)	kW	16,0	18,2	25,0	28,4	35,3	42,6	47,8	60,0
Heating	Heating capacity (2)	kW	53,0	61,6	80,6	92,9	119,7	137,9	158,8	182,9
	Absorbed power (2)	kW	16,2	18,8	25,6	29,5	35,9	45,6	48,6	64,0
Compressors	Quantity	n°	2	2	2	2	3	3	4	4
	Type		<- - - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - - ->							
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	3	3	4	4
Evaporator	Water flow	l/s	2,24	2,60	3,40	3,92	5,05	5,81	6,70	7,72
	Pressure drops	kPa	35	32	46	32	29	37	42	48
	Water connections	"G	1½"	2½"	2½"	2½"	<------ PN16 DN 80 ------->			PN16 DN 100
Electrical characteristics	Power supply	V/Ph/Hz	<------------------ 400 / 3 / 50 ------------------>							
	Max. running current	A	45	49	65	75	91	113	123	153
	Max. inrush current	A	148	154	205	241	231	277	263	319
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6
	Available static pressure	Pa	140	130	140	130	115	125	125	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64
High ESP Version	Fans	n°	1	1	2	2	2	3	3	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	---
	Available static pressure	Pa	240	265	285	270	255	265	265	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	120	113	76	75	126	113	101	79
	Storage water volume	l	190	190	470	470	470	470	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"	3"	3"
Weights	Transport weight (4)	Kg	617	682	812	934	1034	1304	1405	1595
	Transport weight (5)	Kg	725	790	1032	1154	1284	1584	1754	1944
	Operating weight (4)	Kg	631	697	829	955	1063	1336	1441	1641
	Operating weight (5)	Kg	915	980	1502	1624	1754	2054	2414	2604

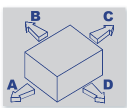
DIMENSIONS

CRA			182	202	262	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350	2350 (***)	3550	3550	3550
	AP	mm	2350	2350	2350	2350	2350 (***)	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	AP	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	2005	2005	2005	2005	2005	2005	2005	2005
	AP	mm	2005	2005	2005	2005	2005	2005	2005	---
H (*)	STD	mm	2205	2205	2205	2205	2205	2205	2205	2205
	AP	mm	2205	2205	2205	2205	2205	2205	2205	---

DIMENSIONAL



CLEREANCE AREA



CRA 182 ÷ 604		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
(***) 3550 mm for WP version
N.B. Weights of WP versions are indicated on the technical book.

CRA 201-P÷702-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SEMI-HERMETIC COMPRESSORS AND PLATE EXCHANGERS.

FROM 48 kW TO 181 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps, of the CRA 201-P÷702-P series are intended to satisfy the needs of medium-large services sector or industrial systems with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, semihermetic compressors and plate-type exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA
Cooling only

CRA/AP
Cooling only with high ESP fans

CRA/WP
Reversible heat pump

CRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Centrifugal type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- Evaporator in AISI 316 stainless steel braze welded plates type with one or two independent circuits on the refrigerant side and on the water side. On the heat pump units is always installed an antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
DS	Desuperheater
RT	Total heat recovery
SI	Inertial tank
PS	Single circulating pump
PD	Double circulating pump

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

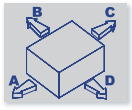
CRA			201-P	251-P	301-P	351-P	402-P	502-P	602-P	702-P
Cooling	Cooling capacity (1)	kW	48,3	59,5	70,8	89,7	100,6	124,7	141,5	180,7
	Absorbed power (1)	kW	16,8	21,0	26,9	33,0	33,6	44,2	51,6	69,2
Heating	Heating capacity (2)	kW	53,3	65,6	78,1	95,3	110,9	137,6	156,1	199,4
	Absorbed power (2)	kW	17,6	21,8	28,0	34,3	35,2	45,8	53,8	71,8
Compressors	Quantity	n°	1	1	1	1	2	2	2	2
	Type		< - Semi-hermetics ->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,31	2,84	3,38	4,29	4,81	5,96	6,76	8,63
	Pressure drops	kPa	41	43	49	46	36	44	47	55
	Water connections	"G	1½"	1½"	1½"	1½"	36	2½"	2½"	2½"
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->							
	Max. running current	A	39	53	66	82	78	111	127	170
	Max. inrush current	A	103	120	137	164	142	178	198	251
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6
	Available static pressure	Pa	140	130	140	120	115	125	115	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64
High ESP Version	Fans	n°	1	1	2	2	2	3	3	---
	Air flow	m³/s	4,2	4,2	7,8	7,6	7,8	11,7	11,1	---
	Available static pressure	Pa	240	265	285	260	255	265	255	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	1,10	1,50	1,50	1,50	1,85
	Pump static pressure	kPa	129	117	101	129	164	131	113	82
	Storage water volume	l	400	400	400	400	600	600	600	600
	Expansion vessel	l	12	12	12	12	18	18	18	18
	Water connections	"G	2½"	2½"	2½"	2½"	2½"	2½"	2½"	2½"
Weights	Transport weight (4)	Kg	585	645	760	910	1130	1235	1355	1530
	Transport weight (5)	Kg	805	865	980	1130	1470	1575	1695	1870
	Operating weight (4)	Kg	592	652	772	924	1144	1249	1370	1546
	Operating weight (5)	Kg	1205	1265	1380	1530	2070	2175	2295	2470

DIMENSIONS

CRA			201-P	251-P	301-P	351-P	402-P	502-P	602-P	702-P
L	STD	mm	2350	2350	2350	2350	3550	3550	3550	3550
	AP	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	AP	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	2005	2005	2005	2005	2005	2005	2005	2005
	AP	mm	2005	2005	2005	2005	2005	2005	2005	---
H (*)	STD	mm	2205	2205	2205	2205	2205	2205	2205	2205
	AP	mm	2205	2205	2205	2205	2205	2205	2205	---

DIMENSIONAL

CLEREANCE AREA



CRA 201-P ÷ 702-P		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CRA 201÷702

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 48 kW TO 181 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps, of the CRA 201÷702 series are intended to satisfy the needs of medium-large services sector or industrial systems with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, semihermetic compressors and tube-bundle exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA
Cooling only

CRA/AP
Cooling only with high ESP fans

CRA/WP
Reversible heat pump

CRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Centrifugal type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

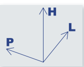
R407C

CRA			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	48,3	59,5	70,8	79,4	104,8	126,9	141,5	158,7	180,7
	Absorbed power (1)	kW	16,8	21,0	26,9	30,2	37,6	46,1	51,6	63,6	69,2
Heating	Heating capacity (2)	kW	53,3	65,6	78,1	87,6	115,6	140,0	156,1	175,1	199,4
	Absorbed power (2)	kW	17,6	21,8	28,0	31,4	39,0	47,8	53,8	66,0	71,8
Compressors	Quantity	n°	1	1	1	1	1	1	2	2	2
	Type		< - - - - - - - - - - - - - - - - Semi-hermetics - - - - - - - - - - - - - - - - >								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,31	2,84	3,38	3,79	5,01	6,06	6,76	7,58	8,63
	Pressure drops	kPa	35	38	42	29	26	34	40	24	33
	Water connections	"G	1"½	2"½	2"½	2"½	DN 80	DN 80	3"	DN 100	DN 100
Electrical characteristics	Power supply	V/Ph/Hz	< - - - - - - - - - - - - - - - - 400 / 3 / 50 - - - - - - - - - - - - - - - - >								
	Max. running current	A	39	53	66	72	94	108	127	150	170
	Max. inrush current	A	103	120	137	143	226	254	198	221	252
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,1	15,6	15,6
	Available static pressure	Pa	140	130	140	130	115	125	115	75	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64	64
High ESP Version	Fans	n°	1	1	2	2	2	3	3	---	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,1	---	---
	Available static pressure	Pa	240	265	285	270	255	265	255	---	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	127	108	89	85	138	116	101	107	84
	Storage water volume	l	190	190	470	470	470	470	660	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24	24
	Water connections	"G	1"½	1"½	2"	2"	2"½	2"½	3"	3"	3"
Weights	Transport weight (4)	Kg	615	675	805	915	965	1150	1410	1520	1605
	Transport weight (5)	Kg	723	783	1025	1135	1215	1430	1759	1869	1954
	Operating weight (4)	Kg	627	690	822	935	995	1180	1445	1565	1650
	Operating weight (5)	Kg	913	973	1495	1605	1685	1900	2419	2529	2614

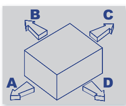
DIMENSIONS

CRA			201	251	301	321	401	501	602	642	702
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550	3550
	AP	mm	2350	2350	2350	2350	2350	3550	3550	---	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
	AP	mm	1100	1100	1100	1100	1100	1100	1100	---	---
H	STD	mm	2005	2005	2005	2005	2005	2005	2005	2005	2005
	AP	mm	2005	2005	2005	2005	2005	2005	2005	---	---
H*	STD	mm	2205	2205	2205	2205	2205	2205	2205	2205	2205
	AP	mm	2205	2205	2205	2205	2205	2205	2205	---	---

DIMENSIONAL



CLEREANCE AREA



CRA 201 ÷ 702		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CRA/Y 282÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 46 kW TO 105 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps of the CRA/Y 282÷604 series use the refrigerant HFC R134a, with minimum O.D.P. value, which allows for significant energy savings in respect of the environment. These units are particularly intended to satisfy the needs of medium/large-sized service sector or industrial rooms with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, Scroll compressors and tube-bundle exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA/Y
Cooling only

CRA/Y/AP
Cooling only with high ESP fans

CRA/Y/WP
Reversible heat pump

CRA/Y/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass fitted with internal overheat protection and crankcase heater if needed.
- Belt-driven centrifugal fans, coupled motor and adjustable pulley pitch.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

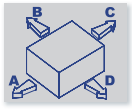
CRA/Y			282	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	46,5	53,5	68,4	79,4	93,2	105,4
	Absorbed power (1)	kW	15,6	17,6	24,5	27,5	31,2	37,4
Heating	Heating capacity (2)	kW	48,1	57,8	71,6	84,3	96,4	115,8
	Absorbed power (2)	kW	17,0	20,0	26,6	31,1	34,0	42,2
Compressors	Quantity	n°	2	2	3	3	4	4
	Type		<---------- Scroll ---------->					
	Refrigerant circuits	n°	2	2	2	2	2	2
	Capacity steps	n°	2	2	3	3	4	4
Evaporator	Water flow	l/s	2,22	2,56	3,27	3,79	4,45	5,04
	Pressure drops	kPa	34	31	13	17	23	27
	Water connections	"G	1½"	2½"	<---------- PN16/DN80 ---------->			
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->					
	Max. running current	A	59	69	91	106	118	143
	Max. inrush current	A	199	235	231	272	258	309
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,9	11,7
	Available static pressure	Pa	140	130	140	130	130	125
	Sound pressure (3)	dB(A)	64	64	65	66	66	66
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63
High ESP Version	Fans	n°	1	1	2	2	2	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,9	11,7
	Available static pressure	Pa	240	265	285	270	270	265
	Sound pressure (3)	dB(A)	65	65	66	67	67	67
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	129	124	159	151	143	133
	Storage water volume	l	190	190	470	470	470	470
	Expansion vessel	l	8	8	18	18	18	18
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"
Weights	Transport weight (4)	Kg	705	760	1000	1065	1280	1472
	Transport weight (5)	Kg	813	868	1180	1245	1460	1652
	Operating weight (4)	Kg	719	775	1029	1094	1309	1504
	Operating weight (5)	Kg	1003	1058	1650	1715	1930	2122

DIMENSIONS

CRA/Y			282	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350	3550	3550
	WP	mm	2350	2350	3550	3550	3550	3550
P	STD	mm	1100	1100	1100	1100	1100	1100
H	STD	mm	2005	2005	2005	2005	2005	2005
H (*)	STD	mm	2005	2005	2205	2205	2205	2205

DIMENSIONAL

CLEREANCE AREA



CRA/Y 282 ÷ 604		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CRA/Y 221÷802

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 49 kW TO 165 kW.

UNIT DESCRIPTION

The indoor water coolers and heat pumps of the CRA/Y 221÷802 series use the refrigerant HFC R134a, with minimum O.D.P. value, which allows for significant energy savings in respect of the environment. These units are particularly intended to satisfy the needs of medium/large-sized service sector or industrial rooms with particular difficulty in positioning units outside the building.
They are used, combined with terminal units, for the air conditioning of the rooms or to remove the heat developed during industrial processes; they can be supplied with RS 485 ModBus connection to integrate, if necessary, the innovative monitoring and control system CLIMAFRIEND that allows to program up to 30 different environments in order to obtain an optimal level of comfort intuitively and efficiently.
Equipped with centrifugal fans, semihermetic compressors and tube-bundle exchangers, even in the version with high head fans, these units can be completed by a hydraulic circuit with tank, with pump, or with tank and pump. A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

CRA/Y
Cooling only

CRA/Y/AP
Cooling only with high ESP fans

CRA/Y/WP
Reversible heat pump

CRA/Y/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Belt-driven centrifugal fans, coupled motor and adjustable pulley pitch.
- Condenser with copper tube and aluminium finned coil.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
HR	Desuperheater
HRT/S	Total heat recovery in series
HRT/P	Total heat recovery in parallel
SP	Inertial tank
PU	Single circulating pump
PD	Double circulating pump
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic guards for condenser with filter (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

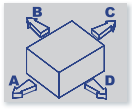
CRA/Y			221	251	301	401	442	502	602	802
Cooling	Cooling capacity (1)	kW	49,1	56,6	67,7	82,4	98,2	113,2	135,4	164,8
	Absorbed power (1)	kW	17,6	18,9	24,1	28,1	35,2	40,0	46,0	59,4
Heating	Heating capacity (2)	kW	50,5	58,1	69,8	83,6	100,2	114,2	138,4	172,8
	Absorbed power (2)	kW	16,6	17,8	22,9	26,9	33,2	37,8	44,0	57,0
Compressors	Quantity	n°	1	1	1	1	2	2	2	2
	Type		<---------- Semi-hermetics ---------->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,35	2,70	3,23	3,94	4,69	5,41	6,47	7,87
	Pressure drops	kPa	38	34	41	31	25	31	39	27
	Water connections	"G	1½"	2½"	2½"	2½"	<-- PN16/DN 80 -->		3"	PN16/DN 100
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400 / 3 / 50 ---------->							
	Max. running current	A	53	77	94	100	106	159	183	206
	Max. inrush current	A	120	159	226	274	173	241	315	380
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6
	Available static pressure	Pa	140	130	140	130	115	125	115	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64
High ESP Version	Fans	n°	1	1	2	2	2	3	3	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	---
	Available static pressure	Pa	240	265	285	270	255	265	255	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---
Unit with tank and pump	Pump nominal power	kW	0,75	0,75	0,75	0,75	1,85	1,85	1,85	1,85
	Pump static pressure	kPa	124	117	94	81	140	129	106	100
	Storage water volume	l	190	190	470	470	470	470	660	660
	Expansion vessel	l	8	8	18	18	18	18	24	24
	Water connections	"G	1½"	1½"	2"	2"	2½"	2½"	3"	3"
Weights	Transport weight (4)	Kg	700	756	940	1060	1110	1470	1500	1740
	Transport weight (5)	Kg	808	864	1160	1280	1360	1750	1849	2089
	Operating weight (4)	Kg	712	771	957	1080	1140	1500	1535	1785
	Operating weight (5)	Kg	998	1054	1630	1750	1830	2220	2509	2749

DIMENSIONS

CRA/Y			221	251	301	401	442	502	602	802
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550
	AP	mm	2350	2350	2350	2350	2350	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
	AP	mm	1100	1100	1100	1100	1100	1100	1100	---
H	STD	mm	2005	2005	2005	2005	2005	2005	2005	2005
	AP	mm	2005	2005	2005	2005	2005	2005	2005	---
H (*)	STD	mm	2005	2005	2205	2205	2205	2205	2205	2205
	AP	mm	2005	2005	2205	2205	2205	2205	2205	---

DIMENSIONAL

CLEREANCE AREA



CRA/Y 221 ÷ 802		
A (**)	mm	800
B	mm	1800
C	mm	300
D	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
(2) Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) Height with inertial tank accessory.
(**) A SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

3

Water cooled liquid chillers and heat pump for remote condensing.

CWW 18/C

WATER COOLED LIQUID CHILLERS WITH ROTARY COMPRESSORS, PLATE EXCHANGERS AND PUMPING KIT

FROM 5 kW.

UNIT DESCRIPTION

The water coolers with water condensation of the CWW 18/C series are designed and produced to be used in small domestic and service sector air conditioning systems.
The particularly reduced dimensions of the unit allow for it to be placed inside buildings in very little space, even inside a cabinet or under a sink; it is supplied complete with a built-in pumping group and setup with everything necessary for a quick and simple installation.
The high energy efficiency of this machine with single rotary compressor allows to cool, and it can be combined, if necessary, with the innovative monitoring and control system CLIMAFRIEND. It can air condition rooms with total dimensions up to a maximum of 130 m², with low energy consumption and remarkably quiet operation and without any impact on the appearance of the building facades, thus ideal for use in historical town centres and residential areas.

VERSIONS

CWW
Cooling only

FEATURES

- Self-bearing structure with pre-painted metal sheet panels lined with insulating material and rubber shock absorbers.
- Rotary compressor, complete with overload protection (klixon) embedded in the motor, installed on rubber vibrations absorbing.
- Condenser in AISI 316 stainless steel brazewelded plates type, complete with pressostatic valve.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch.
- R407C refrigerant.
- Electrical panel icludes: main switch with door lock device, fuses, compressor remote control switch.
- Microprocessor control and regulation system.
- Water circuit includes: circulator, safety valve, gauge, expansion vessel built-in the inertial tank.

TECHNICAL DATA

R407C

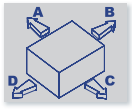
CWW			18/C
Cooling	Cooling capacity (1)	kW	5,1
	Absorbed power (1)	kW	1,3
Compressors	Quantity	n°	1
	Type		Rotary
Evaporator	Water flow	l/s	0,24
	Pressure drops	kPa	25
	Water connections	"G	1"
Condenser	Water flow	l/s	0,08
	Pressure drops	kPa	11
	Water connections	"G	1/2"
Electrical characteristics	Power supply	V/Ph/Hz	230 / 1 / 50
	Max. running current	A	11
	Max. inrush current	A	38
Pumping kit	Pump nominal power	kW	0,13
	Available static pressure	kPa	40
	Storage water volume	l	10
	Expansion vessel	l	0,5
Sound pressure (2)	STD	dB(A)	36
Weights	Transport weight	Kg	66
	Operating weight	Kg	76

DIMENSIONS

CWW			18/C
L	STD	mm	570
P	STD	mm	370
H	STD	mm	450

DIMENSIONAL

CLEREANCE AREA



CWW 18/C		
A	mm	50
B	mm	50
C	mm	300
D (*)	mm	500

NOTES

(1) Chilled water from 12 to 7°C, water temperature at the condenser from 15°C to 35°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(*) D SIDE: Electrical board side.

CWW 18÷151

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 5 kW TO 45 kW.

UNIT DESCRIPTION

The CWW 18÷151 water coolers and heat pumps are intended to satisfy the needs of small and medium domestic or industrial systems which require medium-low power, space-saving units and quiet operation. In fact, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
These units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Equipped with prepainted plate structure, Scroll compressors and plate-type exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the version with tank and pump; and a series of accessories supplied separately rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 13 models with cooling capacities ranging from 5 to 45 kW.

VERSIONS

CWW
Cooling only

CWW/SP
Cooling only with tank and pump

CWW/WP
Reversible heat pump

CWW/WP/SP
Reversible heat pump with tank and pump

FEATURES

- Self-supporting prepainted steel frame.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Condenser in AISI 316 stainless steel brazewelded plates type, with pressostatic valve.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch.
- R407C refrigerant.
- Electrical pane includes: main switch with door lock device, fuses, compressor and pump remote control switch (41÷151).
- Microprocessor control and regulation system.
- Water circuit for SP versions complete includes: insulated tank, circulator or pump, safety valve, gauge and expansion vessel.

ACCESSORIES

Loose accessories:

PS	Circulating pump
PB	Low pressure switch
CR	Remote control panel
IS	RS 485 serial interface
PV	Pressure valve and solenoid valve (for only cooling versions)
VV	Pressure valve and solenoid valve (for WP versions)
AG	Rubber shock absorbers

TECHNICAL DATA

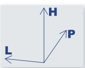
R407C

CWW			18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Cooling capacity (1)	kW	5,1	6,6	7,9	9,3	11,5	14,1	16,7	18,9	20,6	25,4	29,4	36,4	44,7
	Absorbed power (1)	kW	1,3	2,1	2,2	2,6	3,0	3,6	4,4	5,1	5,7	7,0	8,3	10,1	13,2
Heating	Heating capacity (2)	kW	6,5	8,9	10,3	12,1	14,5	18,3	21,7	24,0	26,8	33,1	39,0	46,7	58,5
	Absorbed power (2)	kW	1,6	2,4	2,7	3,2	3,6	4,6	5,5	6,4	6,9	8,6	10,3	12,6	16,2
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type		< - - - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - - - ->												
Evaporator	Water flow	l/s	0,24	0,32	0,38	0,44	0,55	0,67	0,80	0,90	0,98	1,21	1,40	1,74	2,14
	Pressure drops	kPa	26	30	27	24	37	34	33	27	30	38	34	32	34
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Condenser	Water flow	l/s	0,08	0,10	0,12	0,14	0,17	0,21	0,25	0,29	0,31	0,39	0,45	0,55	0,69
	Pressure drops	kPa	11	14	13	14	14	14	13	15	12	12	12	11	14
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Electrical characteristics	Power supply	V/Ph/Hz	<-- 230/1/50 -->			<- - - - - - - - - 400 / 3+ N / 50 - - - - - - - - - >									
	Max. running current	A	11	15	17	7	10	12	14	16	15	18	21	26	30
	Max. inrush current	A	47	62	76	46	50	66	74	101	99	123	127	167	189
Version with tank and pump	Pump nominal power	kW	0,19	0,19	0,19	0,19	0,30	0,30	0,30	0,30	0,45	0,55	0,55	0,55	0,75
	Available static pressure	kPa	44	40	42	41	126	121	112	102	144	195	180	138	140
	Storage water volume	l	50	50	50	50	50	50	50	50	150	150	150	150	150
	Expansion vessel	l	2	2	2	2	2	2	2	2	5	5	5	5	5
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	36	36	36	37	39	39	40	41	43	43	43	44	44
Weights	Transport weight (4)	Kg	83	85	87	89	92	93	96	98	188	190	198	204	218
	Transport weight (5)	Kg	108	110	112	114	116	117	120	122	267	269	277	283	297
	Operating weight (4)	Kg	84	86	88	90	94	95	98	100	191	193	201	207	221
	Operating weight (5)	Kg	159	161	163	165	168	169	172	174	420	422	430	436	450

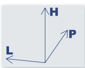
DIMENSIONS

CWW			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	550	550	550	550	550	550	550	550	550	550	550	550	550
	SP	mm	550	550	550	550	550	550	550	550	1100	1100	1100	1100	1100
P	STD	mm	550	550	550	550	550	550	550	550	550	550	550	550	550
H	STD	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

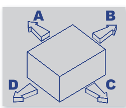
DIMENSIONAL

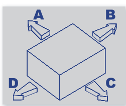


18 ÷ 151



SP 81÷151





CLEREANCE AREA

CWW 18 ÷ 151		
A	mm	500
B	mm	200
C	mm	500
D (*)	mm	800

CWW/SP 81 ÷ 151		
A	mm	800
B	mm	500
C	mm	800
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7°C, water temperature at the condenser from 15°C to 35°C.
(2) Chilled water from 12 to 7°C, water temperature at the evaporator from 15°C to 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit and. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) D SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CWW/GEO 21÷131

REVERSIBLE GEOTHERMAL HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 6 kW TO 45 kW.

UNIT DESCRIPTION

CLINT presents the new range of GEOTHERMIC heat pumps able to provide winter and summer climate control and produce domestic hot water at high temperature (up to 65°C).
The unit exploits the renewable energy stored in the ground. A clean, free and unlimited source that can be used to transfer heat to the home.
GEOTHERMIC, the unit exclusively powered by electrical energy, extracts heat stored in the subsoil and releases it in homes guaranteeing high levels of comfort and yield: 75% of energy used is taken from the environment.
GEOTHERMIC is also an integrated system: with a microprocessor managing the climate control and domestic hot water production systems, simultaneously managing hydronic terminals and even a solar panel system. The GEOTHERMIC heat pump is immediately ready upon installation. Hydraulic circuit optimisation includes high efficiency plate exchangers and low load loss with a circulator on the system circuit, on the domestic water circuit and on the geothermic circuit. Pressure gauges on the system and geothermic circuit, expansion chamber and safety devices on the water side, domestic water circuit pump to guaranty accumulation with priority. GEOTHERMIC, in addition to producing water for radiant or terminal panel systems, provides domestic hot water at high temperatures which, accumulated in specific tanks, is available at any time.

VERSIONS

CWW/GEO
Reversible geothermal heat pumps with domestic hot water production

FEATURES

- Structure manufactured in thick galvanised sheet, painted with epoxy powders complete with rubber shock absorbers.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Condensers plate-type in AISI 316 steel, equipped with antifreeze heater.
- Evaporator plate-type in AISI 316 steel, equipped with antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Electronic expansion valve thanks to the proportional modulation and high reliability, it guarantees the ability to stabilise and keep heat pump operation constant in very short times, thus offering energy saving.
- Water circuit divided into a primary system circuit, domestic hot water circuit and geothermal circuit; comprising the circulating pump, safety water valve, expansion tank, and pressure gauge.

ACCESSORIES

Loose accessories:

AI	System side inertial tank.
KI	System hydronic kit
HW	Storage tank for DHW
HWS	Storage tank for DHW production for supplement of solar panels.
FC	Freecooling kit
KS	Supplementary solar panels kit

TECHNICAL DATA

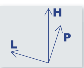
R407C

CWW/GEO			21	31	51	61	71	91	131
WINTER MODE									
Heating	Heating capacity (1)	kW	6,0	7,1	10,4	15,2	16,4	20,8	30,4
	Absorbed power (1)	kW	1,7	1,9	2,7	3,9	4,3	5,5	7,7
	C.O.P.		3,53	3,74	3,85	3,90	3,81	3,78	3,95
System side	System water flow	m³/h	1,02	1,22	1,79	2,61	2,82	3,57	5,23
	Available static pressure	kPa	48	44	44	48	161	169	136
	Expansion vessel	lt	2	2	4	4	8	8	8
Geothermal side	Cooling capacity in borehole (2)	kW	4,4	5,4	7,9	11,2	12,5	15,7	22,4
	Borehole fluid flowrate (2)	m³/h	1,26	1,55	2,25	3,21	3,57	4,50	6,42
	Available static pressure (2)	kPa	36	27	31	35	122	150	165
	Expansion vessel	lt	2	2	4	4	8	8	8
SUMMER MODE									
Cooling	Cooling capacity (3)	kW	8,9	10,5	15,2	22,2	25,1	30,4	44,4
	Absorbed power (3)	kW	1,4	1,6	2,3	3,5	4,0	4,6	7,0
	E.E.R.		6,36	6,56	6,61	6,34	6,28	6,61	6,34
System side	System water flow	m³/h	1,53	1,80	2,61	3,82	4,32	5,23	7,64
	Available static pressure	kPa	27	22	24	25	80	128	51
	Expansion vessel	lt	2	2	4	4	8	8	8
Geothermal side	Cooling capacity in borehole (4)	kW	10,1	11,8	17,0	25,1	28,4	34,0	50,2
	Borehole fluid flowrate (4)	m³/h	1,74	2,03	2,92	4,32	4,88	5,85	8,63
	Available static pressure (4)	kPa	17	12	16	10	45	113	142
	Expansion vessel	lt	2	2	4	4	8	8	8
Compressors	Quantity	n°	1	1	1	1	2	2	2
	Type		<- - - Scroll - - ->						
DHW side	Heating capacity (5)	kW	5,6	6,8	9,9	14,2	16,0	19,8	28,3
	Water flow	m³/h	0,95	1,17	1,70	2,43	2,75	3,41	4,87
	Available static pressure (5)	kPa	52	46	45	49	41	40	148
Electrical characteristics	Power supply	V/Ph/Hz	<-- 230/1/50 -->		<- - - 400 / 3+ N / 50 - - ->				
	Max. running current	A	17	19	21	11	17	18	23
	Max. inrush current	A	61	76	102	87	101	63	97
Sound pressure (6)	STD	dB(A)	40	41	41	44	44	44	47
Weights	Transport weight	Kg	110	110	127	175	175	187	225

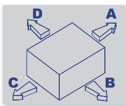
DIMENSIONS

CWW/GEO			21	31	51	61	71	91	131
L	STD	mm	600	600	600	600	800	800	800
P	STD	mm	450	450	550	550	680	680	680
H	STD	mm	920	920	1060	1060	1180	1180	1180

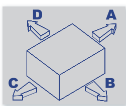
DIMENSIONAL



CLEREANCE AREA



CWW/GEO 21 ÷ 61		
A	mm	---
B	mm	400
C (*)	mm	500
D	mm	400



CWW/GEO 71 ÷ 131		
A	mm	300
B	mm	400
C (*)	mm	600
D	mm	400

NOTES

(1) User circuit: radiant system °C 30/35 In-Out.
(2) External circuit: geothermal borehole glycolate water 20 % °C 0/-3 In-Out
(3) User circuit: radiant system °C 23/18 In-Out
(4) External circuit: geothermal borehole glycolate water 20 % °C 25/30 In-Out.
(5) DHW circuit °C 45/50 In-Out.
(6) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.

CLINT

CWW 182÷604

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS WITH SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 48 kW TO 170 kW.

UNIT DESCRIPTION

The CWW 182÷604 water coolers and heat pumps are intended to satisfy the needs of domestic or industrial systems which require high power, space-saving units and quiet operation. In fact, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
These units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Equipped with Scroll compressors and tube-bundle exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the versions with tank, with pump or with tank and pump; and a series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 8 models with cooling capacities ranging from 48 to 170 kW.

VERSIONS

CWW
Cooling only

CWW/SSL
Super silencied cooling only

CWW/WP
Reversible heat pump

CWW/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Shell and tube type condenser, with easily removable cast iron heads to enable acess for maintenance operations. Each refrigerant circuit is supplied with an indipendent condenser. Water connections for cooling tower operation.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
SP	Inertial tank
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
PV2	2-ways pressostatic valve
PV3	3-ways pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

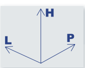
R407C

CWW			182	202	262	302	364	404	524	604
Cooling	Cooling capacity (1)	kW	48,2	56,0	73,1	84,4	96,4	112,1	146,2	168,7
	Absorbed power (1)	kW	13,0	15,0	19,7	22,9	26,0	30,0	39,4	45,7
Heating	Heating capacity (2)	kW	54,5	63,4	82,8	95,5	109,1	126,9	165,5	191,0
	Absorbed power (2)	kW	15,2	17,7	23,2	26,8	30,6	35,6	46,4	53,6
Compressors	Quantity	n°	2	2	2	2	4	4	4	4
	Type		<- - - Scroll - - ->							
	Refrigerant circuits	n°	2	2	2	2	4	4	4	4
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,30	2,67	3,50	4,03	4,61	5,36	6,97	8,06
	Pressure drops	kPa	29	23	34	24	18	24	32	22
	Water connections	"G	1½"	2½"	2½"	2½"	DN80	DN80	DN80	DN100
Condenser	Water flow	l/s	2,92	3,39	4,43	5,13	5,85	6,79	8,87	10,24
	Pressure drops	kPa	15	14	27	35	15	14	27	35
	Water connections - IN	"G	2 x 1½"	2 x 1½"	2 x 1½"	2 x 1½"	4 x 1½"	4 x 1½"	4 x 1½"	4 x 1½"
	Water connections - OUT	"G	2"	2"	2"	2"	2 X 2"	2 X 2"	2 X 2"	2 X 2"
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3+ N / 50 - - - >							
	Max. running current	A	40	58	70	70	80	116	140	140
	Max. inrush current	A	150	159	210	210	190	217	280	280
Sound pressure (3)	STD	dB(A)	60	63	70	70	62	65	73	72
Weights	Transport weight	Kg	611	617	663	688	902	918	1015	1084
	Operating weight	Kg	630	640	690	720	940	960	1050	1130

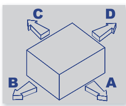
DIMENSIONS

CWW			182	202	262	302	364	404	524	604
L	STD	mm	1950	2150	2380	2150	2150	2150	2400	2650
	SSL	mm	1950	2150	2350	2150	2150	2150	2400	2650
P	STD	mm	810	810	810	810	810	810	810	830
	SSL	mm	950	950	950	950	950	950	950	950
H	STD	mm	1400	1400	1400	1400	1500	1500	1500	1635
	SSL	mm	1400	1400	1400	1400	1620	1620	1620	1750

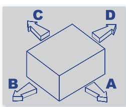
DIMENSIONAL



CLEREANCE AREA



CWW 182 ÷ 302		
A	mm	1000
B (*)	mm	800
C	mm	500
D	mm	500



CWW 364 ÷ 604		
A	mm	2100
B (*)	mm	800
C	mm	500
D	mm	500

NOTES

(1) Chilled water from 12° to 7°C. Condensing water from 30° to 35°C. With well water from 15 to 30°C, the cooling capacity increases by 6% and the power input decreases by 12%.
(2) Hot water from 40° to 45°C. Well water from 15 to 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) B SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CWW 201÷702

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS WITH SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 52 kW TO 195 kW.

UNIT DESCRIPTION

The CWW 201÷702 water coolers and heat pumps are intended to satisfy the needs of domestic or industrial systems which require high power, space-saving units and quiet operation. In fact, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
These units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Equipped with semihermetic compressors and tube-bundle exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the versions with tank, with pump or with tank and pump; and a series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 8 models with cooling capacities ranging from 52 to 195 kW.

VERSIONS

CWW
Cooling only

CWW/SSL
Super silencied cooling only

CWW/WP
Reversible heat pump

CWW/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection and intercepting valves.
- Shell and tube type condenser, with easily removable cast iron heads to enable acess for maintenance operations. Each refrigerant circuit is supplied with an indipendent condenser. Water connections for cooling tower operation.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
MF	Muffler
SP	Inertial tank
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
PV2	2-ways pressostatic valve
PV3	3-ways pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

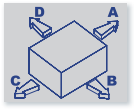
CWW			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	52,0	64,2	76,4	85,7	113,3	136,9	152,8	171,3	194,1
	Absorbed power (1)	kW	14,5	18,3	23,1	27,6	33,7	43,5	45,8	57,5	65,1
Heating	Heating capacity (2)	kW	57,3	70,8	84,3	94,5	125,0	151,1	168,6	189,1	214,2
	Absorbed power (2)	kW	15,4	18,9	22,5	25,3	33,4	40,2	44,8	50,3	56,9
Compressors	Quantity	n°	1	1	1	1	1	1	2	2	2
	Type		<- Semi-hermetics ->								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,47	3,06	3,64	4,08	5,42	6,53	7,31	8,19	9,28
	Pressure drops	kPa	37	30	34	23	24	31	33	21	27
	Water connections	"G	1½"	2½"	2½"	2½"	DN80	DN80	DN80	DN100	DN100
Condenser	Water flow	l/s	3,18	3,94	4,75	5,41	7,02	8,62	9,49	10,93	12,38
	Pressure drops	kPa	13	14	22	27	35	48	22	27	36
	Water connections - IN	"G	2 x 1½"	2 x 1½"	2 x 1½"	2 x 1½"	2 x 1½"	2 x 1½"	4 x 1½"	4 x 1½"	4 x 1½"
	Water connections - OUT	"G	2"	2"	2"	2"	2"	2"	2 X 2"	2 X 2"	2 X 2"
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3+ N / 50 ->								
	Max. running current	A	37	45	53	60	78	92	106	120	122
	Max. inrush current	A	97	116	135	147	180	226	188	207	208
Sound pressure (3)	STD	dB(A)	62	65	66	67	69	69	69	70	71
Weights	Transport weight	Kg	651	667	683	718	747	762	1025	1081	1116
	Operating weight	Kg	670	690	710	750	790	810	1080	1150	1190

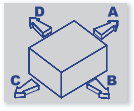
DIMENSIONS

CWW			201	251	301	321	401	501	602	642	702
L	STD	mm	1950	2150	2380	2150	2150	2150	2400	2650	2650
	SSL	mm	1950	2150	2350	2150	2150	2150	2400	2650	2650
P	STD	mm	850	850	850	850	850	850	850	850	850
	SSL	mm	950	950	950	950	950	950	950	950	950
H	STD	mm	1400	1400	1400	1400	1400	1400	1425	1450	1500
	SSL	mm	1400	1400	1400	1400	1400	1400	1600	1600	1650

DIMENSIONAL

CLEREANCE AREA





CWW 201 ÷ 501		
A	mm	1500
B (*)	mm	800
C	mm	500
D	mm	500

CWW 602 ÷ 702		
A	mm	2300
B (*)	mm	800
C	mm	500
D	mm	500

NOTES

(1) Chilled water from 12° to 7°C. Condensing water from 30° to 35°C. With well water from 15 to 30°C, the cooling capacity increases by 6% and the power input decreases by 12%.
(2) Hot water from 40° to 45°C. Well water from 15 to 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) B SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

CWW 802÷3204

WATER COOLED LIQUID CHILLERS WITH SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 218 kW TO 782 kW.

UNIT DESCRIPTION

The water coolers of the CWW 802÷3204 series are intended to satisfy the needs of the services sector or industrial systems requiring high power, thus making it convenient to split the workload over several compressors.
Equipped with semihermetic compressors, tube-bundle exchangers and connections for condensation with tower water or well water or with a dry-cooler, these units can also be produced in super silent versions; furthermore, they have a series of accessories which are factory-assembled of supplied separately such as: heat recuperator in series or in parallel, soft start and, if necessary, a device for operating a heat pump. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.
This extremely functional and versatile series includes 14 models with cooling capacities ranging from 218 to 782 kW.

VERSIONS

CWW
Cooling only

CWW/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, incorporated thermal protection and shut off valves.
- Shell and tube type condenser, with easily removable cast iron heads to enable acess for maintenance operations. Each refrigerant circuit is supplied with an indipendent condenser. Water connections for well water or closed circuit.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
SS	Soft start
DP	Device for heat pump operation
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
PV3	3-ways pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

CWW			802	902	1002	1102	1202	1502	1602
Cooling	Cooling capacity (1)	kW	218	237	266	294	321	348	390
	Absorbed power (1)	kW	59	64	69	76	85	91	105
Heating	Heating capacity (2)	kW	247	270	302	333	364	393	424
	Absorbed power (2)	kW	61	67	72	81	89	96	107
Compressors	Quantity	n°	2	2	2	2	2	2	2
	Type		< - Semi-hermetics ->						
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	10,42	11,32	12,71	14,05	15,34	16,63	18,63
	Pressure drops	kPa	29	34	21	26	31	35	37
	Water connections	"G	100	100	125	125	125	125	125
Condenser	Water flow	l/s	13,23	14,38	16,01	17,68	19,40	20,97	23,65
	Pressure drops	kPa	45	52	44	44	43	50	46
	Water connections	"G	2"	2"	2"½	2"½	2"½	2"½	2"½
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->						
	Max. running current	A	167	167	185	240	260	296	296
	Max. inrush current	A	299	299	330	430	440	566	566
Sound pressure (3)	STD	dB(A)	65	65	65	65	66	66	66
	STD with SL accessory	dB(A)	62	62	62	62	63	63	63
	SSL	dB(A)	59	59	59	59	60	60	60
Weights	Transport weight	Kg	1290	1330	1370	1575	1595	1615	1660
	Operating weight	Kg	1380	1420	1500	1710	1730	1755	1790

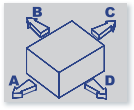
CWW			1604	1804	2004	2204	2404	3004	3204
Cooling	Cooling capacity (1)	kW	436	474	532	588	641	697	782
	Absorbed power (1)	kW	118	128	136	152	169	183	209
Heating	Heating capacity (2)	kW	494	540	602	666	721	785	840
	Absorbed power (2)	kW	122	133	146	161	178	191	215
Compressors	Quantity	n°	4	4	4	4	4	4	4
	Type		< - Semi-hermetics ->						
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	20,83	22,65	25,42	28,09	30,63	33,30	37,36
	Pressure drops	kPa	45	32	51	52	61	43	45
	Water connections	"G	150	150	150	200	200	200	200
Condenser	Water flow	l/s	26,47	28,76	32,01	35,36	38,70	42,04	47,35
	Pressure drops	kPa	59	40	46	43	54	46	50
	Water connections	"G	2"½	DN80	DN80	DN80	DN80	DN80	DN80
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->						
	Max. running current	A	335	335	371	480	520	592	592
	Max. inrush current	A	466	466	516	670	700	862	862
Sound pressure (3)	STD	dB(A)	66	66	66	66	67	67	67
	STD with SL accessory	dB(A)	63	63	63	63	64	64	64
	SSL	dB(A)	60	60	60	60	61	61	61
Weights	Transport weight	Kg	2390	2465	2480	3100	3150	3200	3220
	Operating weight	Kg	2580	2660	2675	3400	3465	3500	3520

DIMENSIONS

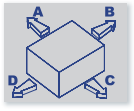
CWW			802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204	2404	3004	3204
L	STD	mm	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100	3100
	SSL	mm	3300	3300	3300	3300	3300	3300	3300	3100	3100	3100	3100	3100	3100	3100
P	STD	mm	780	780	780	780	780	780	780	1420	1420	1420	1420	1420	1420	1420
	SSL	mm	780	780	780	780	780	780	780	1420	1420	1420	1420	1420	1420	1420
H	STD	mm	1700	1700	1700	1700	1700	1700	1700	1900	1900	1900	1900	1900	1900	1900
	SSL	mm	1700	1700	1700	1700	1700	1700	1700	1900	1900	1900	1900	1900	1900	1900

DIMENSIONAL

CLEREANCE AREA



CWW 802 ÷ 1602		
A	mm	500
B	mm	500
C	mm	500
D (*)	mm	800



CWW 1604 ÷ 3204		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

NOTES

(1) Chilled water from 12° to 7°C. Condensing water from 30° to 35°C.
(2) Hot water from 40° to 45°C. Water temperature at the evaporator 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) D SIDE: Electrical board side.
C SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

CWW 702-V÷5602-V

WATER COOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 185 kW TO 1630 kW.

UNIT DESCRIPTION

The water coolers of the CWW 702-V÷5602-V series are intended to satisfy the needs of the services sector or industrial systems requiring high power, thus making it convenient to split the workload over several compressors.
Equipped with latest generation screw compressors, tube-bundle exchangers and connections for condensation with tower water or well water or with a dry-cooler, these units can also be produced in super silent versions; furthermore, they have a series of accessories which are factory-assembled of supplied separately such as: heat recuperator in series or in parallel, soft start and, if necessary, a device for operating a heat pump. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.
This extremely functional and versatile series includes 20 models with cooling capacities ranging from 185 to 1630 kW.

VERSIONS

CWW
Cooling only

CWW/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, cranckcase heater, oil sight glass, thermal protection and intercepting valves.
- Shell and tube type condenser, with easily removable cast iron heads to enable acess for maintenance operations. Each refrigerant circuit is supplied with an indipendent condenser. Water connections for well water or closed circuit.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
RZ	Compressors stepless control
HR	Desuperheater
HRT	Total heat recovery
RF	Cooling circuit shut off valves
FE	Evaporator heater
SS	Soft start
DP	Device for heat pump operation
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
PV3	3-ways pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

CWW			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
Cooling	Cooling capacity (1)	kW	185	226	246	291	319	370	427	470	526	605
	Absorbed power (1)	kW	47	58	62	72	78	90	103	116	125	140
Heating	Heating capacity (2)	kW	212	255	282	323	355	412	475	534	581	671
	Absorbed power (2)	kW	54	65	71	80	86	99	114	132	137	153
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		< - Screw - >									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	8,84	10,80	11,75	13,90	15,24	17,68	20,40	22,46	25,13	28,91
	Pressure drops	kPa	52	62	43	53	30	39	44	53	53	57
	Water connections	"G	100	100	125	125	125	125	150	150	150	200
Condenser	Water flow	l/s	11,08	13,57	14,72	17,34	18,97	21,98	25,32	28,00	31,10	35,59
	Pressure drops	kPa	46	48	43	43	55	58	55	39	50	44
	Water connections	"G	2"	2"	2"½	2"½	2"½	2"½	2"½	DN80	DN80	DN80
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 - >									
	Max. running current	A	136	160	174	180	192	248	280	314	336	410
	Max. inrush current	A	308	357	366	393	469	475	491	662	663	753
Sound pressure (3)	STD	dB(A)	63	63	63	63	64	64	64	66	66	66
	SSL	dB(A)	57	57	57	57	58	58	58	60	60	60
Weights	Transport weight	Kg	1150	1310	1285	1410	1575	1845	2010	2060	2295	2460
	Operating weight	Kg	1230	1390	1420	1550	1720	1980	2200	2250	2480	2760

CWW			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
Cooling	Cooling capacity (1)	kW	633	754	843	897	931	1026	1096	1332	1508	1630
	Absorbed power (1)	kW	150	176	195	207	215	236	252	316	347	373
Heating	Heating capacity (2)	kW	700	832	928	994	1030	1135	1212	1500	---	---
	Absorbed power (2)	kW	165	194	215	225	237	261	278	342	---	---
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		< - Screw - >									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	30,24	36,02	40,28	42,86	44,48	49,02	52,36	63,64	72,05	77,88
	Pressure drops	kPa	60	49	43	45	46	60	51	53	59	56
	Water connections	"G	200	200	200	200	200	200	200	200	200	200
Condenser	Water flow	l/s	37,41	44,43	49,59	52,75	54,75	60,30	64,40	78,74	88,63	95,70
	Pressure drops	kPa	51	54	58	40	41	41	42	54	30	35
	Water connections	"G	DN80	DN80	DN80	DN100	DN100	DN100	DN100	DN100	DN125	DN125
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 - >									
	Max. running current	A	392	450	490	552	540	600	668	800	936	1002
	Max. inrush current	A	514	579	619	693	723	843	929	995	1524	1560
Sound pressure (3)	STD	dB(A)	66	67	68	68	69	69	68	69	70	70
	SSL	dB(A)	60	61	62	62	63	63	62	63	64	64
Weights	Transport weight	Kg	2515	2845	2855	3220	3240	3830	4050	4210	4810	4980
	Operating weight	Kg	2820	3150	3200	3560	3580	4150	4480	4790	5430	5660

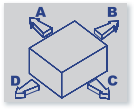
DIMENSIONS

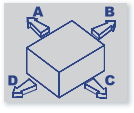
CWW			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
L	STD	mm	3300	3300	3300	3300	3300	3300	3300	3100	3100	3100
P	STD	mm	780	780	780	780	780	780	780	1420	1420	1420
H	STD	mm	2000	2000	2000	2000	2000	2000	2000	2150	2150	2150

CWW			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
L	STD	mm	3100	3100	3100	3300	3300	3800	3800	3800	3800	4600
P	STD	mm	1420	1420	1420	1450	1450	1450	1550	1550	1650	1650
H	STD	mm	2150	2150	2150	2150	2150	2150	2200	2200	2200	2200

DIMENSIONAL

CLEREANCE AREA





CWW 702-V÷ 1602-V		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

CWW 1802-V ÷ 5602-V		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

NOTES

(1) Chilled water from 12° to 7°C. Condensing water from 30° to 35°C.
(2) Hot water from 40° to 45°C. Water temperature at the evaporator 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

CWW/Y 1302-B÷4202-B

WATER COOLED LIQUID CHILLERS WITH SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 260 kW TO 1150 kW.

UNIT DESCRIPTION

The water coolers of the CWW/Y 1302-B÷4202-B series, with R134a refrigerant, are intended to satisfy the needs of the services sector or industrial systems requiring high power, thus making it convenient to split the workload over several compressors.
Equipped with latest generation screw compressors, tube-bundle exchangers and connections for condensation with tower water or well water or with a dry-cooler, these units can also be produced in super silent versions; furthermore, they have a series of accessories which are factory-assembled of supplied separately such as: heat recuperator in series or in parallel, soft start and, if necessary, a device for operating a heat pump. Designed and produced to optimize the layout of each component so as to make any necessary maintenance operations more convenient, these units have an essential and compact structure intended for indoor installation.
This extremely functional and versatile series includes 20 models with cooling capacities ranging from 185 to 1630 kW.

VERSIONS

CWW/Y
Cooling only

CWW/Y/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw semihermetic, with oil separator, cranckcase heater, oil sight glass, thermal protection and shut off valve and stepless capacity steps.
- Shell and tube type condenser, with easily removable cast iron heads to enable acess for maintenance operations. Each refrigerant circuit is supplied with an indipendent condenser. Water connections for well water or closed circuit.
- Shell and tube type evaporator, with two indipendent refrigerants circuits and one water circuit.
- R134a refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
HR	Desuperheater
HRT	Total heat recovery
RF	Cooling circuit shut off valves
FE	Evaporator heater
SS	Soft start
DP	Device for heat pump operation
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
PV3	3-ways pressostatic valve
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R134a

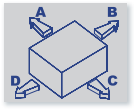
CWW/Y			1302-B	1502-B	1702-B	1902-B	2002-B	2602-B	2802-B	3002-B	3602-B	4202-B
Cooling	Cooling capacity (1)	kW	267	323	374	426	488	577	660	750	892	1049
	Absorbed power (1)	kW	57	69	80	94	99	123	136	150	182	210
Heating	Heating capacity (2)	kW	293	354	409	465	533	628	719	819	977	1146
	Absorbed power (2)	kW	67	81	93	105	120	150	166	185	221	258
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		< - Screw ->									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	< - Stepless ->									
Evaporator	Water flow	l/s	12,76	15,43	17,87	20,35	23,32	27,57	31,53	35,83	42,62	50,12
	Pressure drops	kPa	51	43	55	60	48	61	67	66	47	62
	Water connections	"G	100	125	125	125	125	150	150	150	200	200
Condenser	Water flow	l/s	15,48	18,71	21,67	24,67	28,03	33,43	38,02	42,99	51,32	60,17
	Pressure drops	kPa	43	49	51	47	36	52	48	45	57	49
	Water connections	"G	2"1/2	2"1/2	2"1/2	2"1/2	DN80	DN80	DN80	DN80	DN80	DN100
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 - >									
	Max. running current	A	247	265	333	349	448	479	501	566	575	615
	Max. inrush current	A	178	214	238	270	292	354	398	438	456	536
Sound pressure (3)	STD	dB(A)	69	69	70	70	70	70	70	72	73	74
	SSL	dB(A)	64	64	65	65	65	65	65	67	66	69
Weights	Transport weight	Kg	2124	2183	2209	2240	2973	3121	3174	4274	4613	4825
	Operating weight	Kg	2240	2350	2380	2460	3160	3440	3490	4580	5050	5280

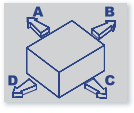
DIMENSIONS

CWW/Y			1302-B	1502-B	1702-B	1902-B	2002-B	2602-B	2802-B	3002-B	3602-B	4202-B
L	STD	mm	3550	3550	3550	3550	3300	3500	3500	3850	3850	3850
	SSL	mm	3550	3550	3550	3550	3300	3500	3500	3850	3850	3850
P	STD	mm	800	800	800	800	1400	1450	1450	1550	1550	1550
	SSL	mm	800	800	800	800	1400	1450	1450	1550	1550	1550
H	STD	mm	2000	2000	2000	2000	2150	2150	2150	2000	2000	2000
	SSL	mm	2000	2000	2000	2000	2150	2150	2150	2000	2000	2000

DIMENSIONAL

CLEREANCE AREA





CWW/Y 1302-B÷ 1902-B		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

CWW/Y 2002-B ÷ 4202-B		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

NOTES

(1) Chilled water from 12° to 7°C. Condensing water from 30° to 35°C.
(2) Hot water from 40° to 45°C. Water temperature at the evaporator 10°C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

MEA 18÷151

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS FOR REMOTE CONDENSING WITH SCROLL COMPRESSORS AND PLATE EXCHANGERS.

FROM 5 kW TO 42 kW.

UNIT DESCRIPTION

The water coolers and heat pumps for remote condensation of the MEA 18÷151 series are intended to satisfy the needs of domestic or service sector systems which require medium power, space-saving units and quiet operation. In fact, combined with the remote condenser, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
Equipped with Scroll compressors and plate-type exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the version with tank and pump; and a series of accessories supplied separately rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 13 models with cooling capacities ranging from 5 to 42 kW.

VERSIONS

MEA
Cooling only

MEA/SP
Cooling only with tank and pump

MEA/WP
Reversible heat pump

MEA/WP/SP
Reversible heat pump with tank and pump

FEATURES

- Self-supporting prepainted steel frame.
- Scroll compressors complete with overload protection (klixon) embedded in the motor and crankcase, if needed.
- Evaporator in AISI 316 stainless steel brazewelded plates type, complete with water differential pressure switch.
- R407C refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (41÷151).
- Microprocessor control and regulation system.
- Water circuit for SP versions includes: insulated tank, circulator or pump, safety valve, gauge and vessel.

ACCESSORIES

Loose accessories:

PS	Circulating pump
PB	Low pressure switch
CR	Remote control panel
IS	RS 485 serial interface
AG	Rubber shock absorbers

TECHNICAL DATA

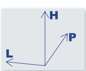
R407C

MEA			18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Cooling capacity (1)	kW	4,8	6,2	7,4	8,7	10,8	13,1	15,7	17,7	19,3	23,8	27,6	34,1	42,0
	Absorbed power (1)	kW	1,4	1,7	2,0	2,3	3,0	3,5	4,5	5,0	5,5	6,4	7,7	9,4	13,4
Heating	Heating capacity (2)	kW	5,6	7,1	8,4	9,8	12,2	14,8	18,0	20,1	22,0	26,5	31,2	38,5	46,1
	Absorbed power (2)	kW	1,7	2,0	2,5	2,9	3,6	4,5	5,6	6,3	6,7	8,0	9,7	11,9	16,4
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type		< - - - Scroll - - - >												
Evaporator	Water flow	l/s	0,23	0,30	0,35	0,42	0,52	0,63	0,75	0,85	0,92	1,14	1,32	1,63	2,01
	Pressure drops	kPa	23	26	23	20	32	29	28	22	25	32	28	26	27
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Connections	Discharge line	Ø	12	12	12	12	16	16	16	16	22	22	22	22	22
	Liquid line	Ø	10	10	10	10	12	12	12	12	12	12	12	12	16
Electrical characteristics	Power supply	V/Ph/Hz	<-- 230/1/50 -->			<- - - 400 / 3+ N / 50 - - - >									
	Max. running current	A	11	15	17	7	10	12	14	16	15	18	21	26	30
	Max. inrush current	A	47	62	76	46	50	66	74	101	99	123	127	167	189
Version with tank and pump	Pump nominal power	kW	0,19	0,19	0,19	0,19	0,30	0,30	0,30	0,30	0,45	0,55	0,55	0,55	0,75
	Available static pressure	kPa	51	46	44	43	158	151	132	128	165	218	186	171	175
	Storage water volume	l	50	50	50	50	50	50	50	50	150	150	150	150	150
	Expansion vessel	l	2	2	2	2	2	2	2	2	5	5	5	5	5
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Sound pressure (3)	STD	dB(A)	36	36	36	37	39	39	40	41	43	43	43	44	44
Weights	Transport weight (4)	Kg	79	81	83	85	88	89	92	94	180	182	190	196	210
	Transport weight (5)	Kg	104	106	108	110	112	113	116	118	259	261	269	275	289
	Operating weight (4)	Kg	80	82	84	86	90	91	94	96	183	185	193	199	213
	Operating weight (5)	Kg	155	157	159	161	163	164	167	169	412	414	422	428	442

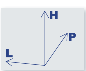
DIMENSIONS

MEA			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	550	550	550	550	550	550	550	550	550	550	550	550	550
	SP	mm	550	550	550	550	550	550	550	550	1100	1100	1100	1100	1100
P	STD	mm	550	550	550	550	550	550	550	550	550	550	550	550	550
H	STD	mm	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200

DIMENSIONAL

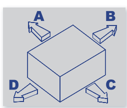


18 ÷ 151

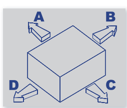


SP 81÷151

CLEREANCE AREA



MEA 18 ÷ 71		
A	mm	500
B	mm	200
C	mm	500
D (*)	mm	800



MEA/SP 81 ÷ 151		
A	mm	800
B	mm	500
C	mm	800
D (*)	mm	800

NOTES

(1) Chilled water from 12 to 7 °C, medium condensing temperature 45 °C.
(2) Heated water from 40 to 45 °C, medium evaporating temperature 4 °C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) D SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

MEA 182÷604

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS FOR REMOTE CONDENSING WITH SCROLL COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 45 kW TO 160 kW.

UNIT DESCRIPTION

The MEA 182÷604 water coolers and heat pumps for remote condensn-ing are intended to satisfy the needs of domestic or industrial systems which require high power, space-saving units and quiet operation. In fact, these units are ideal for indoor installation and, equipped with a self-con-tained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
These units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Equipped with Scroll compressors and tube-bundle exchangers, these units have cooling and hydraulic circuits complete with everything neces-sary for quick installation and high energy efficiency, even in the versions with tank, with pump or with tank and pump; and a series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 8 models with cool-ing capacities ranging from 45 to 160 kW.

VERSIONS

MEA
Cooling only

MEA/SSL
Super silencied cooling only

MEA/WP
Reversible heat pump

MEA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protec-tion and crankcase heater if needed.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
SP	Inertial tank
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

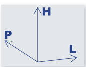
R407C

MEA			182	202	262	302	364	404	524	604
Cooling	Cooling capacity (1)	kW	45,1	52,5	68,7	79,1	90,2	104,9	137,4	158,2
	Absorbed power (1)	kW	13,9	16,2	21,4	25,2	32,6	38,3	43,8	51,4
Heating	Heating capacity (2)	kW	51,1	59,4	77,8	89,6	102,1	118,8	155,5	179,1
	Absorbed power (2)	kW	15,0	16,0	22,1	26,2	29,6	33,9	43,1	50,4
Compressors	Quantity	n°	2	2	2	2	4	4	4	4
	Type		<- - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - ->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4
Evaporator	Water flow	l/s	2,1	2,5	3,3	3,8	4,3	5,0	6,5	7,5
	Pressure drops	kPa	27	24	34	25	22	28	35	26
	Water connections	"G	1½"	2½"	2½"	2½"	DN80	DN80	DN80	DN100
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - 400 / 3+ N / 50 - - - - - - - - - - ->							
	Max. running current	A	40	58	58	70	80	116	116	140
	Max. inrush current	A	150	159	164	210	190	217	222	280
Sound pressure (3)	STD	dB(A)	63	66	67	67	69	69	69	70
	STD with SL accessory	dB(A)	61	64	71	70	63	66	73	73
	SSL	dB(A)	55	58	65	65	58	61	68	67
Weights	Transport weight (4)	Kg	538	541	573	600	747	789	839	908
	Operating weight (4)	Kg	550	556	590	620	776	820	874	954
	Transport weight (5)	Kg	836	839	1223	1250	1397	1460	1748	1817
	Operating weight (5)	Kg	848	854	1240	1270	1426	1491	1783	1863

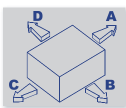
DIMENSIONS

MEA			182	202	262	302	364	404	524	604
L	STD	mm	1740	1740	1740	1950	2100	2125	2400	2650
	SSL	mm	1740	1740	1740	1950	2100	2125	2400	2650
P	STD	mm	810	810	810	810	810	810	810	830
	SSL	mm	950	950	950	950	950	950	950	950
H	STD	mm	1050	1075	1075	1200	1075	1100	1125	1250
	SSL	mm	1175	1200	1200	1325	1200	1225	1250	1400

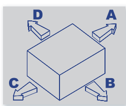
DIMENSIONAL



CLEREANCE AREA



MEA 182 ÷ 302		
A	mm	1000
B (*)	mm	800
C	mm	500
D	mm	500



MEA 364 ÷ 604		
A	mm	2100
B (*)	mm	800
C	mm	500
D	mm	500

NOTES

(1) Chilled water from 12 to 7 °C, medium condensing temperature 45 °C.
(2) Heated water from 40 to 45 °C, medium evaporating temperature 4 °C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) B SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

MEA 201÷702

WATER COOLED LIQUID CHILLERS AND HEAT PUMPS FOR REMOTE CONDENSING WITH SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 48 kW TO 204 kW.

UNIT DESCRIPTION

The MEA 201÷702 water coolers and heat pumps for remote condensing are intended to satisfy the needs of domestic or industrial systems which require high power, space-saving units and quiet operation. In fact, these units are ideal for indoor installation and, equipped with a self-contained structure, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
These units can be combined with terminal units and, if necessary, the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently without compromises.
Equipped with semihermetic compressors and tube-bundle exchangers, these units have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency, even in the versions with tank, with pump or with tank and pump; and a series of accessories, factory-assembled or supplied separately, such as the desuperheater or the total heat recuperator, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 8 models with cooling capacities ranging from 48 to 204 kW.

VERSIONS

MEA
Cooling only

MEA/SSL
Super silencied cooling only

MEA/WP
Reversible heat pump

MEA/WP/SSL
Super silencied reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection and intercepting valves.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
MF	Muffler
SP	Inertial tank
SPU	Inertial tank and single circulating pump
SPD	Inertial tank and double circulating pump
RF	Cooling circuit shut off valves
FE	Evaporator heater
FU	Evaporator heater for SPU
FD	Evaporator heater for SPD
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

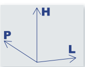
R407C

MEA			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	48,2	67,0	79,6	89,2	117,9	142,5	159,3	178,3	204,0
	Absorbed power (1)	kW	13,8	20,8	26,3	31,6	39,2	50,7	53,2	58,8	67,4
Heating	Heating capacity (2)	kW	53,2	74,0	87,9	98,4	130,1	157,3	175,7	196,8	225,0
	Absorbed power (2)	kW	15,0	20,	25,0	28,0	38,0	46,0	49,0	56,0	63,0
Compressors	Quantity	n°	1	1	1	11	1	1	2	2	2
	Type		< - - - - - - - - - - - - - - - - Semi-hermetics - - - - - - - - - - - - - - - - ->								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
Evaporator	Water flow	l/s	2,3	3,2	3,8	4,3	5,6	6,8	7,6	8,5	9,7
	Pressure drops	kPa	30	39	46	31	37	50	47	33	43
	Water connections	"G	1½"	2½"	2½"	2½"	DN80	DN80	DN80	DN100	DN100
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - 400 / 3+ N / 50 - - - - - - - - - - >								
	Max. running current	A	37	45	53	57	75	92	106	114	122
	Max. inrush current	A	97	113	122	136	173	203	175	193	209
Sound pressure (3)	STD	dB(A)	63	66	67	68	69	69	69	70	71
	STD with SL accessory	dB(A)	60	63	64	65	66	66	66	67	68
	SSL	dB(A)	58	61	62	62	64	64	64	65	66
Weights	Transport weight (4)	Kg	578	591	593	630	657	663	845	904	934
	Operating weight (4)	Kg	876	889	1213	1250	1307	1313	1754	1813	1843
	Transport weight (5)	Kg	590	606	610	650	686	694	880	950	980
	Operating weight (5)	Kg	888	904	1230	1270	1336	1344	1789	1859	1889

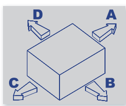
DIMENSIONS

MEA			201	251	301	321	401	501	602	642	702
L	STD	mm	1740	1740	1740	1950	2100	2125	2400	2650	2650
	SSL	mm	1740	1740	1740	1950	2100	2125	2400	2650	2650
P	STD	mm	850	850	850	850	850	850	850	850	850
	SSL	mm	950	950	950	950	950	950	950	950	950
H	STD	mm	1000	1000	1000	1000	1050	1075	1000	1075	1100
	SSL	mm	1075	1100	1100	1100	1200	1225	1125	1200	1250

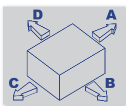
DIMENSIONAL



CLEREANCE AREA



MEA 201 ÷ 501		
A	mm	1500
B (*)	mm	800
C	mm	500
D	mm	500



MEA 602 ÷ 702		
A	mm	2300
B (*)	mm	800
C	mm	500
D	mm	500

NOTES

(1) Chilled water from 12 to 7 °C, medium condensing temperature 45 °C.
(2) Heated water from 40 to 45 °C, medium evaporating temperature 4 °C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(4) Unit without tank and pump.
(5) Unit with tank and pump.
(*) B SIDE: Electrical board side.
N.B. Weights of SSL and WP versions are indicated on the technical book.

MEA 802÷3204

WATER COOLED LIQUID CHILLERS FOR REMOTE CONDENSING WITH SEMI-HERMETIC COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 200 kW TO 720 kW.

UNIT DESCRIPTION

The water coolers for remote condensation of the MEA 802÷3204 series are intended to satisfy the needs of the services sector or industrial systems which require high power with continual refrigerant delivery, space-saving units and quiet operation.
In fact, combined with the remote condenser, these units are ideal for indoor installation and, equipped with a self-supporting structure that sustains the main components, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
Equipped with semihermetic compressors and tube-bundle exchangers, these units can also be produced in a super silent version. They have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency; and a series of accessories, factory-assembled or supplied separately, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 14 models with cooling capacities ranging from 200 to 720 kW.

VERSIONS

MEA
Cooling only

MEA/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection and intercepting valves.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
HR	Desuperheater
HRT	Total heat recovery
MF	Muffler
RF	Cooling circuit shut off valves
FE	Evaporator heater
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote display
IS	RS 485 serial interface
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

MEA			802	902	1002	1102	1202	1502	1602
Cooling	Cooling capacity (1)	kW	200	220	246	273	297	322	360
	Absorbed power (1)	kW	65	71	80	88	96	104	117
Compressors	Quantity	n°	2	2	2	2	2	2	2
	Type		< - Semi-hermetics - >						
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	9,56	10,51	11,75	13,04	14,19	15,38	17,20
	Pressure drops	kPa	27	32	20	24	29	33	35
	Water connections	"G	100	100	125	125	125	125	125
Electrical characteristics	Power supply	V/Ph/Hz	< - 400 / 3 / 50 - >						
	Max. running current	A	167	167	185	240	260	296	296
	Max. inrush current	A	299	299	330	430	440	566	566
Sound pressure (2)	STD	dB(A)	65	65	65	65	66	66	66
	STD with SL accessory	dB(A)	62	62	62	62	63	63	63
	SSL	dB(A)	59	59	59	59	60	60	60
Weights	Transport weight	Kg	1050	1100	1135	1310	1330	1350	1410
	Operating weight	Kg	1110	1160	1240	1415	1430	1450	1505

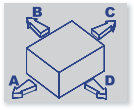
MEA			1604	1804	2004	2204	2404	3004	3204
Cooling	Cooling capacity (1)	kW	401	439	492	546	595	644	720
	Absorbed power (1)	kW	132	144	161	174	192	207	235
Compressors	Quantity	n°	4	4	4	4	4	4	4
	Type		< - Semi-hermetics - >						
	Refrigerant circuits	n°	2	2	2	2	2	2	2
	Capacity steps	n°	4	4	4	4	4	4	4
Evaporator	Water flow	l/s	19,16	20,97	23,51	26,09	28,43	30,77	34,40
	Pressure drops	kPa	41	30	48	49	57	40	43
	Water connections	"G	150	150	150	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	< - 400 / 3 / 50 - >						
	Max. running current	A	335	335	371	480	520	592	592
	Max. inrush current	A	466	466	516	670	700	862	862
Sound pressure (2)	STD	dB(A)	66	66	66	66	67	67	67
	STD with SL accessory	dB(A)	63	63	63	63	64	64	64
	SSL	dB(A)	60	60	60	60	61	61	61
Weights	Transport weight	Kg	1900	1940	1990	2550	2600	2650	2680
	Operating weight	Kg	2045	2075	2115	2780	2830	2870	2900

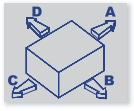
DIMENSIONS

MEA			802	902	1002	1102	1202	1502	1602	1604	1804	2004	2204	2404	3004	3204
L	STD	mm	3100	3100	3100	3100	3100	3100	3100	3800	3800	3800	3800	3800	3800	3800
	SSL	mm	3300	3300	3300	3300	3300	3300	3300	3800	3800	3800	3800	3800	3800	3800
P	STD	mm	780	780	780	780	780	780	780	1100	1100	1100	1100	1100	1100	1100
	SSL	mm	780	780	780	780	780	780	780	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1400	1400	1400	1400	1400	1400	1400	1700	1700	1700	1700	1700	1700	1700
	SSL	mm	1400	1400	1400	1400	1400	1400	1400	1700	1700	1700	1700	1700	1700	1700

DIMENSIONAL

CLEREANCE AREA





MEA 802 ÷ 1602		
A	mm	500
B	mm	500
C	mm	500
D (*)	mm	800

MEA 1604 ÷ 3204		
A	mm	500
B (*)	mm	800
C	mm	500
D	mm	500

NOTES

(1) Chilled water from 12 to 7 °C, medium condensing temperature 45 °C.
(2) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) D SIDE: Electrical board side.
B SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

MEA 702-V÷5602-V

WATER COOLED LIQUID CHILLERS FOR REMOTE CONDENSING WITH SCREW COMPRESSORS AND SHALL AND TUBE EXCHANGERS.

FROM 170 kW TO 1500 kW.

UNIT DESCRIPTION

The water coolers for remote condensation of the MEA 702-V÷5602-V series are intended to satisfy the needs of the services sector or industrial systems which require high power with continual refrigerant delivery, space-saving units and quiet operation. In fact, combined with the remote condenser, these units are ideal for indoor installation and, equipped with a self-supporting structure that sustains the main components, they reduce the overall dimensions to a minimum while at the same time making installation and maintenance operations easier.
Equipped with latest generation screw compressors and tube-bundle exchangers, these units can also be produced in a super silent version. They have cooling and hydraulic circuits complete with everything necessary for quick installation and high energy efficiency; and a series of accessories, factory-assembled or supplied separately, rounds off the variety of equipment in this product range.
This extremely functional and versatile series includes 20 models with cooling capacities ranging from 170 to 1500 kW.

VERSIONS

MEA
Cooling only

MEA/SSL
Super silencied cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, crankcase heater, oil sight glass, thermal protection andintercepting valves.
- Evaporator shell and tube type, with two indipendent refrigerants circuits and one water circuit.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
RZ	Compressors stepless control
HR	Desuperheater
HRT	Total heat recovery
RF	Cooling circuit shut off valves
FE	Evaporator heater
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
AG	Rubber shock absorbers
AM	Spring shock absorbers
FL	Flow switch

TECHNICAL DATA

R407C

MEA			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
Cooling	Cooling capacity (1)	kW	170	198	227	259	290	338	386	433	480	541
	Absorbed power (1)	kW	59	69	79	89	95	113	125	145	155	169
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		<- Screw ->									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	8,12	9,46	10,85	12,37	13,86	16,15	18,44	20,69	22,93	25,85
	Pressure drops	kPa	49	59	38	48	27	35	42	48	48	53
	Water connections	"G	100	100	125	125	125	125	150	150	150	200
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 - >									
	Max. running current	A	136	160	174	180	192	248	280	314	336	410
	Max. inrush current	A	308	357	366	393	469	475	491	662	663	753
Sound pressure (2)	STD	dB(A)	64	64	64	64	65	65	65	66	66	66
	SSL	dB(A)	58	58	58	58	59	59	59	60	60	60
Weights	Transport weight	Kg	920	1050	1030	1140	1300	1540	1670	1720	1850	1985
	Operating weight	Kg	975	1110	1135	1245	1400	1635	1815	1855	1975	2215

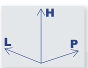
MEA			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
Cooling	Cooling capacity (1)	kW	608	687	758	828	910	992	1077	1235	1397	1500
	Absorbed power (1)	kW	192	215	235	257	278	308	340	374	433	464
Compressors	Quantity	n°	2	2	2	2	2	2	2	2	2	2
	Type		<- Screw ->									
	Refrigerant circuits	n°	2	2	2	2	2	2	2	2	2	2
	Capacity steps	n°	6	6	6	6	6	6	6	6	6	6
Evaporator	Water flow	l/s	29,05	32,82	36,22	39,56	43,48	47,40	51,46	59,01	66,75	71,67
	Pressure drops	kPa	54	45	39	42	44	54	48	50	54	51
	Water connections	"G	200	200	200	200	200	200	200	200	200	200
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 - >									
	Max. running current	A	392	450	490	552	540	600	668	800	936	1002
	Max. inrush current	A	514	579	619	693	723	843	929	995	1524	1560
Sound pressure (2)	STD	dB(A)	66	67	68	68	69	69	68	69	70	70
	SSL	dB(A)	60	61	62	62	63	63	62	63	64	64
Weights	Transport weight	Kg	2045	2330	2350	2480	2500	3020	3230	3340	3660	3800
	Operating weight	Kg	2270	2550	2550	2720	2740	3230	3530	3780	4080	4280

DIMENSIONS

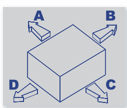
MEA			702-V	802-V	902-V	1102-V	1202-V	1502-V	1602-V	1802-V	2002-V	2202-V
L	STD	mm	3300	3300	3300	3300	3300	3300	3300	3600	3800	3800
P	STD	mm	780	780	780	780	780	780	780	1100	1100	1100
H	STD	mm	1900	1900	1900	1900	1900	1900	1900	2150	2150	2150

MEA			2402-V	3202-V	3302-V	3402-V	3602-V	4002-V	4202-V	4602-V	5002-V	5602-V
L	STD	mm	3800	3800	4100	4200	4200	4200	4400	4400	4600	5000
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	2150	2150	2150	2150	2150	2150	2200	2200	2200	2200

DIMENSIONAL



CLEREANCE AREA



MEA 702-V ÷ 5602-V		
A	mm	500
B	mm	500
C (*)	mm	800
D	mm	500

NOTES

(1) Chilled water from 12 to 7 °C, medium condensing temperature 45 °C.
(2) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

MR 1500-2500

REMOTE HYDRONIC MODULES WITH PUMP KIT.

FROM 1500 lt. AND 2500 lt.

UNIT DESCRIPTION

The remote hydronic modules with pumping group of the MR 1500-2500 series are intended to solve technical problems resulting from thermal inertia in air conditioning systems for both residential and industrial use.
Installing a tank for cooled water allows units to reduce the operating cycles of the compressors, thus extending the useful life of the machines. It also results in a greater capacity of the system itself, a remarkable operational saving even using machines with reduced capacities and a greater flexibility, being able to work with temperatures other than the design temperatures. The tanks are made in peraluman and zinc-coated plate with a capacity of 1500 and 2500 litres; they are available with circulation pump or double circulation pump accessory and are complete with all the components necessary for a quick on-site installation.

VERSIONS

MR 1500
With 1500 lt. tank

MR 2500
With 2500 lt. tank

FEATURES

- Self-supporting frame in peraluman and galvanized steel frame further protected with polyester powder painting. Easy to remove panels allow access to the inside of the unit for maintenance and other necessary operations.
- Electrical board. Present only with the accessories circulating pump, it includes: - main switch with door safety interlock; automatic switches for protection of circulating pumps, of secondary circuit and of antifreeeze heaters, signalling lamps, interface relay and clamps for external connections.
- Water circuit. Includes: insulated inertial tank, safety valve, automatic air release valves, expansion vessel, guage, automatic filling group, plant charge and discharge water shut off valve.

ACCESSORIES

Factory fitted accessories:

PU1-PU5	Circulating pump
PD1-PD5	Double circulating pump
FS	Antifreeze heater tank
FU	Antifreeze heater tank and single pump
FD	Antifreeze heater tank and double pump

TECHNICAL DATA

H2O

MR			1500		2500	
Pump kit	Storage water volume	l	1500		2500	
	Expansion vessel	l	2x25		3x25	
	Safety valve	bar	3		3	
	Water connections	"G	4"		4"	
Weights	Version:		Transport weight	Operating weight	Transport weight	Operating weight
	STD	Kg	470	1970	520	3020
	STD+PU1	Kg	513	2014	565	3066
	STD+PU2	Kg	569	2070	617	3118
	STD+PU3	Kg	569	2070	617	3118
	STD+PU4	Kg	634	2135	686	3187
	STD+PU5	Kg	740	2241	796	3297
	STD+PD1	Kg	586	2088	638	3140
	STD+PD2	Kg	696	2198	740	3242
	STD+PD3	Kg	696	2198	740	3242
	STD+PD4	Kg	826	2328	878	3380
	STD+PD5	Kg	1055	2557	990	3492

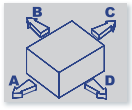
PUMP ELECTRICAL CHARACTERISTICS			
Nominal absorbed power	PU1-PD1	kW	3,0
	PU2-PD2	kW	5,5
	PU3-PD3	kW	7,5
	PU4-PD4	kW	15,0
	PU5-PD5	kW	22,0
Max runnnig current	PU1-PD1	A	5,6
	PU2-PD2	A	11,0
	PU3-PD3	A	14,6
	PU4-PD4	A	28,6
	PU5-PD5	A	40,3

DIMENSIONS

MR			1500	2500
L	STD	mm	1900	1900
P	STD	mm	2260	2260
H	STD	mm	1780	1780

DIMENSIONAL

CLEREANCE AREA



MR 1500 - 2500		
A	mm	800
B	mm	800
C	mm	800
D	mm	800

4

Packaged air condenser and condensing units

SCA 18÷151

PACKAGED AIR CONDITIONERS WITH REMOTE AIR COOLED CONDENSER.

FROM 6,7 kW TO 55,2 kW.

UNIT DESCRIPTION

The "close control" self-contained air conditioning units with remote air condensation (A) of the SCA series are the ideal solution for the air conditioning needs of rooms requiring a precise control of the thermohygrometric conditions of the treated air, particularly data processing centres and technological rooms. The vertical floor-mounted installation, directly in the room or in an appropriate service space, is very simple and immediate. Equipped with a wide range of accessories, the unit is available in the versions with upward delivery and front intake or with underfloor air delivery and intake from above; it can be operated in cooling-only, cooling and electric heating or cooling, electric heating and dehumidification mode. Characterized by high efficiency and remarkably quiet operation, these units are equipped with double inlet centrifugal fans, Scroll compressor and internal acoustic lining. An EU4 filter in renewable synthetic material, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level; furthermore, the easy removal of the filter enables continuous cleaning cycles to be carried out in order to guarantee appropriate air-quality standards in the rooms where the unit is installed.

VERSIONI

AIR DELIVERY UPWARDS AND INTAKE ON FRONT	
SCA/U	Cooling only
SCA/U/EH	Cooling + electrical heater
SCA/U/HUD	Cooling + electrical heater + humidifier + deshumidifier
AIR DELIVERY UNDER FLOOR AND INTAKE FROM ABOVE	
SCA/D	Cooling only
SCA/D/EH	Cooling + electrical heater
SCA/D/HUD	Cooling + electrical heater + humidifier + deshumidifier

FEATURES

- Structure in galvanized sheet with an ulterior protection obtained through a polyester powder painting, entirely lined with heat/sound insulation material.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Cooling coil unit formed of a finned coil unit with copper tubes and aluminium fins, direct expansion type.
- Centrifugal type delivery fan with double intake statically and dynamically balanced, directly coupled with electric motor.
- Filtering section formed of dry filters in synthetic material with EU4 efficiency rating.
- R407C refrigerant.
- Electrical panel includes: main switch with door locking device, fuses, compressor and fans contactor switches.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

CC	Remote condensing control
IS	RS 485 serial interface
AR	Inlet air renew with filter
AF	EU5 filter
PF	Differential pressostat filters control
WS	Water heating coil with 3-ways valve
SA	Water sensor
FF	Fire sensor
FM	Smoke sensor

Loose accessories:

BM	Plenum ambient inlet with grill (only U version)
ZA	Pedestal with deflectord (only D version)

TECHNICAL DATA

R407C

SCA			18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Total cooling capacity (1)	kW	6,7	8,3	10,0	12,2	14,6	18,3	21,8	24,0	27,5	31,9	37,3	41,7	55,2
	Sensible cooling capacity (1)	kW	5,7	6,5	7,8	10,4	12,9	16,1	19,4	20,1	24,5	25,9	31,0	32,4	45,3
	Absorbed power (1) (2)	kW	1,7	2,1	2,5	3,1	3,7	4,6	5,3	6,4	7,0	8,3	9,8	11,9	14,7
Air treatment section	Air flow	m³/s	0,44	0,50	0,56	0,83	1,11	1,33	1,67	1,67	2,00	2,00	2,50	2,78	3,61
	Available static pressure	Pa	60	60	60	100	100	80	110	110	60	60	110	110	90
	Fans	n°	1	1	1	1	1	1	1	1	1	1	2	2	2
	Filters		<---------- EU4 ---------->												
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type		<---------- Scroll ---------->												
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
Electrical characteristics	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Max. running current	A	13	17	19	11	14	15	18	20	21	22	30	33	39
	Max. inrush current	A	55	69	84	60	64	76	87	114	115	136	153	190	229
Hot water coil	Heating capacity (3)	Kg	11,4	12,2	13,1	17,3	20,6	23,0	32,4	32,4	36,3	36,3	50,1	53,4	62,6
	Air pressure drops	Pa	12	13	14	15	20	23	26	26	24	24	27	39	25
	Water flow	l/s	0,27	0,29	0,31	0,41	0,49	0,55	0,77	0,77	0,87	0,87	1,20	1,28	1,50
	Water pressure drops	kPa	19	22	25	30	42	51	24	24	30	30	19	21	29
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1¼"	1¼"	1¼"
Electric heating	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Heating capacity	kW	3	3	3	6	6	6	9	9	9	9	12	12	12
	Max absorbed current	A	13	13	13	8,7	8,7	8,7	13	13	13	13	17	17	17
	Steps	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
Humidifier	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Absorbed power	kW	1,5	1,5	1,5	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6
	Max absorbed current	A	6,6	6,6	6,6	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
Sound pressure (4)	STD	dB(A)	42	42	43	42	42	44	45	45	46	45	48	48	49
Transport weight	STD	Kg	200	203	205	215	235	245	255	260	395	400	410	440	450

DIMENSIONS

SCA			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	650	650	650	800	800	800	1200	1200	1200	1200	1550	1550	1550
P	STD	mm	450	450	450	650	650	650	800	800	800	800	800	800	800
H	STD	mm	1790	1790	1790	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b., 19 °C w.b.; average condensation temperature 45 °C.
(2) Values include compressor and fan of the internal fan.
(3) Ambient air temperature 20 °C; water inlet temperature 80 °C; water outlet temperature 70 °C.
(4) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

SCW 18÷151

PACKAGED AIR CONDITIONERS WITH WATER CONDENSER.

FROM 7,2 kW TO 65,0 kW.

UNIT DESCRIPTION

The "close control" self-contained air conditioning units with remote water condensation (W) of the SCW series are the ideal solution for the air conditioning needs of rooms requiring a precise control of the thermohygrometric conditions of the treated air, particularly data processing centres and technological rooms. The vertical floor-mounted installation, directly in the room or in an appropriate service space, is very simple and immediate. Equipped with a wide range of accessories, the unit is available in the versions with upward delivery and front intake or with underfloor air delivery and intake from above; it can be operated in cooling-only, cooling and electric heating or cooling, electric heating and dehumidification mode. Characterized by high efficiency and remarkably quiet operation, these units are equipped with double inlet centrifugal fans, Scroll compressor and internal acoustic lining. An EU4 filter in renewable synthetic material, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level; furthermore, the easy removal of the filter enables continuous cleaning cycles to be carried out in order to guarantee appropriate air-quality standards in the rooms where the unit is installed.

VERSIONS

AIR DELIVERY UPWARDS AND INTAKE ON FRONT	
SCW/U	Cooling only
SCW/U/EH	Cooling + electrical heater
SCW/U/HUD	Cooling + electrical heater + humidifier + deshumidifier
AIR DELIVERY UNDER FLOOR AND INTAKE FROM ABOVE	
SCW/D	Cooling only
SCW/D/EH	Cooling + electrical heater
SCW/D/HUD	Cooling + electrical heater + humidifier + deshumidifier

FEATURES

- Structure in galvanized sheet with an ulterior protection obtained through a polyester powder painting, entirely lined with heat/sound insulation material.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Cooling coil unit formed of a finned coil unit with copper tubes and aluminium fins, direct expansion type.
- Centrifugal type delivery fan with double intake statically and dynamically balanced, directly coupled with electric motor.
- Water cooled condenser braze-welded plate type in AISI 316, with water consumption pressure limiting valve (for mains or well water) optional.
- Filtering section formed of dry filters in synthetic material with EU4 efficiency rating.
- R407C refrigerant.
- Electrical panel includes: main switch with door locking device, fuses, compressor and fans contactor switches.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

TD	Condenser for tower or dry cooler
PV	2-ways pressostatic valve (for mains or well water)
IS	RS 485 serial interface
AR	Inlet air renew with filter
AF	EU5 filter
PF	Differential pressostat filters control
WS	Water heating coil with 3-ways valve
SA	Water sensor
FF	Fire sensor
FM	Smoke sensor

Loose accessories:

BM	Plenum ambient inlet with grill (only U version)
ZA	Pedestal with deflectord (only D version)

TECHNICAL DATA

R407C

SCW			18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Total cooling capacity (1)	kW	7,2	9,3	11,6	13,5	16,5	21,0	22,8	27,4	31,6	37,2	43,1	51,1	65,0
	Sensible cooling capacity (1)	kW	5,7	7,0	8,7	10,9	13,8	17,5	19,1	21,9	26,5	29,0	34,0	38,6	50,6
	Absorbed power (1) (2)	kW	1,4	1,8	2,0	2,6	3,0	4,0	4,5	5,3	5,8	6,9	8,1	10,0	12,3
	Water flow (1)	l/s	0,10	0,13	0,16	0,19	0,23	0,30	0,33	0,39	0,45	0,53	0,61	0,73	0,92
	Pressure drops (1)	kPa	1	1	1	1	6	14	16	28	22	26	20	19	22
	Water flow (3)	l/s	0,41	0,53	0,65	0,77	0,93	1,19	1,30	1,56	1,79	2,11	2,45	2,92	3,69
	Pressure drops (3)	kPa	1	1	1	1	1	1	1	2	3	3	5	6	10
	Water connections	"G	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"	1"
Air treatment section	Air flow	m³/s	0,44	0,50	0,56	0,83	1,11	1,33	1,67	1,67	2,00	2,00	2,50	2,78	3,61
	Available static pressure	Pa	60	60	60	100	100	80	110	110	60	60	110	110	90
	Fans	n°	1	1	1	1	1	1	1	1	1	1	2	2	2
	Filters		<---------- EU4 ---------->												
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type		<---------- Scroll ---------->												
	Refrigerant circuits	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
Electrical characteristics	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Max. running current	A	13	17	19	11	14	15	18	20	21	22	30	33	39
	Max. inrush current	A	55	69	84	60	64	76	87	114	115	136	153	190	229
Hot water coil	Heating capacity (4)	Kg	11,4	12,2	13,1	17,3	20,6	23,0	32,4	32,4	36,3	36,3	50,1	53,4	62,6
	Air pressure drops	Pa	12	13	14	15	20	23	26	26	24	24	27	39	25
	Water flow (4)	l/s	0,27	0,29	0,31	0,41	0,49	0,55	0,77	0,77	0,87	0,87	1,20	1,28	1,50
	Water pressure drops	kPa	19	22	25	30	42	51	24	24	30	30	19	21	29
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1¼"	1¼"	1¼"
Electric heating	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Heating capacity	kW	3	3	3	6	6	6	9	9	9	9	12	12	12
	Max absorbed current	A	13	13	13	8,7	8,7	8,7	13	13	13	13	17	17	17
	Steps	n°	1	1	1	1	1	1	1	1	1	1	1	1	1
Humidifier	Power supply	V/Ph/Hz	<--230/1/50-->			<---------- 400/3+N/50 ---------->									
	Absorbed power	kW	1,5	1,5	1,5	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6
	Max absorbed current	A	6,6	6,6	6,6	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
Sound pressure (5)	STD	dB(A)	42	42	43	42	42	44	45	45	46	45	48	48	49
Transport weight	STD	Kg	210	213	215	225	245	255	265	270	410	415	425	455	465

DIMENSIONS

SCW			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	650	650	650	800	800	800	1200	1200	1200	1200	1550	1550	1550
P	STD	mm	450	450	450	650	650	650	800	800	800	800	800	800	800
H	STD	mm	1790	1790	1790	1990	1990	1990	1990	1990	1990	1990	1990	1990	1990

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b., 19 °C w.b.; inlet water temperature 15 °C; outlet water temperature 35 °C.
(2) Values include compressor and fan of the internal fan.
(3) Ambient air temperature 27 °C d.b., 19 °C w.b.; inlet water temperature 30 °C; outlet water temperature 35 °C.
(4) Ambient air temperature 20 °C; water inlet temperature 80 °C; water outlet temperature 70 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

RCA 21÷151

REMOTE AIR CONDENSER WITH AXIAL FANS.

UNIT DESCRIPTION

The remote air-cooled condensers with axial fans of the RCA series are designed to be combined with evaporating units (MEA) and "close control" self-contained air conditioning units (SCA), both for indoor installation.
These units, available in three configurations depending on the degree of noiselessness required: Standard (STD), Silent (SL) and Super Silent (SSL), are equipped with latest generation axial fans, with motor fan shrouds having a large radius of curvature to eliminate all the air flow turbulence, and larger plenum to uniform the air distribution on the cooling battery.
These units can be installed with either horizontal or vertical air delivery, as needed.

VERSIONS

RCA
Standard unit

RCA/SL
Silencied unit

RCA/SSL
Super silencied unit

COMBINATIONS

MEA	18	21	25	31	41	51	61	71	81	91	101	131	151
RCA	21	21	21	21	31	61	61	61	61	91	91	101	131
RCA/SL	21	21	21	25	41	41	51	71	71	81	101	101	151
RCA/SSL	---	---	---	41	41	41	61	---	81	81	91	101	131

SCA	18	21	25	31	41	51	61	71	81	91	101	131	151
RCA	21	21	21	31	61	61	61	81	81	91	101	131	151
RCA/SL	21	21	25	41	41	51	71	71	81	101	101	131	151
RCA/SSL	---	---	---	41	41	---	81	81	81	91	101	101	151

FEATURES

- Frame in pre-painted galvanised steel casework.
- The cowlings of the motorfans are made with a wide bending radius to eliminate any turbulence in the airflow.
- Heat exchanger is made with corrugated fins with a greater external heat exchange surface, cut with a special louver configuration to give the best external coefficient of heat exchange.

ACCESSORIES

Loose accessories:

SW Supports for vertical air flow versions

TECHNICAL DATA

RCA			21	31	61	81	91	101	131	151
Air flow	STD	m³/s	0,9	0,8	1,8	1,6	2,7	2,4	3,9	3,7
Connections	Discharge line	Ø	14	14	20	22	24	28	35	35
	Liquid line	Ø	12	12	18	20	22	22	28	28
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->							
	Absorbed power	kW	0,19	0,19	0,19	0,19	0,19	0,19	0,76	0,76
	Absorbed current	A	0,8	0,8	0,8	0,8	0,8	0,8	3,2	3,2
Condenser	Fans	n°	1	1	2	2	3	3	2	2
	Sound pressure (1)	dB(A)	39	39	41	41	43	43	48	48
Transport weight	STD	Kg	20	25	40	46	62	68	97	106

RCA/SL			21	25	41	51	71	81	101	131	151
Air flow	STD	m³/s	0,6	0,6	1,3	1,9	1,7	2,7	2,7	4,0	4,0
Connections	Discharge line	Ø	14	14	20	24	28	35	35	42	42
	Liquid line	Ø	12	12	18	22	22	28	28	35	35
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->								
	Absorbed power	kW	0,13	0,13	0,13	0,13	0,13	0,29	0,29	0,29	0,29
	Absorbed current	A	0,6	0,6	0,6	0,6	0,6	1,4	1,4	1,4	1,4
Condenser	Fans	n°	1	1	2	3	3	2	2	3	3
	Sound pressure (1)	dB(A)	29	29	31	33	33	40	39	38	37
Transport weight	STD	Kg	20	25	40	46	62	68	97	115	134

RCA/SSL			41	61	81	91	101	131	151
Air flow	STD	m³/s	1,0	0,9	1,9	1,7	2,9	2,7	3,6
Connections	Discharge line	Ø	22	24	35	35	42	42	48
	Liquid line	Ø	20	22	28	28	35	35	42
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->						
	Absorbed power	kW	0,15	0,15	0,15	0,15	0,15	0,15	0,15
	Absorbed current	A	0,7	0,7	0,7	0,7	0,7	0,7	0,7
Condenser	Fans	n°	1	1	2	2	3	3	4
	Sound pressure (1)	dB(A)	28	28	29	29	30	30	31
Transport weight	STD	Kg	56	67	97	106	134	151	201

DIMENSIONS

RCA			21-31	61-81	91-101	---	131-151	---	---
RCA/SL			21-25	41-51	71-81	---	101-131	151	---
RCA/SSL			---	---	---	41-61	81-91	101-131	151
L	STD	mm	780	1380	1980	1142	2042	2942	3640
P	STD	mm	630	1230	1830	---	---	---	1800
H	STD	mm	625	625	625	800	800	800	800

DIMENSIONAL

NOTES

(1) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

SCR 103÷764

VERTICAL DUCTABLE "CLOSE CONTROL" TERMINAL UNITS.

FROM 10 kW TO 74,2 kW.

UNIT DESCRIPTION

The "close control" duct-type air conditioning units of the SCR series are the ideal solution for the air conditioning needs of rooms requiring a precise control of the thermohygrometric conditions of the treated air, particularly data processing centres and technological rooms. Connected to a hydronic system with a water cooler, these units are set up for vertical floor-mounted installation, directly in the room or in an appropriate service space. Equipped with a wide range of accessories, the unit can provide distribution directly into the room, connected to a series of ducts or with downward underfloor delivery; it can be operated in cooling-only, cooling and electric heating or cooling, electric heating and dehumidification mode. Characterized by high efficiency and remarkably quiet operation, these units are equipped with double inlet centrifugal fans and internal acoustic lining. An EU4 filter in renewable synthetic material, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level; furthermore, the easy removal of the filter enables continuous cleaning cycles to be carried out in order to guarantee appropriate air-quality standards in the rooms where the unit is installed.

VERSIONS

AIR DELIVERY UPWARDS AND INTAKE ON FRONT	
SCR/U	Cooling only
SCR/U/EH	Cooling + electrical heater
SCR/U/HUD	Cooling + electrical heater + humidifier + deshumidifier
AIR DELIVERY UNDER FLOOR AND INTAKE FROM ABOVE	
SCR/D	Cooling only
SCR/D/EH	Cooling + electrical heater
SCR/D/HUD	Cooling + electrical heater + humidifier + deshumidifier

FEATURES

- Structure in galvanized sheet with an ulterior protection obtained through a polyester powder painting, entirely lined with heat/sound insulation material.
- Cooling coil unit formed of a finned coil unit with copper tubes and aluminium fins, refrigerated water type.
- Centrifugal type delivery fan with double intake statically and dynamically balanced, directly coupled with electric motor.
- Filtering section formed of dry filters in synthetic material with EU4 efficiency rating.
- Electrical panel includes: main switch with door locking device, fan protection, fan contactor switch.

ACCESSORIES

Factory fitted accessories:

IS	RS 485 serial interface
AR	Inlet air renew with filter
AF	EU5 filter
PF	Differential pressostat filters control
WS	Water heating coil with 3-ways valve
SA	Water sensor
FF	Fire sensor
FM	Smoke sensor

Loose accessories:

BM	Plenum ambient inlet with grill (only U version)
ZA	Pedestal with deflectord (only D version)

TECHNICAL DATA

H_2O

MODELLI			103	113	124	183	243	283	353	424	543	604	764
Cooling	Total cooling capacity (1)	kW	10,0	10,9	14,1	18,3	22,0	24,8	28,8	40,7	47,0	62,6	74,2
	Sensible cooling capacity (1)	kW	7,4	8,0	10,0	13,5	16,9	19,5	23,6	31,2	36,7	45,7	56,2
Air treatment section	Air flow	m³/s	0,44	0,50	0,56	0,83	1,11	1,33	1,67	2,00	2,50	2,78	3,61
	Available static pressure	Pa	60	60	60	100	100	80	110	60	110	110	90
	Fans	n°	1	1	1	1	1	1	1	1	2	2	2
	Filters		<---------- EU4 ---------->										
Water connections	Water flow	l/s	0,48	0,52	0,67	0,87	1,05	1,18	1,38	1,94	2,25	2,99	3,55
	Pressure drops	kPa	29	33	32	18	23	27	15	18	29	30	38
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1¼"	1¼"	1¼"
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->					<---------- 400/3+N/50 ---------->					
	Absorbed power	kW	0,24	0,24	0,24	0,55	0,55	0,74	1,10	1,10	1,48	1,48	2,20
	Max. running current	A	2,4	2,4	2,4	5,1	5,1	2,8	3,3	3,3	5,4	5,4	6,6
	Max. inrush current	A	8,5	8,5	8,5	17	17	9,8	11	11	19	19	23
Hot water coil	Heating capacity (2)	Kg	11,4	12,2	13,1	17,3	20,6	23,0	32,4	36,3	50,1	53,4	62,6
	Air pressure drops	Pa	12	13	14	15	20	23	26	24	27	39	25
	Water flow (2)	l/s	0,27	0,29	0,31	0,41	0,49	0,55	0,77	0,87	1,20	1,28	1,50
	Water pressure drops	kPa	19	22	25	30	42	51	24	30	19	21	29
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1¼"	1¼"	1¼"
Electric heating	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->					<---------- 400/3+N/50 ---------->					
	Heating capacity	kW	3	3	3	6	6	6	9	9	12	12	12
	Max absorbed current	A	13	13	13	8,7	8,7	8,7	13	13	17	17	17
	Steps	n°	1	1	1	1	1	1	1	1	1	1	1
Humidifier	Power supply	V/Ph/Hz	<---------- 230/1/50 ---------->					<---------- 400/3+N/50 ---------->					
	Absorbed power	kW	1,5	1,5	1,5	3,6	3,6	3,6	3,6	3,6	3,6	3,6	3,6
	Max absorbed current	A	6,6	6,6	6,6	5,5	5,5	5,5	5,5	5,5	5,5	5,5	5,5
Sound pressure (3)	STD	dB(A)	42	42	43	42	42	44	45	45	48	48	49
Transport weight	STD	Kg	173	174	175	184	202	204	215	225	313	331	337

DIMENSIONS

MODELLI			103	113	124	183	243	283	353	424	543	604	764
L	STD	mm	650	650	650	800	800	800	1200	1200	1550	1550	1550
P	STD	mm	450	450	450	650	650	650	800	800	800	800	800
H	STD	mm	1790	1790	1790	1990	1990	1990	1990	1990	1990	1990	1990

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b., 19 °C w.b.; inlet water temperature 7 °C; outlet water temperature 12 °C.
(2) Ambient air temperature 20 °C; water inlet temperature 80 °C; water outlet temperature 70 °C.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

SCS 81÷131

PACKAGED AIR COOLED AIR CONDITIONERS WITH RADIAL FANS.

FROM 26 kW TO 43 kW.

UNIT DESCRIPTION

The self-contained air conditioning units with air condensation and centrifugal fans of the SCS series are the ideal solution for the air conditioning needs of commercial areas, offices, open space and shops. The vertical floor-mounted installation in an appropriate service space is very simple and immediate; the unit is equipped with a wide range of accessories and allows the distribution of air directly into the room or into several rooms through the use of a duct network. The unit can operate in cooling-only mode or cooling and heating mode through a reversible heat pump. Characterized by high efficiency and remarkably quiet operation, these units are equipped with double inlet centrifugal fans, Scroll compressor and internal acoustic lining; an EU4 filter in renewable synthetic material, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee appropriate hygiene standards in highly frequented rooms.

VERSIONS

SCS
Cooling only

SCS/WP
Reversible heat pump

FEATURES

- Structure in galvanized sheet with an ulterior protection obtained through a polyester powder painting, entirely lined with heat/sound insulation material.
- Condensing section includes: hermetic scroll compressor with overload protection within the motor winding and crankcase heater, installed on rubber shock absorbers; double inlet centrifugal fan type statically and dynamically balanced, belt-driven connected to a 3-phase electric motor; condenser coil with copper tubes and aluminium fins.
- Air handling section is lined internally with a 20 mm thick layer of thermal and acoustic insulating material; the evaporator made ofcopper tubes and aluminium fins and fitted with a condensate drain pain; double inlet centrifugal fan statically and dynamically balanced, with variable pulley and belt-driven connected to a 3-phase electric motor; synthetic filters.
- R407C refrigerant.
- Electrical board includes: main switch with panel door interlock, fuses, compressor and fan contactors.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

CC	Condensing control
IS	RS 485 serial interface
PF	Differential pressostat filters control
WS	Water heating coil with 3-ways valve
EH	Electrical heater
RP	Metallic guards for condenser

TECHNICAL DATA

R407C

SCS			81	91	101	131
Cooling	Cooling capacity (1)	kW	26,6	30,5	35,1	42,9
	Absorbed power (1)	kW	7,0	8,6	9,8	12,3
Heating	Heating capacity (2)	kW	24,5	29,2	33,8	40,9
	Absorbed power (2)	kW	6,5	8,2	9,4	11,7
Air treatment section	Air flow	m³/s	1,4	1,4	1,9	1,9
	Available static pressure	Pa	100	100	100	100
	Fans	n°	1	1	1	1
	Filters		<---------- EU3 ---------->			
Condensnig section	Compressors	n°	1	1	1	1
	Type		<---------- Scroll ---------->			
	Refrigerant circuits	n°	1	1	1	1
	Fans	n°	1	1	1	1
	Air flow	m³/s	2,50	2,50	3,33	3,33
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 400/3+N/50 ---------->			
	Max. running current	A	20,4	23,4	29,7	34,7
	Max. inrush current	A	105	129	136	176
Hot water coil	Heating capacity (3)	Kg	43,6	43,6	52,8	59,2
	Air pressure drops	Pa	23	23	39	29
	Water flow (3)	l/s	1,06	1,06	1,29	1,45
	Water pressure drops	kPa	9	9	13	9
	Water connections	"G	1¼"	1¼"	1¼"	1¼"
Electric heating	Power supply	V/Ph/Hz	<---------- 400/3+N/50 ---------->			
	Heating capacity	kW	12	12	12	12
	Max absorbed current	A	17	17	17	17
	Steps	n°	1	1	1	1
Sound pressure (4)	STD	dB(A)	58	58	59	59
Transport weight	STD	Kg	474	484	487	507

DIMENSIONS

SCS			81	91	101	131
L	STD	mm	1500	1500	1500	1500
P	STD	mm	800	800	800	800
H	STD	mm	2240	2240	2240	2240

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b., 19 °C w.b.; external air temperature 35 °C.
(2) Ambient air temperature 20 °C, external air temperature 7 °C d.b., 6 °C w.b.
(3) Ambient air temperature 20 °C; water inlet temperature 80 °C; water outlet temperature 70 °C.
(4) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

RTA 182÷804

ROOF-TOP WITH SANDWICH PANELS WITH SCROLL COMPRESSORS.

FROM 54 kW TO 255 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA
Cooling only

RTA/WP
Heat pump

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

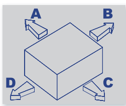
RTA			182	202	262	302	364	404	524	604	804
Cooling	Cooling capacity (1)	kW	54,5	64,9	78,3	97,6	112,0	131,8	158,5	197,4	254,9
	Absorbed power (1) (3)	kW	18,4	20,9	25,3	30,5	36,8	41,7	50,5	61,0	76,7
Heating	Heating capacity (2)	kW	56,2	67,3	81,0	101,3	115,3	136,7	164,0	204,9	259,7
	Absorbed power (2) (3)	kW	15,6	17,7	21,0	25,9	31,2	35,3	40,9	51,7	64,3
Air treatment section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250
	Fans	n°	1	1	1	1	1	1	1	1	1
	Filters		<- - - EU3 - G3 - - ->								
Air intake section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100
	Fans	n°	1	1	1	1	1	1	1	1	1
Condening section	Compressors	n°	2	2	2	2	4	4	4	4	4
	Type		< - - - Scroll - - - >								
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4	4
	Fans	n°	2	2	2	2	2	4	4	4	6
	Air flow	m³/s	6,8	7,0	6,7	6,4	9,2	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Max. running current	A	50	54	66	76	100	111	131	151	197
	Max. inrush current	A	153	159	206	242	203	216	271	317	381
Hot water coil	Heating capacity (4)	Kg	85	100	125	150	175	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	30	36	35	35	35
	Water flow (4)	l/s	2,03	2,39	2,99	3,58	4,18	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	23	24	24	24	24	27	26	27	35
	Water connections	"G	1½"	1½"	1½"	1½"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Heating capacity	kW	15	21	27	27	41	41	41	48	45
	Max absorbed current	A	22	30	39	39	59	59	59	68	65
	Steps	n°	2	2	2	2	4	4	4	4	4
Sound pressure (5)	STD	dB(A)	63	63	63	63	66	63	63	63	62
Transport weight	STD	Kg	1335	1397	1508	1618	2198	2306	2441	2661	3130
Transport weight	WP	Kg	1365	1422	1533	1643	2248	2356	2491	2711	3200

DIMENSIONS

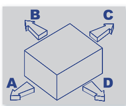
RTA			182	202	262	302	364	404	524	604	804
L	STD	mm	3100	3100	3200	3300	3800	4600	4600	4600	7270
P	STD	mm	2325	2325	2325	2325	2325	2325	2325	2325	2325
H	STD	mm	2150	2390	2390	2390	2405	2580	2580	2600	2600

DIMENSIONAL

CLEREANCE AREA



RTA 182 ÷ 364		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700



RTA 404 ÷ 804		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

CLINT

RTA 301÷801

ROOF-TOP WITH SANDWICH PANELS WITH SCREW COMPRESSORS.

FROM 97 kW TO 244 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA
Cooling only

RTA/WP
Heat pump

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

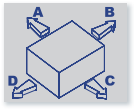
R407C

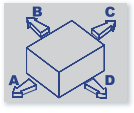
RTA			301	401	501	601	801
Cooling	Cooling capacity (1)	kW	97,1	132,2	161,5	189,3	244,1
	Absorbed power (1) (3)	kW	34,4	44,2	54,3	64,7	79,1
Heating	Heating capacity (2)	kW	103,1	141,0	172,3	200,3	258,7
	Absorbed power (2) (3)	kW	27,8	35,6	43,5	52,5	65,4
Air treatment section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250
	Fans	n°	1	1	1	1	1
	Filters		<- EU3 - G3 ->				
Air intake section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100
	Fans	n°	1	1	1	1	1
Condening section	Compressors	n°	1	1	1	1	1
	Type		1	1	1	1	1
	Refrigerant circuits	n°	<- Screw ->				
	Capacity steps	n°	2	2	2	2	2
	Fans	n°	2	4	4	4	6
	Air flow	m³/s	6,4	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Max. running current	A	252	283	353	462	584
	Max. inrush current	A	85	108	127	148	190
Hot water coil	Heating capacity (4)	Kg	150	200	250	300	350
	Air pressure drops	Pa	31	36	35	35	35
	Water flow (4)	l/s	3,58	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	24	27	26	27	35
	Water connections	"G	1½"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Heating capacity	kW	27	41	41	48	45
	Max absorbed current	A	39	59	59	69	65
	Steps	n°	2	4	4	4	4
Sound pressure (5)	STD	dB(A)	66	63	63	65	63
Transport weight	STD	Kg	1686	2423	2579	2838	2930
Transport weight	WP	Kg	1706	2473	2629	2888	3000

DIMENSIONS

RTA			301	401	501	601	801
L	STD	mm	3300	4600	4600	4600	7270
P	STD	mm	2325	2325	2325	2325	2325
H	STD	mm	2390	2580	2580	2600	2600

DIMENSIONAL





CLEREANCE AREA

RTA 301		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700

RTA 401 ÷ 801		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

RTA/MS 182÷804

ROOF-TOP WITH SANDWICH PANELS WITH SCROLL COMPRESSORS AND MIXING BOX.

FROM 54 kW TO 255 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/MS
Cooling only with mixing box

RTA/WP/MS
Heat pump with mixing box

MIXING BOX

MS - Mixing box. Further to components of the basic section, includes: two wing profile aluminium dampers with spring return servomotors, the opposite movement is ensured by transmission of nylon gear.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of pre-painted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

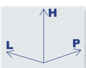
R407C

RTA/MS			182	202	262	302	364	404	524	604	804
Cooling	Cooling capacity (1)	kW	54,5	64,9	78,3	97,6	112,0	131,8	158,5	197,4	254,9
	Absorbed power (1) (3)	kW	18,4	20,9	25,3	30,5	36,8	41,7	50,5	61,0	76,7
Heating	Heating capacity (2)	kW	56,2	67,3	81,0	101,3	115,3	136,7	164,0	204,9	259,7
	Absorbed power (2) (3)	kW	15,6	17,7	21,0	25,9	31,2	35,3	40,9	51,7	64,3
Air treatment section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250
	Fans	n°	1	1	1	1	1	1	1	1	1
	Filters		<- - - EU3 - G3 - - ->								
Air intake section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100
	Fans	n°	1	1	1	1	1	1	1	1	1
Condening section	Compressors	n°	2	2	2	2	4	4	4	4	4
	Type		< - - - Scroll - - - >								
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4	4
	Fans	n°	2	2	2	2	2	4	4	4	6
	Air flow	m³/s	6,8	7,0	6,7	6,4	9,2	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Max. running current	A	50	54	66	76	100	111	131	151	197
	Max. inrush current	A	153	159	206	242	203	216	271	317	381
Hot water coil	Heating capacity (4)	Kg	85	100	125	150	175	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	30	36	35	35	35
	Water flow (4)	l/s	2,03	2,39	2,99	3,58	4,18	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	23	24	24	24	24	27	26	27	35
	Water connections	"G	1½"	1½"	1½"	1½"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Heating capacity	kW	15	21	27	27	41	41	41	48	45
	Max absorbed current	A	22	30	39	39	59	59	59	68	65
	Steps	n°	2	2	2	2	4	4	4	4	4
Sound pressure (5)	STD	dB(A)	63	63	63	63	66	63	63	63	62
Transport weight	STD	Kg	1335	1397	1508	1618	2198	2306	2441	2661	3130
Transport weight	WP	Kg	1365	1422	1533	1643	2248	2356	2491	2711	3200

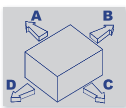
DIMENSIONS

RTA/MS			182	202	262	302	364	404	524	604	804
L	STD	mm	3840	3840	3940	4040	4540	5340	5340	5340	8010
P	STD	mm	2325	2325	2325	2325	2325	2325	2325	2325	2325
H	STD	mm	2150	2390	2390	2390	2405	2580	2580	2600	2600

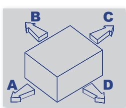
DIMENSIONAL



CLEREANCE AREA



RTA/MS 182 ÷ 364		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700



RTA /MS 404 ÷ 804		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

RTA/MS 301÷801

ROOF-TOP WITH SANDWICH PANELS WITH SCREW COMPRESSORS AND MIXING BOX.

FROM 97 kW TO 244 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/MS
Cooling only with mixing box

RTA/WP/MS
Heat pump with mixing box

MIXING BOX

MS - Mixing box. Further to components of the basic section, includes: two wing profile aluminium dampers with spring return servomotors, the opposite movement is ensured by transmission of nylon gear.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of pre-painted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

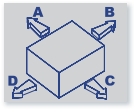
RTA/MS			301	401	501	601	801
Cooling	Cooling capacity (1)	kW	97,1	132,2	161,5	189,3	244,1
	Absorbed power (1) (3)	kW	34,4	44,2	54,3	64,7	79,1
Heating	Heating capacity (2)	kW	103,1	141,0	172,3	200,3	258,7
	Absorbed power (2) (3)	kW	27,8	35,6	43,5	52,5	65,4
Air treatment section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250
	Fans	n°	1	1	1	1	1
	Nominal power motors	kW	4,0	7,5	7,5	7,5	11,0
	Filters		<- EU3 - G3 ->				
Air intake section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100
	Fans	n°	1	1	1	1	1
	Nominal power motors	kW	2,2	3,0	3,0	4,0	7,5
Condensing section	Compressors	n°	1	1	1	1	1
	Type		1	1	1	1	1
	Refrigerant circuits	n°	<- Screw ->				
	Capacity steps	n°	2	2	2	2	2
	Fans	n°	2	4	4	4	6
	Air flow	m³/s	6,4	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Max. running current	A	252	283	353	462	584
	Max. inrush current	A	85	108	127	148	190
Hot water coil	Heating capacity (4)	Kg	150	200	250	300	350
	Air pressure drops	Pa	31	36	35	35	35
	Water flow (4)	l/s	3,58	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	24	27	26	27	35
	Water connections	"G	1½"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Heating capacity	kW	27	41	41	48	45
	Max absorbed current	A	39	59	59	69	65
	Steps	n°	2	4	4	4	4
Sound pressure (5)	STD	dB(A)	66	63	63	65	63
Transport weight	STD	Kg	1686	2423	2579	2838	2930
Transport weight	WP	Kg	1706	2473	2629	2888	3000

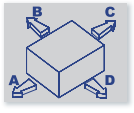
DIMENSIONS

RTA/MS			301	401	501	601	801
L	STD	mm	4040	5340	5340	5340	8010
P	STD	mm	2325	2325	2325	2325	2325
H	STD	mm	2390	2580	2580	2600	2600

DIMENSIONAL

CLEREANCE AREA





RTA /MS 301		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700

RTA/MS 401 ÷ 801		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

RTA/ECO 182÷804

ROOF-TOP WITH SANDWICH PANELS WITH SCROLL COMPRESSORS AND ECONOMIZER.

FROM 54 kW TO 255 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/ECO
Cooling only with economizer

RTA/ECO/COMPACT
Compact cooling only with economizer

RTA/WP/ECO
Heat pump with economizer

RTA/WP/ECO/COMPACT
Compact heat pump with economizer

ECO - COMPACT

ECO - Economizer. Further to components of the basic section, includes: return air fan with electrical motor, complete of adjustable transmission, mounted on elastic supports; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.
COMPACT - Unit made of stacked handling air sections.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
CH	Enthalpic control
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

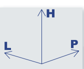
R407C

RTA/ECO			182	202	262	302	364	404	524	604	804
Cooling	Cooling capacity (1)	kW	54,5	64,9	78,3	97,6	112,0	131,8	158,5	197,4	254,9
	Absorbed power (1) (3)	kW	18,4	20,9	25,3	30,5	36,8	41,7	50,5	61,0	76,7
Heating	Heating capacity (2)	kW	56,2	67,3	81,0	101,3	115,3	136,7	164,0	204,9	259,7
	Absorbed power (2) (3)	kW	15,6	17,7	21,0	25,9	31,2	35,3	40,9	51,7	64,3
Air treatment section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250
	Fans	n°	1	1	1	1	1	1	1	1	1
	Filters		<- - - EU3 - G3 - - ->								
Air intake section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100
	Fans	n°	1	1	1	1	1	1	1	1	1
Condening section	Compressors	n°	2	2	2	2	4	4	4	4	4
	Type		< - - - Scroll - - - >								
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4	4
	Fans	n°	2	2	2	2	2	4	4	4	6
	Air flow	m³/s	6,8	7,0	6,7	6,4	9,2	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Max. running current	A	50	54	66	76	100	111	131	151	197
	Max. inrush current	A	153	159	206	242	203	216	271	317	381
Hot water coil	Heating capacity (4)	Kg	85	100	125	150	175	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	30	36	35	35	35
	Water flow (4)	l/s	2,03	2,39	2,99	3,58	4,18	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	23	24	24	24	24	27	26	27	35
	Water connections	"G	1½"	1½"	1½"	1½"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Heating capacity	kW	15	21	27	27	41	41	41	48	45
	Max absorbed current	A	22	30	39	39	59	59	59	68	65
	Steps	n°	2	2	2	2	4	4	4	4	4
Sound pressure (5)	STD	dB(A)	63	63	63	63	66	63	63	63	62
Transport weight	STD	Kg	2246	2329	2531	2744	3547	3757	3979	4376	5060
Transport weight	WP	Kg	2276	2354	2556	2769	3597	3807	4029	4426	5130

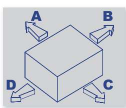
DIMENSIONS

RTA/ECO			182	202	262	302	364	404	524	604	804
L	STD	mm	6430	6430	6580	6780	7580	8380	8480	8580	12450
	COMPACT	mm	5470	5470	5570	5980	6390	7280	7280	7480	10190
P	STD	mm	2325	2325	2325	2325	2325	2325	2325	2325	2325
H	STD	mm	2150	2390	2390	2390	2405	2580	2580	2600	2600

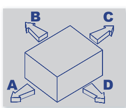
DIMENSIONAL



CLEREANCE AREA



RTA /ECO 182 ÷ 364		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700



RTA/ECO 404 ÷ 804		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

CLINT

RTA/ECO 301÷801

ROOF-TOP WITH SANDWICH PANELS WITH SCREW COMPRESSORS AND ECONOMIZER.

FROM 97 kW TO 244 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/ECO
Cooling only with economizer

RTA/ECO/COMPACT
Compact cooling only with economizer

RTA/WP/ECO
Heat pump with economizer

RTA/WP/ECO/COMPACT
Compact heat pump with economizer

ECO - COMPACT

ECO - Economizer. Further to components of the basic section, includes: return air fan with electrical motor, complete of adjustable transmission, mounted on elastic supports; motorized wing profile aluminium dampers, the opposite movement is ensured by transmission of nylon gear. Supply, return and fresh air are controlled through the microprocessor fitted in the base unit; this microprocessor, according to the temperature of the return and fresh air, modulates the opening of the dampers and controls the refrigerant circuit capacity steps to ensure comfort conditions of the handled air. The adjustments of the ECO versions are automatically controlled both in free-cooling and free-heating mode.
COMPACT - Unit made of stacked handling air sections.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
CH	Enthalpic control
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

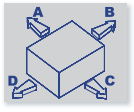
RTA/ECO			301	401	501	601	801
Cooling	Cooling capacity (1)	kW	97,1	132,2	161,5	189,3	244,1
	Absorbed power (1) (3)	kW	34,4	44,2	54,3	64,7	79,1
Heating	Heating capacity (2)	kW	103,1	141,0	172,3	200,3	258,7
	Absorbed power (2) (3)	kW	27,8	35,6	43,5	52,5	65,4
Air treatment section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250
	Fans	n°	1	1	1	1	1
	Filters		<- EU3 - G3 ->				
Air intake section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100
	Fans	n°	1	1	1	1	1
Condening section	Compressors	n°	1	1	1	1	1
	Type		1	1	1	1	1
	Refrigerant circuits	n°	<- Screw ->				
	Capacity steps	n°	2	2	2	2	2
	Fans	n°	2	4	4	4	6
	Air flow	m³/s	6,4	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Max. running current	A	252	283	353	462	584
	Max. inrush current	A	85	108	127	148	190
Hot water coil	Heating capacity (4)	Kg	150	200	250	300	350
	Air pressure drops	Pa	31	36	35	35	35
	Water flow (4)	l/s	3,58	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	24	27	26	27	35
	Water connections	"G	1½"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Heating capacity	kW	27	41	41	48	45
	Max absorbed current	A	39	59	59	69	65
	Steps	n°	2	4	4	4	4
Sound pressure (5)	STD	dB(A)	66	63	63	65	63
Transport weight	STD	Kg	2812	3874	4117	4553	4860
Transport weight	WP	Kg	2832	3924	4167	4603	4930

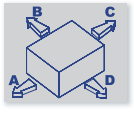
DIMENSIONS

RTA/ECO			301	401	501	601	801
L	STD	mm	6780	8380	8480	8580	12450
	COMPACT	mm	5980	7280	7280	7480	10190
P	STD	mm	2325	2325	2325	2325	2325
H	STD	mm	2390	2580	2580	2600	2600

DIMENSIONAL

CLEREANCE AREA





RTA /ECO 301		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700

RTA/ECO 401 ÷ 801		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

RTA/ECO/REC-FX 182÷804

ROOF-TOP WITH SANDWICH PANELS WITH SCROLL COMPRESSORS, ECONOMIZER AND CROSS FLOW HEAT RECOVERY.

FROM 54 kW TO 255 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/ECO/REC-FX
Cooling only with economizer and cross flow heat recovery

RTA/ECO/REC-FX/COMPACT
Compact cooling only with economizer and cross flow heat recovery

RTA/WP/ECO/REC-FX
Heat pump with economizer and cross flow heat recovery

RTA/WP/ECO/COMPACT
Compact heat pump with economizer and cross flow heat recovery

ECO/REC-FX - COMPACT

ECO/REC-FX - Cross flow heat recovery. Further to components of the basic section, includes: static recovery device made of aluminium with moisture drain pan, flat filters inspect able through hinged door and dampers with return spring servomotors (fresh air damper + return air damper + supply air damper + 2 free-cooling dampers). Also the adjustment of this section is included into the unit control.
COMPACT - Unit made of stacked handling air sections.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
CH	Enthalpic control
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

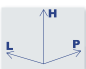
R407C

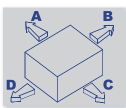
RTA/ECO/REC-FX			182	202	262	302	364	404	524	604	804
Cooling	Cooling capacity (1)	kW	54,5	64,9	78,3	97,6	112,0	131,8	158,5	197,4	254,9
	Absorbed power (1) (3)	kW	18,4	20,9	25,3	30,5	36,8	41,7	50,5	61,0	76,7
Heating	Heating capacity (2)	kW	56,2	67,3	81,0	101,3	115,3	136,7	164,0	204,9	259,7
	Absorbed power (2) (3)	kW	15,6	17,7	21,0	25,9	31,2	35,3	40,9	51,7	64,3
Air treatment section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250	250	250	250	250
	Fans	n°	1	1	1	1	1	1	1	1	1
	Filters		<- - - - EU3 - G3 - - - ->								
Air intake section	Air flow	m³/s	2,67	3,30	4,05	4,84	5,49	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100	100	100	100	100
	Fans	n°	1	1	1	1	1	1	1	1	1
Condening section	Compressors	n°	2	2	2	2	4	4	4	4	4
	Type		< - - - - Scroll - - - - >								
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2	2
	Capacity steps	n°	2	2	2	2	4	4	4	4	4
	Fans	n°	2	2	2	2	2	4	4	4	6
	Air flow	m³/s	6,8	7,0	6,7	6,4	9,2	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - 400 / 3 / 50 - - - ->								
	Max. running current	A	50	54	66	76	100	111	131	151	197
	Max. inrush current	A	153	159	206	242	203	216	271	317	381
Hot water coil	Heating capacity (4)	Kg	85	100	125	150	175	200	250	300	350
	Air pressure drops	Pa	30	31	31	31	30	36	35	35	35
	Water flow (4)	l/s	2,03	2,39	2,99	3,58	4,18	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	23	24	24	24	24	27	26	27	35
	Water connections	"G	1½"	1½"	1½"	1½"	2"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- - - - 400 / 3 / 50 - - - ->								
	Heating capacity	kW	15	21	27	27	41	41	41	48	45
	Max absorbed current	A	22	30	39	39	59	59	59	68	65
	Steps	n°	2	2	2	2	4	4	4	4	4
Sound pressure (5)	STD	dB(A)	63	63	63	63	66	63	63	63	62
Transport weight	STD	Kg	2255	2317	2551	2781	3542	3732	3938	4393	5070
Transport weight	WP	Kg	2285	2342	2576	2786	3592	3782	3988	4443	5140

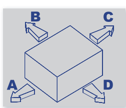
DIMENSIONS

RTA/ECO/REC-FX			182	202	262	302	364	404	524	604	804
L	STD	mm	6830	6830	6980	7530	8330	9130	9230	9730	13600
	COMPACT	mm	5670	5670	5720	6170	7170	7970	8070	8770	11250
P	STD	mm	2325	2325	2325	2325	2325	2325	2325	2325	2325
H	STD	mm	2150	2390	2390	2390	2405	2580	2580	2600	2600

DIMENSIONAL







CLEREANCE AREA

RTA/ECO/REC-FX	182 ÷ 364	
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700

RTA/ECO/REC-FX	404 ÷ 804	
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

RTA/ECO/REC-FX 301÷801

ROOF-TOP WITH SANDWICH PANELS WITH SCREW COMPRESSORS, ECONOMIZER AND CROSS FLOW HEAT RECOVERY.

FROM 97 kW TO 244 kW.

UNIT DESCRIPTION

The outdoor "Roof Top" self-contained air conditioning units of the RTA series, which can be connected to a duct network for air distribution, are ideal for the air conditioning of large surface areas for public use such as halls, shopping centres, cafeterias, restaurants and health centres, or for industrial environments such as food processing or preservation centres.
Equipped with extruded aluminium alloy sections and 50mm-thick sandwich panelling, these units are available in a cooling-only version and a version with reversible heat pump. They have a high degree of modularity and adaptability to every plant-engineering need since, in addition to the basic versions, it is also possible to add various solutions for the air treatment sections: mixing chamber, free cooling, cross-flow heat recuperator, humidifier, hot air generator, etc.
The flat or pocket filters help to keep the air quality at a suitable level in order to guarantee appropriate hygiene standards.

VERSIONS

RTA/ECO/REC-FX
Cooling only with economizer and cross flow heat recovery

RTA/ECO/REC-FX/COMPACT
Compact cooling only with economizer and cross flow heat recovery

RTA/WP/ECO/REC-FX
Heat pump with economizer and cross flow heat recovery

RTA/WP/ECO/COMPACT
Compact heat pump with economizer and cross flow heat recovery

ECO/REC-FX - COMPACT

ECO/REC-FX - Cross flow heat recovery. Further to components of the basic section, includes: static recovery device made of aluminium with moisture drain pan, flat filters inspect able through hinged door and dampers with return spring servomotors (fresh air damper + return air damper + supply air damper + 2 free-cooling dampers). Also the adjustment of this section is included into the unit control.
COMPACT - Unit made of stacked handling air sections.

FEATURES

- Structure of base perimeter made of steel sheet elements galvanised, passive treated and mould folded (3 mm thick). The frame is made of extruded aluminium alloy profiles connected by 3 way joints. The assembling of the base to the frame is of dual support and grants the walking on the base panels installation of which is effected without sticking out screws. 50 mm thick sandwich panels are made of prepainted steel sheet; water proofing is granted by gaskets having shape memory for perfect seal up even after repeated removals. Section connection is effected by means of assembling conic stirrups and water proofing is granted by gaskets.
- R407C refrigerant.
- Electrical board includes: door interlocking isolator; fuses; thermal protection relays on compressors; thermo contacts for the fans of the condensing unit; contactors for the fan motors of the air handling unit.
- Microprocessor for the automatic control of the unit.

COMPLEMENTARY SECTIONS

SFT	Soft bag filter section with efficiency F6-F7-F8
SFT/R	Rigid bag filter section with efficiency F6-F7-F8
UMI/ST	Adiabatic humidifier section
UMI/ES	Exothermic steam producer
UMI/EN	Endothermic steam producer
F/MS	Endothermic hot air generator with 1-step gas burner
F/BS	Endothermic hot air generator with 2-step gas burner
F/MD	Endothermic hot air generator with modulating gas burner
F/CD	Condensation endothermic hot air generator with modulating gas burner

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
WS2	2-row water coil for heating with three way valve
EH	Electrical coil
CH	Enthalpic control
SQ	Air quality sensor
PF	Differential pressostat filters control
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote display
IS	RS 485 serial interface
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

R407C

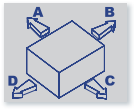
RTA/ECO/REC-FX			301	401	501	601	801
Cooling	Cooling capacity (1)	kW	97,1	132,2	161,5	189,3	244,1
	Absorbed power (1) (3)	kW	34,4	44,2	54,3	64,7	79,1
Heating	Heating capacity (2)	kW	103,1	141,0	172,3	200,3	258,7
	Absorbed power (2) (3)	kW	27,8	35,6	43,5	52,5	65,4
Air treatment section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	250	250	250	250	250
	Fans	n°	1	1	1	1	1
	Filters		<- EU3 - G3 ->				
Air intake section	Air flow	m³/s	4,84	6,32	8,20	9,79	12,31
	Available static pressure	Pa	100	100	100	100	100
	Fans	n°	1	1	1	1	1
Condening section	Compressors	n°	1	1	1	1	1
	Type		1	1	1	1	1
	Refrigerant circuits	n°	<- Screw ->				
	Capacity steps	n°	2	2	2	2	2
	Fans	n°	2	4	4	4	6
	Air flow	m³/s	6,4	14,0	13,4	12,8	19,3
Electrical characteristics	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Max. running current	A	252	283	353	462	584
	Max. inrush current	A	85	108	127	148	190
Hot water coil	Heating capacity (4)	Kg	150	200	250	300	350
	Air pressure drops	Pa	31	36	35	35	35
	Water flow (4)	l/s	3,58	4,78	5,97	7,17	8,36
	Water pressure drops	kPa	24	27	26	27	35
	Water connections	"G	1½"	2"	2"	2½"	2½"
Electric heating	Power supply	V/Ph/Hz	<- 400 / 3 / 50 ->				
	Heating capacity	kW	27	41	41	48	45
	Max absorbed current	A	39	59	59	69	65
	Steps	n°	2	4	4	4	4
Sound pressure (5)	STD	dB(A)	66	63	63	65	63
Transport weight	STD	Kg	2829	3849	4076	4570	4870
Transport weight	WP	Kg	2849	3899	4126	4620	4940

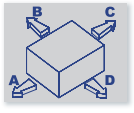
DIMENSIONS

RTA/ECO/REC-FX			301	401	501	601	801
L	STD	mm	7530	9130	9230	9730	13600
	COMPACT	mm	6170	7970	8070	8770	11250
P	STD	mm	2325	2325	2325	2325	2325
H	STD	mm	2390	2580	2580	2600	2600

DIMENSIONAL

CLEREANCE AREA





RTA/ECO/REC-FX 301		
A	mm	800
B	mm	800
C	mm	800
D (**)	mm	1700

RTA/ECO/REC-FX 401 ÷ 801		
A (**)	mm	1000
B	mm	1700
C	mm	800
D	mm	1700

NOTES

(1) Evaporator inlet air temperature 27 °C d.b. 19 °C w.b.; Ambient air temperature 35 °C;
(2) Condensator inlet air temperature 20 °C; Ambient air temperature 7 °C d.b./6 °C w.b.
(3) Excluded the power absorbed by centrifugal fans.
(4) Inlet air temperature 20 °C; Inlet water temperature 70 °C; Outlet water temperature 60 °C.
(5) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(**) D SIDE: Coil side.
A SIDE: Electrical board side.

MHA 18÷151

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH AXIAL FANS AND SCROLL COMPRESSORS.

FROM 5 kW TO 47 kW.

UNIT DESCRIPTION

The condensing units and reversible condensing units of the MHA 18÷151 series are intended to satisfy the needs of small and medium-sized domestic or industrial systems.
With a peraluman structure, these outdoor units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated.
They can also be used in combination with hydronic evaporator units, generally in air-conditioning applications
They are equipped with Scroll compressors and axial fans, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MHA
Cooling only

MHA/WP
Reversible heat pump

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Axial fan type low ventilation and special wing profile, they are directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- R407C refrigerant.
- Electrical panel icludes: main switch with door lock device, fuses, compressor remote control switch.
- Microprocessor control and regulation system.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
CV	Moisture drain pan (only WP 18÷71)
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

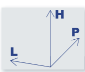
R407C

MHA				18	21	25	31	41	51	61	71	81	91	101	131	151
Cooling	Cooling capacity (1)		kW	5,4	7,0	8,4	9,8	12,1	14,9	17,6	19,9	21,6	26,7	31,0	38,3	47,2
	Absorbed power (1)		kW	1,4	1,8	2,2	3,2	3,9	5,0	5,2	5,9	6,7	8,3	9,6	11,8	13,3
Heating	Heating capacity (2)		kW	5,6	7,3	8,7	10,0	12,4	15,2	18,3	20,6	22,4	27,2	31,8	42,3	55,0
	Absorbed power (2)		kW	1,5	1,9	2,2	3,2	4,0	5,1	5,4	6,1	7,0	8,5	9,8	12,1	14,2
Compressors	Quantity		n°	1	1	1	1	1	1	1	1	1	1	1	1	1
	Type			< - - - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - - - ->												
Condenser	Fans		n°	1	1	1	1	2	2	2	2	1	1	2	2	2
	Air flow		m³/s	0,97	0,89	0,89	0,82	1,94	1,78	1,64	1,64	2,69	2,50	4,00	4,00	5,38
Connections	Suction line	Ø	“	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	1 1/8"	1 1/8"
		Ø	mm	15,9	15,9	15,9	15,9	19	19	19	22	22	22	22	28,6	28,6
	Liquid line	Ø	“	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"	5/8"
		Ø	mm	9,5	9,5	9,5	9,5	12,7	12,7	12,7	12,7	12,7	12,7	12,7	15,9	15,9
Electrical characteristics	Power supply		V/Ph/Hz	<-- 230/1/50 -->			<---------- 400/3+N/50 ---------->									
	Max. running current		A	12	16	18	8	11	14	15	17	17	20	24	29	35
	Max. inrush current		A	50	64	79	49	55	71	79	106	107	131	139	179	206
Sound pressure (3)	STD		dB(A)	49	49	50	50	52	52	52	52	51	52	52	52	52
Transport weight	STD		Kg	83	83	87	90	107	109	111	113	208	218	232	252	266
	WP		Kg	91	91	96	99	118	120	122	124	229	240	258	277	293

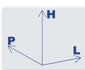
DIMENSIONS

MHA			18	21	25	31	41	51	61	71	81	91	101	131	151
L	STD	mm	870	870	870	870	1160	1160	1160	1160	1850	1850	1850	1850	1850
P	STD	mm	320	320	320	320	500	500	500	500	1000	1000	1000	1000	1000
H	STD	mm	1100	1100	1100	1100	1270	1270	1270	1270	1300	1300	1300	1300	1300

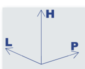
DIMENSIONAL



18 ÷ 31

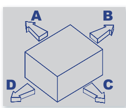


41 ÷ 71



81 ÷ 151

CLEREANCE AREA



CHA 18 ÷ 31		
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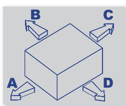
B	mm	200
C	mm	200
D (*)	mm	800



CHA 41 ÷ 71		
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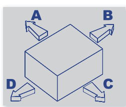
B	mm	200
C	mm	200
D (*)	mm	800



CHA 81 ÷ 151		
A (**)	mm	800
B	mm	800
C	mm	500
D	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.
(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) D SIDE: Fan side.
(**) A SIDE: Electrical board side.

4

MHA 182÷604

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH AXIAL FANS AND SCROLL COMPRESSORS.

FROM 50 kW TO 177 kW.

UNIT DESCRIPTION

The condensing units and reversible condensing units of the MHA 182÷604 series are intended to satisfy the needs of medium/large-sized domestic or industrial systems.
These outdoor units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporator units in both air-conditioning and industrial process cooling applications
They are equipped with Scroll compressors and axial fans, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MHA
Cooling only

MHA/SSL
Super silencied cooling only

MHA/WP
Reversible heat pump

MHA/WP/SSL
Super silencied Reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
RL	Liquid receiver (WP included)
VS	Solenoid valve (except WP)
BP	HGBP by-pass valve (except WP)
FF	Dryer filter + sightglass
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic filter guards for condenser (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers

TECHNICAL DATA

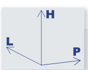
R407C

MHA			182	202	262	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	49,9	58,0	76,0	87,4	114,6	131,8	154,3	177,4
	Absorbed power (1)	kW	14,8	17,0	22,8	26,2	33,2	39,3	44,6	53,6
Heating	Heating capacity (2)	kW	56,5	65,7	86,0	98,9	129,7	149,2	174,6	200,6
	Absorbed power (2)	kW	13,0	14,8	18,4	22,6	27,8	33,9	37,4	47,2
Compressors	Quantity	n°	2	2	2	2	3	3	4	4
	Type		<- - - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - - ->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	3	3	4	4
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,1	7,9	7,7	7,5	11,7	11,7	15,6
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66
	SL sound pressure (3)	dB(A)	56	56	57	57	58	57	58	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---
	Air flow	m³/s	3,5	6,1	6,0	5,6	9,2	8,5	8,5	---
	Sound pressure (3)	dB(A)	50	50	52	51	52	51	52	---
Connections	Suction line	Ø mm	<- - - - - - - - 1x42 - - - - - - - ->				<- 1x35+1x42 ->		<-- 2x42 -->	
	Liquid line	Ø mm	<- - - - - - - - 1x22 - - - - - - - ->				<- 1x16+1x22 ->		<-- 2x22 -->	
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - - - - 400 / 3 / 50 - - - - - - - - - - - - ->							
	Max. running current	A	42	60	61	74	90	110	121	149
	Max. inrush current	A	152	161	167	214	196	250	227	289
Transport weight	STD	Kg	504	555	639	754	817	1082	1122	1272
	WP	Kg	554	611	703	829	899	1190	1234	1399

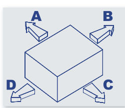
DIMENSIONS

MHA			182	202	262	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275

DIMENSIONAL



CLEREANCE AREA



MHA 182 ÷ 604		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.
(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of WP versions are indicated on the technical book.

CLINT

4

MHA 201÷702

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH AXIAL FANS AND SEMI-HERMETIC COMPRESSORS.

FROM 54 kW TO 204 kW.

UNIT DESCRIPTION

The condensing units and reversible condensing units of the MHA 201÷702 series are intended to satisfy the needs of medium/large-sized domestic or industrial systems.
These outdoor units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporator units in both air-conditioning and industrial process cooling applications
They are equipped with semihermetic compressors and axial fans, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MHA
Cooling only

MHA/SSL
Super silencied cooling only

MHA/WP
Reversible heat pump

MHA/WP/SSL
Super silencied Reversible heat pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type complete with cranckcase heater, oil sight glass, thermal protection and shut off valves.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser with copper tube and aluminium finned coil.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CT	Condensing control down to 0 °C
CC	Condensing control down to -20°C
MF	Muffler
RF	Cooling circuit shut off valves
RL	Liquid receiver (WP included)
VS	Solenoid valve (except WP)
BP	HGBP by-pass valve (except WP)
FF	Dryer filter + sightglass
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic filter guards for condenser (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers

TECHNICAL DATA

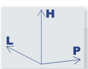
R407C

MHA			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	54,2	67,0	79,6	89,2	117,9	142,5	159,3	178,3	203,9
	Absorbed power (1)	kW	17,2	21,8	27,4	29,7	37,8	46,1	52,8	60,2	68,4
Heating	Heating capacity (2)	kW	61,2	75,6	90,3	100,8	133,7	161,9	181,6	201,7	231,0
	Absorbed power (2)	kW	14,1	17,1	21,0	22,7	29,6	36,3	40,8	48,4	53,4
Compressors	Quantity	n°	1	1	1	1	1	1	2	2	2
	Type		< - - - Semi-hermetics - - - >								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3	3
	Air flow	m³/s	4,2	4,1	7,9	7,7	7,5	11,7	11,1	15,6	15,6
	Sound pressure (3)	dB(A)	60	60	62	62	62	62	62	66	66
	SL sound pressure (3)	dB(A)	56	56	57	57	58	57	58	63	63
SSL version	Fans	n°	2	2	2	2	3	3	3	---	---
	Air flow	m³/s	3,5	6,1	6,0	5,6	9,2	8,5	8,5	---	---
	Sound pressure (3)	dB(A)	50	50	52	52	52	51	52	---	---
Connections	Suction line	Ø mm	<- - - 1x42 - - ->				<--1x54 -->		<- - - 2x42 - - ->		
	Liquid line	Ø mm	<- - - 1x22 - - ->				<-- 1x28 -->		<- - - 2x22 - - ->		
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Max. running current	A	36	50	60	61	88	98	117	126	156
	Max. inrush current	A	100	116	130	140	219	244	188	205	237
Transport weight	STD	Kg	500	550	635	725	761	927	1142	1206	1280
	WP	Kg	550	605	699	798	837	1020	1256	1327	1408

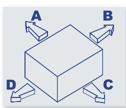
DIMENSIONS

MHA			201	251	301	321	401	501	602	642	702
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550	3550
	SSL	mm	2350	2350	2350	2350	3550	3550	3550	---	---
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1920	1920	2220	2220	2220	2220	2220	2275	2275

DIMENSIONAL



CLEREANCE AREA



MHA 182 ÷ 604		
A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.
(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.
N.B. Weights of SSL versions are indicated on the technical book.

MRA 18÷131

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH RADIAL FANS AND SCROLL COMPRESSORS.

FROM 5 kW TO 38 kW.

UNIT DESCRIPTION

The indoor condensing units and reversible condensing units of the MRA 18÷131 series are intended to satisfy the needs of small and medium-sized domestic or industrial systems with particular difficulty in positioning units outside the building.
With a prepainted plate structure, these units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporator units, generally in air-conditioning applications
They are equipped with Scroll compressors and centrifugal fans, with appreciable useful head, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, all supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MHA
Cooling only

MHA/WP
Reversible heat pump

FEATURES

- Self-supporting prepainted steel frame.
- Scroll compressors with internal overheat protection and crankcase heater if needed.
- Double inlet centrifugal type fan statically and dynamically balanced directly driven by a electric motor (18÷71) or belt driven connected to a three-phase electric motor (81÷131).
- Condenser in copper tubes and aluminium finned coil complete with drain pan for WP version.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuse and overload protection for compressors.
- Microprocessor control and regulation system.

ACCESSORIES

Loose accessories:

CC	Condensing control down to -20°C
RP	Metallic guards for condenser
AG	Rubber shock absorbers

TECHNICAL DATA

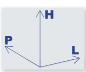
R407C

MRA			18	21	25	31	41	51	61	71	81	91	101	131
Cooling	Cooling capacity (1)	kW	5,4	7,0	8,4	9,8	12,1	14,9	17,6	19,9	21,6	26,7	31,0	38,3
	Absorbed power (1)	kW	1,6	2,0	2,4	3,4	4,7	5,8	6,0	6,7	7,3	9,9	11,1	14,1
Heating	Heating capacity (2)	kW	5,6	7,3	8,7	10,0	12,4	15,2	18,3	20,6	22,4	27,2	31,8	39,4
	Absorbed power (2)	kW	1,7	2,1	2,4	3,4	4,8	5,9	6,2	6,9	7,6	10,2	11,3	14,4
Compressors	Quantity	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Type		<- - - Scroll - - ->											
Condenser	Fans	n°	1	1	1	1	1	1	1	1	1	1	1	1
	Air flow	m³/s	0,90	0,87	0,87	0,86	1,80	1,78	1,78	1,78	2,50	3,37	3,33	3,33
	Available static pressure	Pa	<- - - 80 - - ->				<- - - 120 - - ->				<- - - 150 - - ->			
Connections	Suction line	Ø "	5/8"	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	7/8"	7/8"	7/8"	7/8"	1 1/8"
		Ø mm	15,9	15,9	15,9	15,9	19	19	19	22	22	22	22	28,6
	Liquid line	Ø "	3/8"	3/8"	3/8"	3/8"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	5/8"
		Ø mm	9,5	9,5	9,5	9,5	12,7	12,7	12,7	12,7	12,7	12,7	12,7	15,9
Electrical characteristics	Power supply	V/Ph/Hz	<-- 230/1/50 -->		<- - - 400/3+N/50 - - ->									
	Max. running current	A	14	18	20	10	14	16	18	20	18	23	26	32
	Max. inrush current	A	56	70	85	55	65	81	89	116	108	140	144	188
Sound pressure (3)	STD	dB(A)	49	49	50	50	51	52	52	53	62	62	62	63
Transport weight	STD	Kg	121	123	126	131	182	190	200	202	305	313	319	334
	WP	Kg	133	135	139	144	200	209	220	222	336	344	351	367

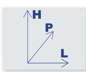
DIMENSIONS

MRA			18	21	25	31	41	51	61	71	81	91	101	131
L	STD	mm	900	900	900	900	900	900	900	900	1500	1500	1500	1500
P	STD	mm	550	550	550	550	690	690	690	690	800	800	800	800
H	STD	mm	1425	1425	1425	1425	1725	1725	1725	1725	1425	1425	1425	1425

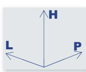
DIMENSIONAL



18 ÷ 31

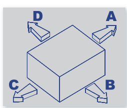


81 ÷ 131

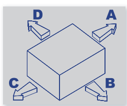


41 ÷ 71

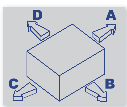
CLEREANCE AREA



MRA 18 ÷ 31		
A (*)	mm	800
B	mm	800
C	mm	800
D	mm	200



MRA 41 ÷ 71		
A (*)	mm	800
B	mm	1000
C	mm	800
D	mm	200



MRA 81 ÷ 151		
A	mm	200
B	mm	1200
C	mm	800
D (*)	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.

(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.

(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

(*) A SIDE: Electrical board side. D SIDE: Electrical board side.

CLINT

MRA 182÷604

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH RADIAL FANS AND SCROLL COMPRESSORS.

FROM 50 kW TO 175 kW.

UNIT DESCRIPTION

The indoor condensing units and reversible condensing units of the MRA 182÷604 series are intended to satisfy the needs of medium/large-sized domestic or industrial systems with particular difficulty in positioning units outside the building.
These units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporator units in both air-conditioning and industrial process cooling applications
They are equipped with Scroll compressors and centrifugal fans even in a high-head version, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MRA
Cooling only

MRA/AP
Cooling only with high ESP fans

MRA/WP
Reversible heat pump

MRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater if needed.
- Centrifugal type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
RF	Cooling circuit shut off valves
RL	Liquid receiver (WP included)
VS	Solenoid valve (except WP)
BP	HGBP by-pass valve (except WP)
FF	Dryer filter + sightglass
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic filter guards for condenser (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers

TECHNICAL DATA

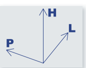
R407C

MRA			182	202	262	302	393	453	524	604
Cooling	Cooling capacity (1)	kW	49,9	58,0	76,0	87,4	114,6	131,8	154,3	177,4
	Absorbed power (1)	kW	16,0	18,2	25,2	28,6	35,6	42,9	48,2	59,6
Heating	Heating capacity (2)	kW	56,5	65,7	86,0	98,9	129,7	149,2	174,6	200,6
	Absorbed power (2)	kW	14,2	16,0	20,8	25,0	30,2	37,5	41,0	53,0
Compressors	Quantity	n°	2	2	2	2	3	3	4	4
	Type		<- - - - - - - - - - - - - - - - - Scroll - - - - - - - - - - - - - - - - ->							
	Refrigerant circuits	n°	1	1	1	1	2	2	2	2
	Capacity steps	n°	2	2	2	2	3	3	4	4
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6
	Available static pressure	Pa	140	130	140	130	115	125	125	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64
High ESP version	Fans	n°	1	1	2	2	2	3	3	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	---
	Available static pressure	Pa	240	265	285	270	255	265	265	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---
	SL sound pressure (3)	dB(A)	63	63	63	64	64	65	65	---
Connections	Suction line	Ø mm	<- - - - - - - - - - 1x42 - - - - - - - - - ->				<-- 1x35+1x42 -->		<-- 2x42 -->	
	Liquid line	Ø mm	<- - - - - - - - - - 1x22 - - - - - - - - - ->				<-- 1x16+1x22 -->		<-- 2x22 -->	
Electrical characteristics	Power supply	V/Ph/Hz	<- - - - - - - - - - - - - 400 / 3 / 50 - - - - - - - - - - - - ->							
	Max. running current	A	45	49	65	75	98	120	123	153
	Max. inrush current	A	148	154	205	241	203	260	263	319
Transport weight	STD	Kg	545	595	705	815	885	1175	1180	1375
	WP	Kg	600	655	776	897	974	1293	1298	1513

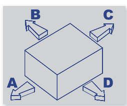
DIMENSIONS

MRA			182	202	262	302	393	453	524	604
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1705	1705	2005	2005	2005	2005	2005	2005

DIMENSIONAL



CLEREANCE AREA



MRA 182 ÷ 604		
A	mm	800
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.
(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.

MRA 201÷702

AIR COOLED CONDENSING UNITS AND REVERSIBLE CONDENSING UNITS WITH RADIAL FANS AND SEMI-HERMETIC COMPRESSORS.

FROM 54 kW TO 204 kW.

UNIT DESCRIPTION

The indoor condensing units and reversible condensing units of the MRA 201÷702 series are intended to satisfy the needs of medium/large-sized domestic or industrial systems with particular difficulty in positioning units outside the building.
These units are combined with evaporators in split system air conditioning installations, allowing the rooms to be cooled and dehumidified or to be heated. They can also be used in combination with hydronic evaporator units in both air-conditioning and industrial process cooling applications
They are equipped with semihermetic compressors and centrifugal fans even in a high-head version, and they enable immediate and efficient use thanks to particular technical and design adjustments.
A wide range of accessories, factory-assembled or supplied separately, complete the outstanding versatility and functionality of the series.

VERSIONS

MRA
Cooling only

MRA/AP
Cooling only with high ESP fans

MRA/WP
Reversible heat pump

MRA/WP/AP
Reversible heat pump with high ESP fans

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic compressors type, complete with cranckcase heater, oil sight glass, incorporated thermal protection.
- Centrifugal type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

Factory fitted accessories:

IM	Protection module
SL	Unit silencement
CC	Condensing control down to -20°C
MF	Muffler
RF	Cooling circuit shut off valves
RL	Liquid receiver (WP included)
VS	Solenoid valve (except WP)
BP	HGBP by-pass valve (except WP)
FF	Dryer filter + sightglass
SS	Soft start
CP	Potential free contacts

Loose accessories:

MN	High and low gauges
MO	Compressor oil gauges
CR	Remote control panel
IS	RS 485 serial interface
RP	Metallic guards for condenser
FP	Metallic filter guards for condenser (except WP)
AG	Rubber shock absorbers
AM	Spring shock absorbers

TECHNICAL DATA

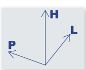
R407C

MRA			201	251	301	321	401	501	602	642	702
Cooling	Cooling capacity (1)	kW	54,2	67,0	79,6	89,2	117,9	142,5	159,3	178,3	203,9
	Absorbed power (1)	kW	18,4	23,0	29,8	32,1	40,2	49,7	56,4	66,2	74,4
Heating	Heating capacity (2)	kW	61,2	75,6	90,3	100,8	133,7	161,9	181,6	201,7	231,0
	Absorbed power (2)	kW	15,3	18,3	23,4	25,1	32,0	39,9	44,4	54,4	59,4
Compressors	Quantity	n°	1	1	1	1	1	1	2	2	2
	Type		< - - - Semi-hermetics - - - >								
	Refrigerant circuits	n°	1	1	1	1	1	1	2	2	2
	Capacity steps	n°	2	2	2	2	2	2	4	4	4
STD version and with SL accessory	Fans	n°	1	1	2	2	2	3	3	3	3
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	15,6	15,6
	Available static pressure	Pa	140	130	140	130	115	125	115	75	75
	Sound pressure (3)	dB(A)	64	64	65	66	66	66	66	68	68
	SL sound pressure (3)	dB(A)	61	61	62	63	63	63	63	64	64
High ESP version	Fans	n°	1	1	2	2	2	3	3	---	---
	Air flow	m³/s	4,2	4,2	7,8	7,8	7,8	11,7	11,7	---	---
	Available static pressure	Pa	240	265	285	270	255	265	255	---	---
	Sound pressure (3)	dB(A)	65	65	66	67	67	67	67	---	---
	SL sound pressure (3)	dB(A)	62	62	63	64	64	64	64	---	---
Connections	Suction line	Ø mm	<- - - 1x42 - - ->				<--- 1x54 --->		<- - - 2x42 - - ->		
	Liquid line	Ø mm	<- - - 1x22 - - ->				<--- 1x28 --->		<- - - 2x22 - - ->		
Electrical characteristics	Power supply	V/Ph/Hz	<- - - 400 / 3 / 50 - - ->								
	Max. running current	A	39	53	66	67	94	108	127	140	170
	Max. inrush current	A	103	120	137	146	226	254	198	219	251
Transport weight	STD	Kg	540	590	715	805	841	1047	1262	1326	1400
	WP	Kg	594	649	787	886	925	1152	1388	1459	1540

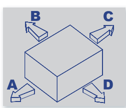
DIMENSIONS

MRA			201	251	301	321	401	501	602	645	702
L	STD	mm	2350	2350	2350	2350	2350	3550	3550	3550	3550
P	STD	mm	1100	1100	1100	1100	1100	1100	1100	1100	1100
H	STD	mm	1705	1705	2005	2005	2005	2005	2005	2005	2005

DIMENSIONAL



CLEREANCE AREA



MRA 182 ÷ 604		
A	mm	300
B	mm	1800
C (*)	mm	800
D	mm	800

NOTES

(1) Average evaporating temperatur 4 °C, ambient air temperature 35 °C.
(2) Average condensing temperatur 40 °C, ambient air temperature 7 °C d.b. / 6 °C w.b.
(3) Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
(*) C SIDE: Electrical board side.

5

Terminal units.

FVW 12÷74 marvin

FAN COIL UNIT WITH CENTRIFUGAL FANS FOR FLOOR OR CEILING INSTALLATION.

FROM 0,9 kW TO 7,3 kW.

UNIT DESCRIPTION

Marvin features an exclusive design which is the result of the experience of architects and engineers who have combined in a single unit aesthetic beauty along with advanced functional and technical solutions for the air conditioning of any room.
Inserted in a system equipped with a water chiller, Marvin generates cool air silently and immediately. During the winter, if used in conjunction with a heating system with a boiler or heat pump, it provides warm air, making it possible to meet home or business heating needs. A filter that absorbs and holds suspended powders maintains suitable air quality. Since it can be easily removed, constant cleaning cycles can be performed, which is especially important in busy rooms to ensure suitable standards of hygiene. All installation needs are considered in the many standard features of Marvin. It can be installed horizontally or vertically, with front or lower intake. There is also a series of accessories, also for a 4-pipe system, that includes a control panel that is installed on-board the machine or in the room. It can also be used in conjunction with the innovative CLIMAFRIEND control and supervision system, to intuitively and efficiently programme and maintain an optimal level of comfort.

marvin®

VERSIONS

FVW/VP	Vertical unit with cabinet bottom inlet and vertical delivery
FVW/VH	Vertical unit with cabinet front inlet and vertical delivery
FVW/VE	Horizontal unit with cabinet rear inlet and horizontal delivery
FVW/VO	Horizontal unit with cabinet bottom inlet and oblique delivery

FEATURES

- Structure made of galvanized sheet protected by a prepainted sheet covering cabinet and ABS details, complete with heat/sound insulation, regenerating filter, heat-resistant ABS polymer grills adjustable in 4 different directions and natural discharge condensation tray.
- Centrifugal type fan directly coupled to a 6-speed singlephase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.

ACCESSORIES

Loose accessories:

Z	Pair of feet
C	Auxiliary tray
WS	Exchanger for 4 tubes systems
EH	Electrical heating element
RP	Rear panel
TP	Rear closing
S	Manual dampers
SG	Manual dampers with grill
SM	ON/OFF motorized dampers
SMG	ON/OFF motorized dampers with grill
RM	Wall connection for dampers
SF	Supply frame
VB	Built-in fan speed control
VR	Fan speed controls
DBM	Built-in control panel
DRM	Electronic control panels
DBA	Automatic built-in control panel
DRA	Automatic control panels
DRE	EASY electronic control panel
TA	Remote room thermostat
TMB	Minimum temperature thermostat for VB and VR
TME	Mininimum temperature electronic thermostat for DBM, DRM, DBA and DRA
V2	ON/OFF valves for 2 pipes system
V4	ON/OFF valves for 4 pipes system
MP	Micro pump for moisture

TECHNICAL DATA

H2O

FVW marvin 2R			12	22	32	42	52	62	72
Cooling	Total cooling capacity (1)	kW	0,95	1,29	2,02	2,51	2,90	3,86	5,16
	Sensible cooling capacity (1)	kW	0,90	1,15	1,69	2,04	2,48	3,18	4,18
	Water flow (1)	l/h	163	222	347	432	499	664	888
	Pressure drops	kPa	2,1	4,2	11,4	2,4	4,8	10,9	21,6
Heating	Heating capacity (2)	kW	2,61	3,66	5,06	6,44	7,90	10,54	13,16
	Water flow (2)	l/h	224	315	435	554	679	906	1132
	Pressure drops	kW	1,6	3,2	8,6	15,1	3,6	8,1	16,3

FVW marvin 3R			13	23	33	43	53	63	73
Cooling	Total cooling capacity (1)	kW	1,31	1,77	2,47	3,11	4,04	5,09	6,45
	Sensible cooling capacity (1)	kW	1,09	1,45	1,96	2,42	3,12	3,86	5,07
	Water flow (1)	l/h	225	304	425	535	695	875	1109
	Pressure drops	kPa	5,4	10,7	8,0	14,2	26,2	8,0	15,8
Heating	Heating capacity (2)	kW	3,20	4,19	5,70	7,03	9,01	11,69	14,59
	Water flow (2)	l/h	275	360	490	605	775	1005	1255
	Pressure drops	kW	4,1	8,1	6,0	10,7	19,7	5,9	11,9

FVW marvin 4R			14	24	34	44	54	64	74
Cooling	Total cooling capacity (1)	kW	1,49	2,05	2,77	3,54	4,58	5,96	7,26
	Sensible cooling capacity (1)	kW	1,26	1,68	2,16	2,71	3,47	4,63	5,57
	Water flow (1)	l/h	253	353	476	609	788	1025	1249
	Pressure drops	kPa	1,0	2,1	5,2	9,1	16,7	5,2	10,2
Heating	Heating capacity (2)	kW	3,45	4,53	6,35	7,75	9,93	13,00	16,19
	Water flow (2)	l/h	297	390	546	666	854	1118	1392
	Pressure drops	kW	0,8	1,6	3,9	6,8	12,6	3,8	7,6
Batteria aggiuntiva	Heating capacity (2)	kW	1,50	2,16	2,92	3,75	4,65	6,01	7,84
	Water flow (2)	l/h	129	186	251	322	400	517	674
	Pressure drops	kW	2,9	6,7	14,6	25,7	6,9	13,1	24,2
Air flow	Max	m³/h	240	340	430	540	690	910	1180
	Med.	m³/h	190	260	340	420	530	730	810
	Min.	m³/h	140	170	250	280	400	510	590
Sound capacity	Max	dB(A)	51	54	50	54	56	58	62
	Med.	dB(A)	44	48	44	47	49	53	52
	Min.	dB(A)	36	36	35	37	43	44	44
Sound pressure (3)	Max	dB(A)	41	44	40	44	46	48	52
	Med.	dB(A)	34	38	34	37	39	43	42
	Min.	dB(A)	26	26	25	27	33	34	34
Electrical characteristics	Power supply	V/Ph/Hz	<- 230 / 1 / 50 ->						
	Max absorbed power	kW	0,02	0,04	0,05	0,07	0,08	0,16	0,20
Water connections		"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	16	19	24	28	33	43	54

DIMENSIONS

FVW marvin 2R	12	22	32	42	52	62	72
FVW marvin 3R	13	23	33	43	53	63	73
FVW marvin 4R	14	24	34	44	54	64	74

L	STD	mm	690	820	1080	1210	1470	1470	1730
P	STD	mm	500	500	500	500	500	570	570
H	STD	mm	210	210	210	210	210	275	275
D*	STD	mm	90	90	90	90	90	90	90

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) D: Feet height.

NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

FVW 12÷74 floyd

FAN COIL UNIT WITH CENTRIFUGAL FANS FOR FLOOR OR CEILING INSTALLATION.

FROM 0,9 kW TO 7,3 kW.

UNIT DESCRIPTION

The Floyd fan coil unit features a refined, exclusive design that lets you install an efficient air conditioning unit in any room, with no aesthetic compromises and without compromising the functionality and harmony of the spaces of the home or business.
Inserted in a system equipped with a water chiller, Marvin generates cool air silently and immediately. During the winter, if used in conjunction with a heating system with a boiler or heat pump, it provides warm air, making it possible to meet home or business heating needs. A filter that absorbs and holds suspended powders maintains suitable air quality. Since it can be easily removed, constant cleaning cycles can be performed, which is especially important in busy rooms to ensure suitable standards of hygiene. All installation needs are considered in the many standard features of Marvin. It can be installed horizontally or vertically, with front or lower intake. There is also a series of accessories, also for a 4-pipe system, that includes a control panel that is installed on-board the machine or in the room. It can also be used in conjunction with the innovative CLIMAFRIEND control and supervision system, to intuitively and efficiently programme and maintain an optimal level of comfort.

floyd®

VERSIONS

FVW/VP	Vertical unit with cabinet bottom inlet and vertical delivery
FVW/VH	Vertical unit with cabinet front inlet and vertical delivery
FVW/VE	Horizontal unit with cabinet rear inlet and horizontal delivery
FVW/VO	Horizontal unit with cabinet bottom inlet and oblique delivery

FEATURES

- Structure made of galvanized sheet protected by a prepainted sheet covering cabinet and ABS details, complete with heat/sound insulation, regenerating filter, heat-resistant ABS polymer grills adjustable in 4 different directions and natural discharge condensation tray.
- Centrifugal type fan directly coupled to a 6-speed singlephase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.

ACCESSORIES

Loose accessories:

Z	Pair of feet
C	Auxiliary tray
WS	Exchanger for 4 tubes systems
EH	Electrical heating element
RP	Rear panel
TP	Rear closing
S	Manual dampers
SG	Manual dampers with grill
SM	ON/OFF motorized dampers
SMG	ON/OFF motorized dampers with grill
RM	Wall connection for dampers
SF	Supply frame
VB	Built-in fan speed control
VR	Fan speed controls
DBM	Built-in control panel
DRM	Electronic control panels
DBA	Automatic built-in control panel
DRA	Automatic control panels
DRE	EASY electronic control panel
TA	Remote room thermostat
TMB	Minimum temperature thermostat for VB and VR
TME	Mininimum temperature electronic thermostat for DBM, DRM, DBA and DRA
V2	ON/OFF valves for 2 pipes system
V4	ON/OFF valves for 4 pipes system
MP	Micro pump for moisture

TECHNICAL DATA

H2O

FVW floyd 2R			12	22	32	42	52	62	72
Cooling	Total cooling capacity (1)	kW	0,95	1,29	2,02	2,51	2,90	3,86	5,16
	Sensible cooling capacity (1)	kW	0,90	1,15	1,69	2,04	2,48	3,18	4,18
	Water flow (1)	l/h	163	222	347	432	499	664	888
	Pressure drops	kPa	2,1	4,2	11,4	2,4	4,8	10,9	21,6
Heating	Heating capacity (2)	kW	2,61	3,66	5,06	6,44	7,90	10,54	13,16
	Water flow (2)	l/h	224	315	435	554	679	906	1132
	Pressure drops	kW	1,6	3,2	8,6	15,1	3,6	8,1	16,3

FVW floyd 3R			13	23	33	43	53	63	73
Cooling	Total cooling capacity (1)	kW	1,31	1,77	2,47	3,11	4,04	5,09	6,45
	Sensible cooling capacity (1)	kW	1,09	1,45	1,96	2,42	3,12	3,86	5,07
	Water flow (1)	l/h	225	304	425	535	695	875	1109
	Pressure drops	kPa	5,4	10,7	8,0	14,2	26,2	8,0	15,8
Heating	Heating capacity (2)	kW	3,20	4,19	5,70	7,03	9,01	11,69	14,59
	Water flow (2)	l/h	275	360	490	605	775	1005	1255
	Pressure drops	kW	4,1	8,1	6,0	10,7	19,7	5,9	11,9

FVW floyd 4R			14	24	34	44	54	64	74
Cooling	Total cooling capacity (1)	kW	1,49	2,05	2,77	3,54	4,58	5,96	7,26
	Sensible cooling capacity (1)	kW	1,26	1,68	2,16	2,71	3,47	4,63	5,57
	Water flow (1)	l/h	253	353	476	609	788	1025	1249
	Pressure drops	kPa	1,0	2,1	5,2	9,1	16,7	5,2	10,2
Heating	Heating capacity (2)	kW	3,45	4,53	6,35	7,75	9,93	13,00	16,19
	Water flow (2)	l/h	297	390	546	666	854	1118	1392
	Pressure drops	kW	0,8	1,6	3,9	6,8	12,6	3,8	7,6
Batteria aggiuntiva	Heating capacity (2)	kW	1,50	2,16	2,92	3,75	4,65	6,01	7,84
	Water flow (2)	l/h	129	186	251	322	400	517	674
	Pressure drops	kW	2,9	6,7	14,6	25,7	6,9	13,1	24,2
Air flow	Max	m³/h	240	340	430	540	690	910	1180
	Med.	m³/h	190	260	340	420	530	730	810
	Min.	m³/h	140	170	250	280	400	510	590
Sound capacity	Max	dB(A)	51	54	50	54	56	58	62
	Med.	dB(A)	44	48	44	47	49	53	52
	Min.	dB(A)	36	36	35	37	43	44	44
Sound pressure (3)	Max	dB(A)	41	44	40	44	46	48	52
	Med.	dB(A)	34	38	34	37	39	43	42
	Min.	dB(A)	26	26	25	27	33	34	34
Electrical characteristics	Power supply	V/Ph/Hz	<- 230 / 1 / 50 ->						
	Max absorbed power	kW	0,02	0,04	0,05	0,07	0,08	0,16	0,20
Water connections		"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	16	19	24	28	33	43	54

DIMENSIONS

FVW floyd 2R			12	22	32	42	52	62	72
FVW floyd 3R			13	23	33	43	53	63	73
FVW floyd 4R			14	24	34	44	54	64	74
L	STD	mm	650	780	1046	1170	1430	1430	1690
P	STD	mm	500	500	500	500	500	570	570
H	STD	mm	210	210	210	210	210	275	275
D*	STD	mm	90	90	90	90	90	90	90

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) D: Feet height.

NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

FVW 12÷74 elmer

FAN COIL UNIT WITH CENTRIFUGAL FANS FOR FLOOR OR CEILING INSTALLATION.

FROM 0,9 kW TO 7,3 kW.

UNIT DESCRIPTION

elmer®

Featuring innovative technical solutions and design, which transform the usual fan coil unit into a silent and efficient part of the home or business setting.
Inserted in a system equipped with a water chiller, Marvin generates cool air silently and immediately. During the winter, if used in conjunction with a heating system with a boiler or heat pump, it provides warm air, making it possible to meet home or business heating needs. A filter that absorbs and holds suspended powders maintains suitable air quality. Since it can be easily removed, constant cleaning cycles can be performed, which is especially important in busy rooms to ensure suitable standards of hygiene. All installation needs are considered in the many standard features of Marvin. It can be installed horizontally or vertically, with front or lower intake. There is also a series of accessories, also for a 4-pipe system, that includes a control panel that is installed on-board the machine or in the room. It can also be used in conjunction with the innovative CLIMAFRIEND control and supervision system, to intuitively and efficiently programme and maintain an optimal level of comfort.

VERSIONS

FVW/VP	Vertical unit with cabinet bottom inlet and vertical delivery
FVW/VH	Vertical unit with cabinet front inlet and vertical delivery
FVW/VE	Horizontal unit with cabinet rear inlet and horizontal delivery
FVW/VO	Horizontal unit with cabinet bottom inlet and oblique delivery

FEATURES

- Structure made of galvanized sheet protected by a prepainted sheet covering cabinet and ABS details, complete with heat/sound insulation, regenerating filter, heat-resistant ABS polymer grills adjustable in 4 different directions and natural discharge condensation tray.
- Centrifugal type fan directly coupled to a 6-speed singlephase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.

ACCESSORIES

Loose accessories:

Z	Pair of feet
C	Auxiliary tray
WS	Exchanger for 4 tubes systems
EH	Electrical heating element
RP	Rear panel
TP	Rear closing
S	Manual dampers
SG	Manual dampers with grill
SM	ON/OFF motorized dampers
SMG	ON/OFF motorized dampers with grill
RM	Wall connection for dampers
SF	Supply frame
VB	Built-in fan speed control
VR	Fan speed controls
DBM	Built-in control panel
DRM	Electronic control panels
DBA	Automatic built-in control panel
DRA	Automatic control panels
DRE	EASY electronic control panel
TA	Remote room thermostat
TMB	Minimum temperature thermostat for VB and VR
TME	Mininimum temperature electronic thermostat for DBM, DRM, DBA and DRA
V2	ON/OFF valves for 2 pipes system
V4	ON/OFF valves for 4 pipes system
MP	Micro pump for moisture

TECHNICAL DATA

H2O

FVW elmer 2R			12	22	32	42	52	62	72
Cooling	Total cooling capacity (1)	kW	0,95	1,29	2,02	2,51	2,90	3,86	5,16
	Sensible cooling capacity (1)	kW	0,90	1,15	1,69	2,04	2,48	3,18	4,18
	Water flow (1)	l/h	163	222	347	432	499	664	888
	Pressure drops	kPa	2,1	4,2	11,4	2,4	4,8	10,9	21,6
Heating	Heating capacity (2)	kW	2,61	3,66	5,06	6,44	7,90	10,54	13,16
	Water flow (2)	l/h	224	315	435	554	679	906	1132
	Pressure drops	kW	1,6	3,2	8,6	15,1	3,6	8,1	16,3

FVW elmer 3R			13	23	33	43	53	63	73
Cooling	Total cooling capacity (1)	kW	1,31	1,77	2,47	3,11	4,04	5,09	6,45
	Sensible cooling capacity (1)	kW	1,09	1,45	1,96	2,42	3,12	3,86	5,07
	Water flow (1)	l/h	225	304	425	535	695	875	1109
	Pressure drops	kPa	5,4	10,7	8,0	14,2	26,2	8,0	15,8
Heating	Heating capacity (2)	kW	3,20	4,19	5,70	7,03	9,01	11,69	14,59
	Water flow (2)	l/h	275	360	490	605	775	1005	1255
	Pressure drops	kW	4,1	8,1	6,0	10,7	19,7	5,9	11,9

FVW elmer 4R			14	24	34	44	54	64	74
Cooling	Total cooling capacity (1)	kW	1,49	2,05	2,77	3,54	4,58	5,96	7,26
	Sensible cooling capacity (1)	kW	1,26	1,68	2,16	2,71	3,47	4,63	5,57
	Water flow (1)	l/h	253	353	476	609	788	1025	1249
	Pressure drops	kPa	1,0	2,1	5,2	9,1	16,7	5,2	10,2
Heating	Heating capacity (2)	kW	3,45	4,53	6,35	7,75	9,93	13,00	16,19
	Water flow (2)	l/h	297	390	546	666	854	1118	1392
	Pressure drops	kW	0,8	1,6	3,9	6,8	12,6	3,8	7,6
Batteria aggiuntiva	Heating capacity (2)	kW	1,50	2,16	2,92	3,75	4,65	6,01	7,84
	Water flow (2)	l/h	129	186	251	322	400	517	674
	Pressure drops	kW	2,9	6,7	14,6	25,7	6,9	13,1	24,2
Air flow	Max	m³/h	240	340	430	540	690	910	1180
	Med.	m³/h	190	260	340	420	530	730	810
	Min.	m³/h	140	170	250	280	400	510	590
Sound capacity	Max	dB(A)	51	54	50	54	56	58	62
	Med.	dB(A)	44	48	44	47	49	53	52
	Min.	dB(A)	36	36	35	37	43	44	44
Sound pressure (3)	Max	dB(A)	41	44	40	44	46	48	52
	Med.	dB(A)	34	38	34	37	39	43	42
	Min.	dB(A)	26	26	25	27	33	34	34
Electrical characteristics	Power supply	V/Ph/Hz	<- 230 / 1 / 50 ->						
	Max absorbed power	kW	0,02	0,04	0,05	0,07	0,08	0,16	0,20
Water connections		"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	16	19	24	28	33	43	54

DIMENSIONS

FVW elmer 2R			12	22	32	42	52	62	72
FVW elmer 3R			13	23	33	43	53	63	73
FVW elmer 4R			14	24	34	44	54	64	74
L	STD	mm	650	780	1040	1170	1430	1430	1690
P	STD	mm	500	500	500	500	500	570	570
H	STD	mm	210	210	210	210	210	275	275
D*	STD	mm	90	90	90	90	90	90	90

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) D: Feet height.

NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

FVW 12÷74

FAN COIL UNIT WITH CENTRIFUGAL FANS FOR FLOOR INSTALLATION.

FROM 0,9 kW TO 7,3 kW.

UNIT DESCRIPTION

The water terminals of the FVW series are designed for vertical floor-mounted installation, with or without feet, in domestic environments or the services sector including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a water cooler, the FVW fan convector generates cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike.
A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.
These units can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

FVW/VF Vertical unit with cabinet bottom inlet and oblique delivery

FVW/VW Vertical unit with cabinet front inlet and oblique delivery

FEATURES

- Structure made of galvanized sheet protected by a prepainted sheet covering cabinet and ABS details, complete with heat/sound insulation, regenerating filter, heat-resistant ABS polymer grills adjustable in 4 different directions and natural discharge condensation tray.
- Centrifugal type fan directly coupled to a 6-speed singlephase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.

ACCESSORIES

Loose accessories:

Z	Pair of feet
C	Auxiliary tray
WS	Exchanger for 4 tubes systems
EH	Electrical heating element
RP	Rear panel
TP	Rear closing
S	Manual dampers
SG	Manual dampers with grill
SM	ON/OFF motorized dampers
SMG	ON/OFF motorized dampers with grill
RM	Wall connection for dampers
SF	Supply frame
VB	Built-in fan speed control
VR	Fan speed controls
DBM	Built-in control panel
DRM	Electronic control panels
DBA	Automatic built-in control panel
DRA	Automatic control panels
DRE	EASY electronic control panel
TA	Remote room thermostat
TMB	Minimum temperature thermostat for VB and VR
TME	Minimum temperature electronic thermostat for DBM, DRM, DBA and DRA
V2	ON/OFF valves for 2 pipes system
V4	ON/OFF valves for 4 pipes system
MP	Micro pump for moisture

TECHNICAL DATA

H2O

FVW 2R			12	22	32	42	52	62	72
Cooling	Total cooling capacity (1)	kW	0,95	1,29	2,02	2,51	2,90	3,86	5,16
	Sensible cooling capacity (1)	kW	0,90	1,15	1,69	2,04	2,48	3,18	4,18
	Water flow (1)	l/h	163	222	347	432	499	664	888
	Pressure drops	kPa	2,1	4,2	11,4	2,4	4,8	10,9	21,6
Heating	Heating capacity (2)	kW	2,61	3,66	5,06	6,44	7,90	10,54	13,16
	Water flow (2)	l/h	224	315	435	554	679	906	1132
	Pressure drops	kW	1,6	3,2	8,6	15,1	3,6	8,1	16,3

FVW 3R			13	23	33	43	53	63	73
Cooling	Total cooling capacity (1)	kW	1,31	1,77	2,47	3,11	4,04	5,09	6,45
	Sensible cooling capacity (1)	kW	1,09	1,45	1,96	2,42	3,12	3,86	5,07
	Water flow (1)	l/h	225	304	425	535	695	875	1109
	Pressure drops	kPa	5,4	10,7	8,0	14,2	26,2	8,0	15,8
Heating	Heating capacity (2)	kW	3,20	4,19	5,70	7,03	9,01	11,69	14,59
	Water flow (2)	l/h	275	360	490	605	775	1005	1255
	Pressure drops	kW	4,1	8,1	6,0	10,7	19,7	5,9	11,9

FVW 4R			14	24	34	44	54	64	74
Cooling	Total cooling capacity (1)	kW	1,49	2,05	2,77	3,54	4,58	5,96	7,26
	Resa frigorifera sensibile (1)	kW	1,26	1,68	2,16	2,71	3,47	4,63	5,57
	Water flow (1)	l/h	253	353	476	609	788	1025	1249
	Pressure drops	kPa	1,0	2,1	5,2	9,1	16,7	5,2	10,2
Heating	Heating capacity (2)	kW	3,45	4,53	6,35	7,75	9,93	13,00	16,19
	Water flow (2)	l/h	297	390	546	666	854	1118	1392
	Pressure drops	kW	0,8	1,6	3,9	6,8	12,6	3,8	7,6
Batteria aggiuntiva	Heating capacity (2)	kW	1,50	2,16	2,92	3,75	4,65	6,01	7,84
	Water flow (2)	l/h	129	186	251	322	400	517	674
	Pressure drops	kW	2,9	6,7	14,6	25,7	6,9	13,1	24,2
Air flow	Max	m³/h	240	340	430	540	690	910	1180
	Med.	m³/h	190	260	340	420	530	730	810
	Min.	m³/h	140	170	250	280	400	510	590
Sound capacity	Max	dB(A)	51	54	50	54	56	58	62
	Med.	dB(A)	44	48	44	47	49	53	52
	Min.	dB(A)	36	36	35	37	43	44	44
Sound pressure (3)	Max	dB(A)	41	44	40	44	46	48	52
	Med.	dB(A)	34	38	34	37	39	43	42
	Min.	dB(A)	26	26	25	27	33	34	34
Electrical characteristics	Power supply	V/Ph/Hz	<- 230 / 1 / 50 ->						
	Max absorbed power	kW	0,02	0,04	0,05	0,07	0,08	0,16	0,20
Water connections		"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	16	19	24	28	33	43	54

DIMENSIONS

FVW 2R	12	22	32	42	52	62	72
FVW 3R	13	23	33	43	53	63	73
FVW 4R	14	24	34	44	54	64	74

L	STD	mm	690	820	1080	1210	1470	1470	1730
P	STD	mm	500	500	500	500	500	570	570
H	STD	mm	210	210	210	210	210	275	275
D*	STD	mm	90	90	90	90	90	90	90

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) D: Feet height.
NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

FIW 12÷74

FAN COIL UNIT WITH CENTRIFUGAL FANS FOR RECESSED INSTALLATION.

FROM 0,9 kW TO 7,3 kW.

UNIT DESCRIPTION

The water terminals of the FIW series are designed for vertical floor-mounted installation, or horizontal in domestic environments or the services sector including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a water cooler, the FIW fan convector generates cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike.
A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.
These units can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

FIW/IV	Recessed vertical unit bottom inlet and vertical delivery
FIW/IF	Recessed vertical unit front inlet and vertical delivery
FIW/IO	Recessed horizontal unit rear inlet and horizontal delivery
FIW/II	Recessed horizontal unit bottom inlet and horizontal delivery

FEATURES

- Structure made of galvanized sheet complete with heat/sound insulation, regenerating filter and natural discharge condensation tray.
- Centrifugal fan type directly coupled to a 6-speed singlephase electric motor, with 3 speeds connected in the standard configuration.
- Heat exchanger coil with copper pipes and aluminium fins with airvent on the distributors.

DRM	Electronic control panels
DRA	Automatic control panels
TA	Remote room thermostat
TMB	Minimum temperature thermostat for VB and VR
TME	Minimum temperature electronic thermostat for DBM, DRM, DBA and DRA
V2	ON/OFF valves for 2 pipes system
V4	ON/OFF valves for 4 pipes system
MP	Micro pump for moisture

ACCESSORIES

Loose accessories:

C	Auxiliary tray
WS	Exchanger for 4 tubes systems
EH	Electrical heating element
S	Manual dampers
SG	Manual dampers with grill
SM	ON/OFF motorized dampers
SMG	ON/OFF motorized dampers with grill
RM	Wall connection for dampers
SF	Supply frame
VR	Fan speed controls

TECHNICAL DATA

H_2O

FIW 2R			12	22	32	42	52	62	72
Cooling	Total cooling capacity (1)	kW	0,95	1,29	2,02	2,51	2,90	3,86	5,16
	Sensible cooling capacity (1)	kW	0,90	1,15	1,69	2,04	2,48	3,18	4,18
	Water flow (1)	l/h	163	222	347	432	499	664	888
	Pressure drops	kPa	2,1	4,2	11,4	2,4	4,8	10,9	21,6
Heating	Heating capacity (2)	kW	2,61	3,66	5,06	6,44	7,90	10,54	13,16
	Water flow (2)	l/h	224	315	435	554	679	906	1132
	Pressure drops	kW	1,6	3,2	8,6	15,1	3,6	8,1	16,3

FIW 3R			13	23	33	43	53	63	73
Cooling	Total cooling capacity (1)	kW	1,31	1,77	2,47	3,11	4,04	5,09	6,45
	Sensible cooling capacity (1)	kW	1,09	1,45	1,96	2,42	3,12	3,86	5,07
	Water flow (1)	l/h	225	304	425	535	695	875	1109
	Pressure drops	kPa	5,4	10,7	8,0	14,2	26,2	8,0	15,8
Heating	Heating capacity (2)	kW	3,20	4,19	5,70	7,03	9,01	11,69	14,59
	Water flow (2)	l/h	275	360	490	605	775	1005	1255
	Pressure drops	kW	4,1	8,1	6,0	10,7	19,7	5,9	11,9

FIW 4R			14	24	34	44	54	64	74
Cooling	Total cooling capacity (1)	kW	1,49	2,05	2,77	3,54	4,58	5,96	7,26
	Sensible cooling capacity (1)	kW	1,26	1,68	2,16	2,71	3,47	4,63	5,57
	Water flow (1)	l/h	253	353	476	609	788	1025	1249
	Pressure drops	kPa	1,0	2,1	5,2	9,1	16,7	5,2	10,2
Heating	Heating capacity (2)	kW	3,45	4,53	6,35	7,75	9,93	13,00	16,19
	Water flow (2)	l/h	297	390	546	666	854	1118	1392
	Pressure drops	kW	0,8	1,6	3,9	6,8	12,6	3,8	7,6
Batteria aggiuntiva	Heating capacity (2)	kW	1,50	2,16	2,92	3,75	4,65	6,01	7,84
	Water flow (2)	l/h	129	186	251	322	400	517	674
	Pressure drops	kW	2,9	6,7	14,6	25,7	6,9	13,1	24,2
Air flow	Max	m³/h	240	340	430	540	690	910	1180
	Med.	m³/h	190	260	340	420	530	730	810
	Min.	m³/h	140	170	250	280	400	510	590
Sound capacity	Max	dB(A)	51	54	50	54	56	58	62
	Med.	dB(A)	44	48	44	47	49	53	52
	Min.	dB(A)	36	36	35	37	43	44	44
Sound pressure (3)	Max	dB(A)	41	44	40	44	46	48	52
	Med.	dB(A)	34	38	34	37	39	43	42
	Min.	dB(A)	26	26	25	27	33	34	34
Electrical characteristics	Power supply	V/Ph/Hz	<- 230 / 1 / 50 ->						
	Max absorbed power	kW	0,02	0,04	0,05	0,07	0,08	0,16	0,20
Water connections		"G	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	16	19	24	28	33	43	54

DIMENSIONS

FIW 2R			12	22	32	42	52	62	72
FIW 3R			13	23	33	43	53	63	73
FIW 4R			14	24	34	44	54	64	74
L	STD	mm	440	560	760	960	1160	1135	1410
P	STD	mm	475	475	475	475	475	545	545
H	STD	mm	195	195	195	195	195	260	260

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.

NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

HWW 32÷63

WALL MOUNTED FAN COILS WITH TANGENTIAL FAN.

FROM 2,21 kW TO 5,0 kW.

UNIT DESCRIPTION

The water terminal units of the HWW series are designed for wall-mounted installation in domestic environments or the services sector including offices and shops.
If connected to a system equipped with a water cooler, the HWW wall-mounted fan convector generates cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike.
A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.
Available in the remote-controlled or wire-controlled version, this unit can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

HWW/TCM
Standard unit predisposed for remote control

HWW/DR
Standard unit predisposed for hard-wired control panel

FEATURES

- ABS structure.
- Tangential ventilating group with automatic/manual 3-speed.
- Easy access and maintenance air filter.
- Manual/motorized supply air fins.
- Automatic/manual operation.
- Min. water low temperature probe.
- Ionizator.

ACCESSORIES

Loose accessories:

TCM	Remote control
DRM	Control panel
DRA	Automatic control panel

TECHNICAL DATA

H2O

HWW			32	33	63
Cooling	Total cooling capacity (1)	kW	2,21	3,02	5,00
	Sensible cooling capacity (1)	kW	1,83	2,06	3,71
Heating	Heating capacity (2)	kW	2,28	2,89	4,83
	Heating capacity (3)	kW	4,65	5,84	9,77
Water flow		l/h	380	520	860
Pressure drops		kPa	15	26	39
Air flow	Max	m³/h	450	490	900
	Med.	m³/h	340	430	790
	Min.	m³/h	280	390	630
Sound pressure (4)	Max	dB(A)	41	42	43
	Med.	dB(A)	34	36	39
	Min.	dB(A)	28	30	30
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50
	Absorbed power	kW	0,02	0,02	0,04
Water connections		"G	1/2"	1/2"	1/2"
Weights	Transport weight	Kg	9	9	18

DIMENSIONS

HWW			32	33	63
L	STD	mm	795	795	1250
P	STD	mm	178	178	195
H	STD	mm	270	270	320

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 45/40 °C;
(3) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(4) At a distance of 1 m and with reverberation time of 0.5 s.

NB
- Maximum operating pressure 1400 kPa.
- Maximum inlet water temperature 80 °C.
- Inhibited ethylene glycol can be added to the water.

TCW 42÷104

WATER CASSETTE

FROM 2,20 kW TO 10,20 kW.

UNIT DESCRIPTION

The water cassette of the TCW series has been designed and produced to be installed in false ceilings, in domestic environments or the services sector including offices, hotels, restaurants, gyms and shops.
If connected to a system equipped with a water cooler, the TCW terminal unit generates cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, it delivers warm air to satisfy the heating needs of households and the service industry alike. A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms. The TCW series, in addition to having a rich set of accessories to complete the unit, also has an attractive intake grille that integrates perfectly in the surrounding environment and adjustable deflectors to distribute the air in the room in an ideal manner. This unit can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

TCW	Base unit
TCW/V	Unit with 3-ways on/off valve
TCW/WB	Unit with exchanger for 4-pipes system
TCW/WB/V	Unit with coil for 4-pipes system and 3-ways on/off valve
TCW/EH	Unit with electric heater
TCW/EH/V	Unit with electric heater and 3-ways on/off valve

FEATURES

- Structure for insulated recess fitting, limited depth (287 mm) and dimensions compatible with the standard double-ceiling modules (600x 600 mm and 600x1200 mm); specially designed for easy installation and maintenance of the hydraulic and electrical connections, accessible starting from the front panel grille.
- Casing with panels in insulated galvanized sheet; combined air intake/suction grille; manual adjustment for diffusion of air on the four sides; possibility of closing one or two air intake sides; suction in middle with regenerable filter; precut holes for connection to an external air intake and for connection to a branch duct for conditioning an adjoining room.
- Combined air diffusion/suction grille with air filter and manually adjustable air diffusion on the 4 sides with suction in middle.
- Centrifugal fan turbine with direct feed. The motors, mounted on elastic suspension and equipped with internal thermal safety, are 3-speed.
- Lift pump with float and detection at 3 levels (On-Off-Alarm) of condensation for lift in the upper part of the box. Discharge occurs by gravity, outside the appliance (lift height up to 600 mm).
- Heat exchanger coil with copper pipes and aluminium fins with air vent on the distributors.
- Electric heater the boxes are factory-fitted (optional) with an electric heater (heating elements) thermally protected against any abnormal temperature increase by means of two automatic or manual-reset thermostats.
- Regenerable-type air filter, accessible after opening the combined air intake/suction grille.
- Internal electric control and protection board with power supply terminal block for connection to terminals without screws and multi-output (42÷54) auto-transformer. Outer placed electrical board (84-104).

ACCESSORIES

Loose accessories:

V2	3-way on/off valve for system with 2 pipes
V4	3-way on/off valve for system with 4 pipes
DRM	Control panel
DRA	Automatic control panel

TECHNICAL DATA

H2O

TCW			42	44	54	84	104
Cooling	Total cooling capacity (1)	kW	2,20	3,50	5,00	6,50	10,20
	Sensible cooling capacity (1)	kW	1,77	2,70	3,78	4,87	7,75
	Water flow (1)	l/h	378	602	850	1118	1754
	Pressure drops	kPa	12,7	16,2	14,7	16,7	25,7
Heating 2-pipes unit	Heating capacity (2)	kW	5,80	7,80	9,90	18,20	19,60
	Water flow (2)	l/h	499	671	851	1565	1686
	Pressure drops	kPa	18,5	23,5	14,6	22,9	18,2
Heating 4-pipes unit	Heating capacity (2)	kW	2,20	3,20	4,90	---	9,50
	Water flow (2)	l/h	189	275	421	---	817
	Pressure drops	kPa	3,2	4,7	4,1	---	5,0
Air flow	Max	m³/h	700	700	760	1550	1725
	Med.	m³/h	460	460	515	1350	1360
	Min.	m³/h	420	420	460	1100	1075
Sound pressure (3)	Max	dB(A)	39	39	44	48	48
	Med.	dB(A)	27	27	36	40	41
	Min.	dB(A)	24	24	31	37	46
Electrical characteristics	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
	Max absorbed power	kW	0,06	0,08	0,11	0,20	0,22
	Med. absorbed power	kW	0,04	0,05	0,07	0,18	0,19
	Min. absorbed power	kW	0,03	0,04	0,05	0,16	0,18
Electrical heater	Power supply	V/Ph/Hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
	Absorbed power	kW	1,5	2,3	2,6	4,3	5,2
Water connections		"G	1/2"	1/2"	3/4"	1"	1"
Weights	Transport weight	Kg	26	26	30	49	55

DIMENSIONS

TCW			42	44	54	84	104
L	STD	mm	571	571	571	1171	1171
P	STD	mm	571	571	571	571	571
H	STD	mm	287	287	287	287	287

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.

NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

UTW 63÷544

MODULAR DUCTABLE TERMINAL UNITS.

FROM 4,6 kW TO 43 kW.

UNIT DESCRIPTION

The modular water terminal units of the UTW series are the ideal solution to meet the air treatment needs of systems including distribution through ducting or directly into the room and installation in false ceilings or in service rooms.
If equipped with a water cooler, they generate cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, they deliver warm air to satisfy the heating needs of households and the service industry alike. A filter, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.
This product range, available for 2- and 4-pipe systems, is complete with various accessories such as: outdoor air intake plenum, mixing section with dampers room delivery plenum for flexible ducts and resistance heating section. These units can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

UTW
Base unit

FEATURES

- Structure in galvanized sheet (63÷274) or in prepainted metal sheet (333÷544), entirely lined with heat/sound insulation material.
- Centrifugal type fan with double intake, statically and dynamically balanced to reduce vibration and noise to a minimum, directly coupled on single-phase 3-speed electric motor (63÷274) or with belt and pulley transmission, connected to 3-phase single speed electric motor (333÷544).
- Heat exchanger in copper tubes and aluminium fins, complete with air vent and drain pan.
- Air filter made of recyclable synthetic material class EU3; inspection is foreseen from the bottom part (63÷274) or side part (333÷544).
- Air bleed valves these are found on the water connections of the coil and make it possible to bleed air from the coil.
- Electrical panel comprising a terminal board for wiring to room control panel and power supply.

ACCESSORIES

Loose accessories:

AF	Filter section
SF	Supply frame
GRI/R	Intake grille+air filter
BM	Supply grille with adjustable finns
PR	Intake plenum
MB	Mixing box with damper
SP	Supply plenum
P3	Supply plenum for flexible ducts
WS	Section for 4-pipes system
EH1	Electric heater section
EH2	Electric heater section
DPG	Intake/supply panel
SM	Servomotor for damper
VR	Fan speed control
DRM	Control panel
DRA	Automatic control panel

TECHNICAL DATA

H_2O

UTW			63	93	104	133	153	233	274	333	414	464	544
Cooling	Total cooling capacity (1)	kW	4,6	7,5	9,1	10,5	13,1	15,7	20,7	25,9	31,7	38,1	42,8
	Sensible cooling capacity (1)	kW	3,5	6,0	7,1	8,4	9,8	13,0	16,7	20,1	24,6	29,6	33,2
	Water flow (1)	l/h	791	1290	1565	1806	2253	2700	3560	4455	5452	6553	7362
	Pressure drops	kPa	14	19	21	18	24	24	26	29	14	29	26
Heating	Heating capacity (2)	kW	9,8	15,5	19,7	21,6	25,9	35,5	46,3	60,1	75,8	91,8	97,1
	Water flow (2)	l/h	843	1333	1694	1858	2227	3053	3982	5169	6519	7895	8351
	Pressure drops	kPa	23	17	22	40	25	23	32	39	14	48	34
Air flow	Max	m³/h	1000	1600	1700	2200	2500	3900	4500	5500 (*)	6800 (*)	7700 (*)	9000 (*)
	Med.	m³/h	800	1200	1300	1800	2000	3000	3800	---	---	---	---
	Min.	m³/h	600	850	900	900	1300	1900	2000	---	---	---	---
Sound pressure (3)	Max	dB(A)	45	44	45	47	49	51	55	56	57	57	58
	Med.	dB(A)	40	38	39	43	44	45	51	---	---	---	---
	Min.	dB(A)	34	30	31	28	35	35	37	---	---	---	---
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230 / 1 / 50 ---------->							<--------- 400 / 3 / 50 -------->			
	Max absorbed power	kW	0,09	0,15	0,15	0,15	0,15	0,42	0,60	0,75	1,10	1,10	1,50
	Max absorbed current	A	1,0	2,1	2,1	2,1	2,1	3,9	6,1	3,3	3,9	3,9	5,4
	Starting current	A	1,4	2,3	2,3	2,3	2,3	5,5	8,5	5,5	6,0	6,0	6,5
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1"	1½"	1½"	1½"	1½"
Weights	Transport weight	Kg	29	42	44	57	65	67	70	168	168	173	175
WS Hot water coil	Heating capacity (2)	kW	6,8	10,9	11,5	13,5	16,0	20,3	22,2	47,4	58,4	64,0	75,1
	Water flow (2)	l/h	585	937	989	1161	1376	1746	1909	4076	5022	5504	6459
	Pressure drops	kPa	10	11	12	15	14	19	23	10	15	10	14
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1¼"	1¼"	1¼"	1¼"
EH1 Electric heating	Power supply	V/Ph/Hz	<---------- 400 / 3 + N / 50 ---------->							---	---	---	--
	Heating capacity	kW	3,0	4,0	4,0	4,0	6,0	6,0	6,0	---	---	---	---
	Max absorbed current	A	4,3	8,7	8,7	8,7	13,0	13,0	13,0	---	---	---	---
	Steps	n°	1	1	1	1	1	1	1	---	---	---	---
EH2 Electric heating	Power supply	V/Ph/Hz	<---------- 400 / 3 + N / 50 ---------->							---	---	---	---
	Heating capacity	kW	6,0	8,0	8,0	8,0	12,0	12,0	12,0	---	---	---	---
	Max absorbed current	A	8,7	17,4	17,4	17,4	26,1	26,1	26,1	---	---	---	---
	Steps	n°	1	1	1	1	1	1	1	---	---	---	---

DIMENSIONS

UTW			63	93	104	133	153	233	274	333	414	464	544
L	STD	mm	645	1005	1005	1105	1345	1345	1345	1400	1400	1400	1400
P	STD	mm	455	455	455	505	540	540	540	800	800	800	800
H	STD	mm	295	295	295	325	325	375	540	800	800	1050	1050

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) One spees 3-phase electrical motors.
NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

UTH 103÷764

VERTICAL DUCTABLE TERMINAL UNITS.

FROM 10,2 kW TO 74,2 kW.

UNIT DESCRIPTION

The vertical water terminal units of the UTH series are the ideal solution to meet the air treatment needs of systems which include distribution through ducting.
If connected to a water cooler, they generate cool air silently and immediately. Otherwise, during the winter, if combined with a heating system with boiler or heat pump, they deliver warm air to satisfy the heating needs of households and the service industry alike. An EU4 filter in renewable synthetic material, which absorbs and retains dust in suspension, allows to keep the air quality at a suitable level, and its easy removal enables continuous cleaning cycles to be carried out which are particularly important in order to guarantee suitable hygiene standards in highly frequented rooms.
This product range, available for 2- and 4-pipe systems with front return and upward delivery, is complete with various accessories such as: room delivery plenum with grille, fresh air intake with filter and differential pressure switch for filter control.
These units can be combined with the innovative monitoring and control system CLIMAFRIEND which allows to program and obtain a level of comfort intuitively and efficiently.

VERSIONS

UTH
Base unit

FEATURES

- Structure in galvanized sheet with an ulterior protection obtained through a polyester powder painting, entirely lined with heat/sound insulation material.
- Centrifugal type fan with double intake, statically and dynamically balanced to reduce vibration and noise to a minimum, directly coupled on single-phase 3-speed electric motor (103÷243) or with belt and pulley transmission, connected to 3-phase single speed electric motor (283÷764).
- Heat exchanger in copper tubes and aluminium fins, complete with air vent and drain pan.
- Air filter made of recyclable synthetic material class EU4; inspection is foreseen from the side part.
- Air bleed valves these are found on the water connections of the coil and make it possible to bleed air from the coil.
- Electrical panel comprising a terminal board for wiring to room control panel and power supply.

ACCESSORIES

Factory fitted accessories:

AR	Fresh air intake with filter
PF	filter control differential pressure switch
WS	coil for 4 pipe system
EH	electric heater

Loose accessories:

BM	Delivery plenum with grille
VR	Fan speed control
DRM	Control panel
DRA	Automatic control panel

TECHNICAL DATA

H2O

UTH			103	113	124	183	243	283	353	424	543	604	704
Cooling	Total cooling capacity (1)	kW	10,0	10,9	14,1	18,3	22,0	24,8	28,8	40,7	47,0	62,6	74,2
	Sensible cooling capacity (1)	kW	7,4	8,0	10,0	13,5	16,9	19,5	23,6	31,2	36,7	45,7	56,2
	Water flow (1)	l/h	1720	1875	2425	3148	3784	4266	4954	7000	8084	10767	12762
	Pressure drops	kPa	29	33	33	18	23	27	15	18	29	30	38
Heating	Heating capacity (2)	kW	21,1	22,9	28,7	38,5	46,9	52,9	61,0	86,1	101,0	129,0	154,0
	Water flow (2)	l/h	1815	1969	2468	3311	4033	4549	5246	7405	8686	11094	13244
	Pressure drops	kPa	24	28	27	11	21	23	12	13	24	25	32
Air flow	Max	m³/h	1600	1800	2000	3000	4000	4800 (*)	6000 (*)	7200 (*)	9000 (*)	10000 (*)	13000 (*)
	Med.	m³/h	1500	1600	1800	2700	3500	---	---	---	---	---	---
	Min.	m³/h	1400	1500	1600	2400	3200	---	---	---	---	---	---
Sound pressure (3)	Max	dB(A)	53	53	54	54	54	56	57	57	60	60	61
	Med.	dB(A)	47	47	49	49	49	---	---	---	---	---	---
	Min.	dB(A)	39	39	40	40	40	---	---	---	---	---	---
Electrical characteristics	Power supply	V/Ph/Hz	<---------- 230 / 1 / 50 ---------->					<---------- 400 / 3 / 50 ---------->					
	Max absorbed power	kW	0,24	0,24	0,24	0,55	0,55	0,74	1,10	1,10	1,48	1,48	2,20
	Max absorbed current	A	2,4	2,4	2,4	5,1	5,1	2,8	3,3	3,3	5,4	5,4	6,6
	Starting current	A	8,5	8,5	8,5	17,0	17,0	9,8	11,5	11,5	18,9	18,9	23,1
Water connections		"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1"	1¼"	1¼"	1¼"
WS Hot water coil	Heating capacity (2)	kW	9,3	10,0	10,7	13,9	16,5	18,5	26,1	28,8	40,3	42,7	51,2
	Water flow (2)	l/h	800	860	920	1195	1419	1591	2245	2477	3466	3672	4403
	Pressure drops	kPa	9	10	11	23	10	42	17	21	12	14	20
	Water connections	"G	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	3/4"	1¼"	1¼"	1¼"
EH1 Electric heating	Power supply	V/Ph/Hz	<---------- 230 / 1 / 50 ---------->					<---------- 400 / 3 + N/ 50 ---------->					
	Heating capacity	kW	3	3	3	6	6	6	9	9	12	12	12
	Max absorbed current	A	13,0	13,0	13,0	8,7	8,7	8,7	13,0	13,0	17,4	17,4	17,4
	Steps	n°	1	1	1	1	1	1	1	1	1	1	1
Transport weight	STD	Kg	173	174	175	184	202	204	215	304	313	331	337

DIMENSIONS

UTH			103	113	124	183	243	283	353	424	543	604	764
L	STD	mm	650	650	650	800	800	800	1200	1200	1550	1550	1550
P	STD	mm	450	450	450	650	650	650	800	800	800	800	800
H	STD	mm	1790	1790	1790	1990	1990	1990	1990	1990	1990	1990	1990

DIMENSIONAL

NOTES

(1) Ambient air temperature 27 °C d.b.; 19 °C w.b.; Water temperature 7/12 °C;
(2) Ambient air temperature 20 °C d.b. Water temperature 70/60 °C;
(3) At a distance of 1 m and with reverberation time of 0.5 s.
(*) One spees 3-phase electrical motors.
NB
- Maximum operating pressure 1000 kPa.
- Maximum inlet water temperature 90 °C.
- Inhibited ethylene glycol can be added to the water.

DBM-DBA / DRM-DRA

ELECTRONIC CONTROL BOARDS FOR FAN COIL UNITS AND HYDRONIC TERMINAL UNITS.

UNIT DESCRPTION

• DBM and DBA are control boards to be fitted in a specially provided space inside the fan coil units; as such they have a connector for easy connection to the terminal board of the units. In this instance the temperature probe is placed close to the air intake, that is in the lee of the fan.
• Otherwise, DRM and DRA are control boards to be fixed on the wall; as such they are suitable for all type of hydronic terminal units. In this instance the temperature probe is inside the control board itself so that it is very important to place the control not in the nearby of any heating source.

DBM/DRM

DBA/DRA

VERSIONS

DBM - DBA
Built-in control panel

DRM - DRA
Wall mounting control panel

FEATURES

Use

- DBM and DRM, manual-acting, required by terminal units for two pipes plant with/without three way ON/OFF valves and for four pipes plant without three way ON/OFF valves.
- DBA and DRA, manual and automatic-acting, required by terminal units for two pipes plant, four pipes plant and for two pipes plant with electrical heater with/without three way ON/OFF valves.

Functions DBM AND DRM

- Manual selection for fan speed;
- Manual selection for operation mode;
- Manual selection for required room temperature;
- Control of the minimum temperature thermostat (optional) both in heating mode (HOT START) and cooling mode (TOO COOL); pre designed values for minimum water temperature are 30°C for heating mode and 12°C for cooling mode.

Functions DBA AND DRA

- Manual or automatic selection for fan speed; using “AUTO” function the control board select automatically fan speed according to ΔT between designed set point and room air temperature.
- Manual or automatic selection for operation mode of the units; using “AUTO” function the control select automatically operation mode of the unit according to air temperature and water temperature.
- Control of the minimum temperature thermostat (standard for DBA and DRA) both in heating mode (HOT START) and cooling mode (TOO COOL); pre-designed values for minimum water temperature are 35°C for heating mode and 25°C for cooling mode. Besides the minimum temperature thermostat allows, in this instance, the “AUTOMATICAL CHANGE OVER” just detecting inlet water temperature and as such has to be always installed in this case.
- PERIODIC VENTILATION: this function is present only if the control is fitted inside the unit. It allows the temperature probe, fitted in the lee of the fan, to get a more precise value for the air temperature.
- Control in ON/OFF MODE of the auxiliary electrical heater in heating mode (two pipes system with electrical heater); in this instance, the “POST VENTILATION” function allows the discharge of the heat produced by the electrical heater itself after its disconnection.
- ANTIFREEZE: this function elude the unit freezing during winter stop; there is a thermostat always working for hot temperature with a set point at 8°C, this thermostat disregards permissions of the water probe and the set operation mode.

CLIMAFRIEND

CHECK AND SUPERVISION SYSTEM FOR AIR CONDITIONING.

UNIT DESCRPTION

The intelligent check of commercial and domestic climate.
Innovative.
Climafriend is a new system for climate management in domestic and commercial venues; simple to install it borns from the need to make easy the user in the obtaining of the best conditions of comfort in the places where he lives and works.
Immediate.
With touch-screen monitor, of that the user interface is provided. It is possible to access immediately to the system functions laying out the working, automatic or manual, of the single uses and the relative hourly/weekly scheduling on different temperature levels.
Effective.
Suitable to be interfaced with any type of electronic controller provided that fi tted out with Modbus RS 485 serial communication card, Climafriend manages, further to the chiller and terminals, till to a maximum of 30 units, also the boiler allowing a big content of energetic consumption's and the system management costs.

VERSIONS

CLIMAFRIEND
Supervision system

FEATURES AND ACCESSORIES

TSC	15" Touch screen color display
AP	Software
IS	RS 485 serial interface
DBA/W	Built-in automatic control panel
DRA/W	Remote automatic control panel
DY	ON/OFF control for boiler thermostat

800-03/08

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