CHAPTER 1

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS FOR RESIDENTIAL & LIGHT COMMERCIAL APPLICATION

| Unit | Page |
|-----------------------|---------|
| CHA/IK/WP 15÷61 | 42 - 43 |
| CHA/CLK 15÷81 | 44 - 45 |
| CHA/ML/ST 41÷71 | 46 - 47 |
| CHA/ML/ST 91÷151 | 48 - 49 |
| CHA/ML/ST 182-P÷302-P | 50 - 51 |

FROM 5,6 KW TO 14 KW.



INVERTER SCROLL

VERSION

CHA/IK/WP

Reversible Heat Pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DC INVERTER Rotary / Twin Rotary / Scroll compressor, complete with overload protection and crankase heater.
- EC INVERTER axial fans with low ventilation and special wing profile, directly coupled to external rotor motors.
- · Condenser with copper tube and aluminium finned coil, complete with drain pan and protection guards.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water flow switch and antifreeze heater.
- Electronic thermostatic valve.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: modulating circulating pump with high efficiency DC Brushless motor, flow switch, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.
- Communication with Modbus RTU protocol through RS485 serial interface.

ACCESSORIES

FACTORY FITTED ACCESSORIES

KDS Dual set-point kit

LOOSE ACCESSORIES

CR Remote control panel

AG Rubber shock absorbers



CHA/IK/WP 15+61

A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH EC INVERTER AXIAL FANS, INVERTER ROTARY/SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.



CHA/IK/WP 15÷61 reversible Heat Pumps with A CLASS energy efficiency are designed for small domestic or service sector environments. Equipped with R410A refrigerant, INVERTER Rotary/Scroll compressors and EC INVERTER axial fans, they are extremely functional and reliable units. The Inverter device controls and continuously modulates the compressor speed, keeping the temperature of the water delivered to the system stable and constant and adapting it perfectly to the thermal load of the places where terminal units it feeds are installed. This obtains high energy efficiencies and ESEER/IPLV values higher than conventional unit, and a reduction of compressor starting peak currents, thus considerably reducing the risk of malfunctioning or breakages. The EC Inverter axial fans vay their speed according to the required thermal load, with consequent benefits in terms of energy efficiency and silent operation. Moreover, CHA/IK/WP 15÷61 does not require inertial storage tanks, since the refrigerating capacity delivered is constantly equal to that required while guaranteeing very quiet operation because the fans adjust their speed to the real load of the system, with benefits above all during the night. It also prevents shutdown due to unexpected overloads, by means of an innovative control system which, on being activated, reduces the refrigerating capacity delivered while keeping the unit runnina.



CHA/IK/WP 15÷61





| MODEL | | | 15 | 25 | 41 | 61 |
|---------------------|-----------------------------------|---------|------|----------|-------------|------------|
| | Heating capacity (1) | kW | 5.6 | 8.9 | 11.8 | 13.9 |
| | Absorbed power (1) | kW | 1.7 | 2.8 | 3.5 | 4.4 |
| I la atina | COP (1) | | 3.23 | 3.22 | 3.33 | 3.17 |
| Heating | Heating capacity (2) | kW | 5.9 | 9.2 | 12.5 | 14.3 |
| | Absorbed power (2) | kW | 1.5 | 2.3 | 3.1 | 3.6 |
| | COP (2) | | 3.99 | 4.01 | 4.09 | 4.01 |
| | Heating capacity (1) | kW | 5.5 | 8.8 | 11.7 | 13.8 |
| | Absorbed power (1) | kW | 1.6 | 2.7 | 3.4 | 4.3 |
| | COP (1) | | 3.35 | 3.30 | 3.42 | 3.24 |
| | EUROVENT Class (1) | | А | A | A | A |
| | Heating capacity (2) | kW | 5.8 | 9.1 | 12.4 | 14.2 |
| Heating (EN 14511) | Absorbed power (2) | kW | 1.4 | 2.2 | 3.0 | 3.5 |
| | COP (2) | | 4.15 | 4.10 | 4.20 | 4.10 |
| | SCOP (3) | | 2.83 | 2.63 | 2.60 | 2.58 |
| | Energy Efficiency (3) | % | 110 | 102 | 101 | 100 |
| | Energy Class (3) | | A+ | A+ | A+ | A+ |
| Casting | Cooling capacity (4) | kW | 3.9 | 6.1 | 7.7 | 9.8 |
| | Absorbed power (4) | kW | 1.4 | 2.1 | 2.7 | 3.5 |
| | EER (4) | | 2.85 | 2.93 | 2.85 | 2.83 |
| Cooling | Cooling capacity (5) | kW | 5.0 | 8.2 | 11.4 | 13.0 |
| | Absorbed power (5) | kW | 1.3 | 2.2 | 3.0 | 3.6 |
| | EER (5) | | 3.73 | 3.69 | 3.84 | 3.67 |
| | Cooling capacity (4) | kW | 3.9 | 6.1 | 7.8 | 9.9 |
| | Absorbed power (4) | kW | 1.3 | 2.0 | 2.6 | 3.4 |
| | EER (4) | | 3.06 | 3.07 | 2.98 | 2.94 |
| Cooling (EN11/E11) | ESEER | | 4.45 | 4.08 | 4.04 | 4.29 |
| COOIIIIg (EIV14511) | EUROVENT Class (4) | | В | В | В | В |
| | Cooling capacity (5) | kW | 5.1 | 8.3 | 11.6 | 13.2 |
| | Absorbed power (5) | kW | 1.3 | 2.2 | 2.9 | 3.4 |
| | EER (5) | | 4.01 | 3.87 | 4.02 | 3.83 |
| Comprosor | Quantity | n° | 1 | 1 | 1 | 1 |
| Compressor | Туре | | Rot | tary | Twin Rotary | Scroll |
| Floatrical | Power supply | V/Ph/Hz | | 230/1/50 | | 400/3+N/50 |
| charactoristics | Max. running current | A | 12 | 20 | 25 | 11 |
| CITATACLETISTICS | Max. starting current | A | 8 | 10 | 16 | 10 |
| | Water flow | l/s | 0.28 | 0.44 | 0.60 | 0.68 |
| Water circuit | Pump available static pressure | kPa | 57 | 32 | 45 | 38 |
| | Water connections | "G | 1″M | 1″M | 1″M | 1″M |
| Sound pressure | STD version (6) | dB(A) | 50 | 53 | 54 | 54 |
| 14/ 1 / · | Transport weight | Kg | 70 | 87 | 140 | 145 |
| Weights | Operating weight | Kg | 73 | 92 | 147 | 152 |

| DIMENSIONS | | | 15 | 25 | 41 | 61 | |
|------------|-----|----|------|------|------|------|--|
| L | STD | mm | 1100 | 1200 | 1220 | 1220 | |
| W | STD | mm | 370 | 370 | 445 | 445 | |
| Н | STD | mm | 720 | 860 | 1400 | 1400 | |



- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013
- Regulation n. 811/2013. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Chilled water from 23 to 18 °C, ambient air temperature 35 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.



CHA/CLK 15÷81

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, ROTARY/SCROLL COMPRESSOR, PLATE EXCHANGER AND PUMP KIT.





The COMPACT LINE series is the winning choice for ideal comfort in residential and commercial environments. The range, in A CLASS energy efficiency, excels for its compact sizes, quietness and optimised water circuit, on a peraluman structure. The COMPACT LINE series features R410A refrigerant, ensuring high efficiency with reduced heat exchange surfaces and environment respect thanks to the low quantities of refrigerant used. Particular design features enable immediate and effective use, easy installation and lasting reliability. These extremely compact and high-tech units offer you ideal comfort in all seasons

Particular design features enable immediate and effective use, easy installation and lasting reliability.

CULTPACT I INP

VERSION

CHA/CLK

Cooling only with tank and pump

CHA/CLK/WP

Reversible Heat Pump with tank and pump

FEATURES

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

ACCESSORIES

FACTORY FITTED ACCESSORIES

LOOSE ACCESSORIES

ΒT Low water temperature Kit

ΤX Coil with pre-coated fins

CR

Remote control panel Modbus RTU protocol, RS485 serial

interface

IS

RP Coil protection metallic guards



CHA/CLK 15+81



| L'Im | SYSTEM CEADING | |
|------|----------------|--|
| ĺ | | |
| | ISO 9001 | |

č

| MODEL | | | 15 | 18 | 21 | 25 | 31 | 41 | 51 | 61 | 71 | 81 |
|-------------------|-----------------------------------|---------|--------|------|------|------|------|--------|------|-------|-------|------|
| | Cooling capacity (1) | kW | 4.2 | 5.1 | 6.4 | 7.5 | 8.6 | 10.4 | 12.2 | 15.3 | 18.6 | 20.5 |
| Cooling | Absorbed power (1) | kW | 1.4 | 1.7 | 2.1 | 2.5 | 2.9 | 3.5 | 4.0 | 5.0 | 6.0 | 6.6 |
| - | EER (1) | | 3.00 | 3.00 | 3.05 | 3.00 | 2.97 | 2.97 | 3.05 | 3.06 | 3.10 | 3.11 |
| | Cooling capacity (1) | kW | 4.3 | 5.2 | 6.5 | 7.6 | 8.7 | 10.5 | 12.5 | 15.6 | 18.9 | 20.8 |
| | Absorbed power (1) | kW | 1.3 | 1.6 | 2.0 | 2.4 | 2.8 | 3.4 | 3.7 | 4.7 | 5.7 | 6.4 |
| Cooling (EN14511) | EER (1) | | 3.23 | 3.19 | 3.20 | 3.15 | 3.11 | 3.10 | 3.36 | 3.32 | 3.29 | 3.27 |
| | ESEER | | 3.10 | 3.25 | 3.37 | 3.41 | 3.37 | 3.32 | 3.34 | 3.38 | 3.42 | 3.44 |
| | EUROVENT Class | | А | A | A | A | A | A | A | A | A | A |
| | Heating capacity (2) | kW | 5.0 | 6.0 | 8.0 | 8.7 | 10.3 | 12.4 | 14.8 | 18.8 | 21.9 | 24.4 |
| Heating | Absorbed power (2) | kW | 1.7 | 2.0 | 2.6 | 2.9 | 3.5 | 4.2 | 4.8 | 6.2 | 7.1 | 8.0 |
| | COP (2) | | 2.94 | 3.00 | 3.08 | 3.00 | 2.94 | 2.95 | 3.08 | 3.03 | 3.08 | 3.05 |
| Heating (EN14511) | Heating capacity (2) | kW | 4.9 | 5.9 | 7.9 | 8.6 | 10.2 | 12.3 | 14.5 | 18.5 | 21.7 | 24.2 |
| | Absorbed power (2) | kW | 1.6 | 2.0 | 2.5 | 2.8 | 3.4 | 4.1 | 4.5 | 5.9 | 6.9 | 7.8 |
| | COP (2) | | 2.99 | 2.98 | 3.11 | 3.06 | 3.01 | 3.01 | 3.21 | 3.12 | 3.16 | 3.11 |
| | EUROVENT Class | | С | C | В | В | В | В | A | В | В | A |
| | SCOP (3) | | 2.95 | 3.06 | 3.17 | 2.95 | 3.00 | 2.99 | 3.06 | 3.16 | 3.18 | 3.17 |
| | Energy Efficiency (3) | % | 115 | 119 | 124 | 115 | 117 | 117 | 119 | 123 | 124 | 124 |
| | Energy Class (3) | | A | A | A+ | A | A | A | A | A | A+ | A+ |
| Compressor | Quantity | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Туре | | Rotary | | | | | Scroll | | | | |
| Floctrical | Power supply | V/Ph/Hz | | | 230/ | 1/50 | | | | 400/3 | +N/50 | |
| characteristics | Max. running current | A | 9 | 11 | 14 | 15 | 18 | 23 | 13 | 15 | 17 | 18 |
| Characteristics | Max. starting current | A | 38 | 44 | 63 | 64 | 77 | 88 | 54 | 75 | 78 | 78 |
| | Water flow | l/s | 0.20 | 0.24 | 0.31 | 0.36 | 0.41 | 0.50 | 0.58 | 0.73 | 0.89 | 0.98 |
| Water circuit | Pump available static pressure | kPa | 52 | 48 | 35 | 45 | 41 | 42 | 140 | 123 | 90 | 80 |
| | Tank water volume | | 25 | 25 | 25 | 25 | 25 | 25 | 50 | 50 | 50 | 50 |
| | Water connections | "G | 3/4" | 3/4″ | 3/4" | 3/4″ | 3/4" | 3/4" | 1″ | 1″ | 1″ | 1″ |
| Sound pressure | STD version (4) | dB(A) | 49 | 49 | 49 | 49 | 51 | 52 | 52 | 52 | 52 | 52 |
| Woights | Transport weight | Kg | 96 | 98 | 106 | 110 | 118 | 120 | 192 | 194 | 196 | 198 |
| vveignts | Operating weight | Kg | 121 | 123 | 131 | 135 | 143 | 145 | 242 | 244 | 246 | 248 |

| DIME | INSIONS | 5 | 15 | 18 | 21 | 25 | 31 | 41 | 51 | 61 | 71 | 81 |
|------|---------|----|------|------|------|------|------|------|------|------|------|------|
| L | STD | mm | 870 | 870 | 870 | 870 | 870 | 870 | 1160 | 1160 | 1160 | 1160 |
| W | STD | mm | 320 | 320 | 320 | 320 | 320 | 320 | 500 | 500 | 500 | 500 |
| Н | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1270 | 1270 | 1270 | 1270 |

CLEARANCE AREA

CHA/CLK 15÷41

200 200 800 200





CHA/CLK 51÷81

200 200 800 200

- 1.
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.



FROM 11 KW TO 23 KW.



CHA/ML/ST 41÷71

A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.



MIDYLINE is the line of Heat Pumps dedicated to hot water production up to 60 °C and operations up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic kit. The unit, featuring A CLASS energy efficiency, is designed to singly handle winter heating, summer air conditioning and the production of high temperature hot water, making use of the electrical energy and heat accumulated in the clean air source, free and infinite, which can also transfer heat to homes. Flexibility is the main feature of the MIDYLINE series, which is also combined with heating units and managed by the innovative, intelligent AQUALOGIK control system, optimizing the water setpoint and regulating power supply voltage to the pump and fans, making use of an inertial tank unnecessary. This results in performance with elevated energy efficiency, silent functioning, optimized dimensions and costs. MIDYLINE is also able to operate in extreme conditions where the external air temperature is very low, as well as intelligently managing integrated elements such as furnaces and electrical coils. Based on the external air sensor, the microprocessor activates the single integration elements in the system.

MIDYLINE

AQUALOGIK

VERSION

CHA/ML/ST

Heat Pump with AQUALOGIK technology

CHA/ML/WP/ST

Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Structure with supporting frame, in peraluman, galvanized sheet and with rubber shock absorbers on the frame.
- Scroll compressor with internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil, complete with drain pan.
- Evaporator AISI 316 stainless steel braze welded plates type, completed with water differential pressure switch and antifreeze heater.
- R407C refrigerant.
- ٠ Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: variable speed circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FH

КC

ΤX

FACTORY FITTED ACCESSORIES

Supplementary electrical heater

Gas burner integration Kit

Coil with pre-coated fins

- HW Storage tank for domestic hot water production CR Remote control panel
- IS Modbus RTU protocol, RS485 serial
 - interface
- RP Coil protection metallic guards



CHA/ML/ST 41÷71



| MODEL | | | 41* | 51* | 41** | 51** | 71 | |
|-----------------------|-----------------------------------|---------|-------|-------|----------|------------|-------|--|
| | Heating capacity (1) | kW | 11.5 | 16.0 | 11.5 | 16.0 | 22.5 | |
| | Absorbed power (1) | kW | 3.2 | 4.6 | 3.2 | 4.6 | 6.5 | |
| Usetine | COP (1) | | 3.59 | 3.48 | 3.59 | 3.48 | 3.46 | |
| Heating | Heating capacity (2) | kW | 11.3 | 15.8 | 11.3 | 15.8 | 22.4 | |
| | Absorbed power (2) | kW | 2.7 | 3.8 | 2.7 | 3.8 | 5.4 | |
| | COP (2) | | 4.19 | 4.16 | 4.19 | 4.16 | 4.15 | |
| | Heating capacity (1) | kW | 11.9 | 16.4 | 11.9 | 16.4 | 23.0 | |
| | Absorbed power (1) | kW | 3.2 | 4.6 | 3.2 | 4.6 | 6.5 | |
| | COP (1) | | 3.72 | 3.57 | 3.72 | 3.57 | 3.54 | |
| Heating (EN14511) | EUROVENT Class | | А | А | A | А | A | |
| 0 . | SCOP (3) | | 3.93 | 4.04 | 3.93 | 4.04 | 3.82 | |
| | Energy Efficiency (3) | % | 151 | 155 | 151 | 155 | 148 | |
| | Energy Class (3) | | A++ | A++ | A++ | A++ | A+ | |
| Cooling | Cooling capacity (4) | kW | 7.3 | 10.5 | 7.3 | 10.5 | 16.0 | |
| | Absorbed power (4) | kW | 2.5 | 3.6 | 2.5 | 3.6 | 5.2 | |
| | EER (4) | | 2.92 | 2.92 | 2.92 | 2.92 | 3.08 | |
| | Cooling capacity (5) | kW | 10.8 | 15.5 | 10.8 | 15.5 | 21.2 | |
| | Absorbed power (5) | kW | 2.7 | 4.0 | 2.7 | 4.0 | 6.1 | |
| | EER (5) | | 4.00 | 3.88 | 4.00 | 3.88 | 3.48 | |
| | Cooling capacity (4) | kW | 7.0 | 10.2 | 7.0 | 10.2 | 15.6 | |
| | Absorbed power (4) | kW | 2.8 | 3.9 | 2.8 | 3.9 | 5.6 | |
| Cooling (EN14511) | EER (4) | | 2.50 | 2.62 | 2.50 | 2.62 | 2.79 | |
| | ESEER | | 2.80 | 3.12 | 2.80 | 3.12 | 3.11 | |
| | EUROVENT Class | | E | D | E | D | С | |
| Compressor | Quantity | n° | 1 | 1 | 1 | 1 | 1 | |
| | Power supply | V/Ph/Hz | | | 230/1/50 | | | |
| Integrated electrical | Heating capacity | kW | 4/6 | 4/6 | 4/6 | 4/6 | 4/6 | |
| coils | Absorbed current | A | 18/26 | 18/26 | 18/26 | 18/26 | 18/26 | |
| | Steps | n° | 2 | 2 | 2 | 2 | 2 | |
| Floctrical | Power supply | V/Ph/Hz | 230/ | 1/50 | | 400/3+N/50 | | |
| characteristics | Max. running current | A | 26 | 35 | 13 | 15 | 19 | |
| | Max. starting current | A | 102 | 165 | 45 | 69 | 106 | |
| | Water flow | l/s | 0.54 | 0.75 | 0.54 | 0.75 | 1.07 | |
| Water circuit | Pump available static pressure | kPa | 231 | 185 | 231 | 185 | 156 | |
| | Water connections | ″G | 1″ | 1″ | 1″ | 1″ | 1″ | |
| Sound pressure | STD version (6) | dB(A) | 52 | 52 | 52 | 52 | 52 | |
| Woights | Transport weight | Kg | 205 | 208 | 205 | 208 | 210 | |
| vveignis | Operating weight | Kg | 209 | 212 | 209 | 212 | 214 | |

| DIME | INSIONS | | 41* | 51* | 41** | 51** | 71 |
|------|---------|----|------|------|------|------|------|
| L | STD | mm | 1160 | 1160 | 1160 | 1160 | 1160 |
| W | STD | mm | 500 | 500 | 500 | 500 | 500 |
| Н | STD | mm | 1270 | 1270 | 1270 | 1270 | 1270 |

CLEARANCE AREA

CHA/ML/ST 41÷71

200 200 800 200



NOTES

- 1.
- 2.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at medium temperature with 3. average climatic conditions. According to EU Regulation n. 811/2013.
- 4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Chilled water from 23 to 18 °C, ambient air 5. temperature 35 °C.
- 6. Sound pressure level measured in free field conditions at 1 m from the unit. According
- to ISO 3744. N.B. Weights of WP version are specified on
- technical brochure. N.B. *= Single phase N.B. **= Three phase



-

FROM 31 KW TO 53 KW.



CHA/ML/ST 91÷151

A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSOR, PLATE EXCHANGER AND HYDRONIC KIT.



MIDYLINE, featuring A CLASS energy efficiency, is the innovative series of Heat Pumps dedicated to production of hot water up to 60 °C and operation up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic unit. The unit, designed to originate and control - throughout the year - the best comfort conditions in rooms with a high rate of daily attendance, such as enclosed areas destined to the activities of the service sector, autonomously handles winter heating, summer air conditioning and the production of high temperature sanitary hot water. The MIDYLINE series, designed with an extremely compact structure for simple installation operations, uses only the electric energy and the heat accumulated in the air, to transfer heat to the rooms, thus allowing considerable energy savings, a high rate of reliability and the shortest start-up times. Flexibility is the main feature of the MIDYLINE series, which is indeed combined with terminal units and managed by the innovative, intelligent AQUALOGIK control and optimization system, which renders the use of an inertial tank unnecessary and guarantees performances with elevated energy efficiency and silent functioning.

MIDYLINE

AQUALOGIK

VERSION

CHA/ML/ST

CHA/ML/WP/ST

Heat Pump with AQUALOGIK technology

Reversible Heat Pump with AQUALOGIK technology

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type, completed with water differential pressure switch and antifreeze heater.
- R407C refrigerant.
- ٠ Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: variable speed circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

КC

ΤX

FACTORY FITTED ACCESSORIES FH Supplementary electrical heater

Gas burner integration Kit

Coil with pre-coated fins

- Storage tank for domestic hot НW water production CR Remote control panel
- Modbus RTU protocol, RS485 serial IS interface
- RP Coil protection metallic guards
- AG Rubber shock absorbers



CHA/ML/ST 91÷151





| MODEL | | | 91 | 101 | 151 | | | |
|-----------------------|--------------------------------|---------|-------|------------|-------|--|--|--|
| | Heating capacity (1) | kW | 30.7 | 40.2 | 52.6 | | | |
| | Absorbed power (1) | kW | 8.0 | 10.9 | 13.6 | | | |
| llooting | COP (1) | | 3.84 | 3.69 | 3.87 | | | |
| неациу | Heating capacity (2) | kW | 29.8 | 40.0 | 50.2 | | | |
| | Absorbed power (2) | kW | 6.7 | 9.2 | 11.4 | | | |
| | COP (2) | | 4.45 | 4.35 | 4.40 | | | |
| | Heating capacity (1) | kW | 31.4 | 41.1 | 53.5 | | | |
| | Absorbed power (1) | kW | 8.0 | 10.9 | 13.6 | | | |
| | COP (1) | | 3.93 | 3.77 | 3.93 | | | |
| Heating (EN14511) | EUROVENT Class | | A | А | A | | | |
| | SCOP (3) | | 3.93 | 3.74 | 3.74 | | | |
| | Energy Efficiency (3) | % | 153 | 145 | 145 | | | |
| | Energy Class (3) | | A++ | A+ | A+ | | | |
| | Cooling capacity (4) | kW | 20.4 | 28.9 | 37.3 | | | |
| | Absorbed power (4) | kW | 6.6 | 9.3 | 11.7 | | | |
| Cooling | EER (4) | | 3.09 | 3.11 | 3.19 | | | |
| | Cooling capacity (5) | kW | 27.6 | 39.3 | 47.8 | | | |
| | Absorbed power (5) | kW | 7.7 | 10.7 | 12.8 | | | |
| | EER (5) | | 3.58 | 3.67 | 3.73 | | | |
| | Cooling capacity (4) | kW | 19.8 | 28.2 | 36.5 | | | |
| | Absorbed power (4) | kW | 7.2 | 10.0 | 12.5 | | | |
| Cooling (EN14511) | EER (4) | | 2.75 | 2.82 | 2.92 | | | |
| | ESEER | | 3.11 | 3.16 | 3.27 | | | |
| | EUROVENT Class | | С | C | В | | | |
| Compressor | Quantity | n° | 1 | 1 | 1 | | | |
| | Power supply | V/Ph/Hz | | 400/3/50 | | | | |
| Integrated electrical | Heating capacity | kW | 6/10 | 6/10 | 6/10 | | | |
| coils | Absorbed current | A | 26/43 | 26/43 | 26/43 | | | |
| | Steps | n° | 2 | 2 | 2 | | | |
| Electrical | Power supply | V/Ph/Hz | | 400/3+N/50 | | | | |
| characteristics | Max. running current | A | 28 | 36 | 42 | | | |
| | Max. starting current | A | 109 | 139 | 179 | | | |
| | Water flow | l/s | 1.47 | 1.92 | 2.51 | | | |
| Water circuit | Pump available static pressure | kPa | 230 | 227 | 195 | | | |
| | Water connections | "G | 1″ | 1″ | 1″ | | | |
| Sound pressure | STD version (6) | dB(A) | 61 | 62 | 64 | | | |
| \A/=:==== | Transport weight | Kg | 220 | 235 | 265 | | | |
| vveignts | Operating weight | Kg | 224 | 239 | 269 | | | |

| DIMENSIONS | | | 91 | 101 | 151 |
|------------|-----|----|------|------|------|
| L | STD | mm | 1850 | 1850 | 1850 |
| W | STD | mm | 1000 | 1000 | 1000 |
| Н | STD | mm | 1300 | 1300 | 1300 |

CLEARANCE AREA

CHA/ML/ST 91÷151

500 800 800 800



NOTES

- 1.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient 2.
- 3. heating at medium temperature with average climatic conditions. According to EU Regulation n. 811/2013.
- 4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Chilled water from 23 to 18 °C, ambient air 5. temperature 35 °C.
- 6. Sound pressure level measured in free field conditions at 1 m from the unit. According
- to ISO 3744. N.B. Weights of WP version are specified on technical brochure. X



FROM 57 KW TO 114 KW.



CHA/ML/ST 182-P+302-P

A CLASS ENERGY EFFICIENCY AIRCOOLED DEDICATED HEAT PUMPS WITH DOMESTIC HOT WATER PRODUCTION, AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER AND HYDRONIC KIT.



MIDYLINE, featuring A CLASS energy efficiency, is the innovative series of Heat Pumps dedicated to production of hot water up to 60 °C and operation up to -20 °C external air temperature, with Scroll compressors, axial fans and integrated hydronic unit. The unit, designed to originate and control – throughout the year – the best comfort conditions in rooms with a high rate of daily attendance, such as enclosed areas destined to the activities of the service sector, autonomously handles winter heating, summer air conditioning and the production of high temperature sanitary hot water. The MIDYLINE series, designed with an extremely compact structure for simple installation operations, uses only the electric energy and the heat accumulated in the air, to transfer heat to the rooms, thus allowing considerable energy savings, a high rate of reliability and the shortest start-up times. Flexibility is the main feature of the MIDYLINE series, which is indeed combined with terminal units and managed by the innovative, intelligent AQUALOGIK control and optimization system, which renders the use of an inertial tank unnecessary and guarantees performances with elevated energy efficiency and silent functioning.

MIDYLINE

AQUALOGIK

| VERSION | |
|--|---|
| CHA/ML/ST | CHA/ML/SSL/ST |
| Heat Pump with AQUALOGIK technology | Super silenced Heat Pump with AQUALOGIK technology |
| CHA/ML/WP/ST | CHA/ML/WP/SSL/ST |
| Reversible Heat Pump with AQUALOGIK technology | Super silenced 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.
- 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 plates type with two independent circuits on the refrigerant side and one on the water side, complete with flow switch and antifreeze heater.
- R407C refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and pump, thermocontacts for fans.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.
- Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SL Unit silencement
- RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on
- RFL Cooling circuit shut-off valve on liquid line
- DS Desuperheater
- KC Gas burner integration Kit
- SS Soft start

IS

- TX Coil with pre-coated fins
 - Modbus RTU protocol, RS485 serial interface

- HWStorage tank for domestic hot
water productionMNHigh and low pressure gaugesCRRemote control panelRPCoil protection metallic guardsAGRubber shock absorbers
- AM Spring shock absorbers



CHA/ML/ST 182-P+302-P





| MODEL | | | 182-P | 202-P | 262-P | 302-P |
|-------------------|-----------------------------------|---------|--------|--------|--------|--------|
| | Heating capacity (1) | kW | 57.2 | 78.3 | 92.7 | 114 |
| | Absorbed power (1) | kW | 16.3 | 20.8 | 25.7 | 33.7 |
| Uniting | COP (1) | | 3.51 | 3.76 | 3.61 | 3.38 |
| Heating | Heating capacity (2) | kW | 55.7 | 74.4 | 91.1 | 112 |
| | Absorbed power (2) | kW | 13.7 | 17.4 | 21.5 | 27.1 |
| | COP (2) | | 4.07 | 4.28 | 4.24 | 4.13 |
| | Heating capacity (1) | kW | 58.0 | 79.2 | 93.6 | 116 |
| | Absorbed power (1) | kW | 16.3 | 20.8 | 25.7 | 33.7 |
| | COP (1) | | 3.56 | 3.81 | 3.64 | 3.43 |
| Heating (EN14511) | EUROVENT Class | | А | A | А | A |
| - | SCOP (3) | | 4.36 | 3.93 | 3.87 | 3.72 |
| | Energy Efficiency (3) | % | 170 | 153 | 151 | 145 |
| | Energy Class (3) | | A++ | A++ | A++ | A+ |
| Cooling | Cooling capacity (4) | kW | 44.3 | 60.4 | 78.6 | 101 |
| | Absorbed power (4) | kW | 16.4 | 23.6 | 34.8 | 39.1 |
| | EER (4) | | 2.70 | 2.56 | 2.26 | 2.58 |
| | Cooling capacity (5) | kW | 60.3 | 81.8 | 101 | 130 |
| | Absorbed power (5) | kW | 18.7 | 27.5 | 37.6 | 42.2 |
| | EER (5) | | 3.22 | 2.97 | 2.69 | 3.08 |
| | Cooling capacity (4) | kW | 43.6 | 59.6 | 77.7 | 99.7 |
| | Absorbed power (4) | kW | 17.1 | 24.4 | 35.7 | 40.4 |
| Cooling (EN14511) | EER (4) | | 2.55 | 2.44 | 2.18 | 2.47 |
| | ESEER | | 3.08 | 2.99 | 2.81 | 2.96 |
| | EUROVENT Class | | D | E | F | E |
| | Quantity | n° | 2 | 2 | 2 | 2 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | 2 | 2 | |
| Flootrical | Power supply | V/Ph/Hz | | 400/ | 3/50 | |
| characteristics | Max. running current | A | 44 | 56 | 68 | 84 |
| Characteristics | Max. starting current | A | 125 | 159 | 205 | 246 |
| | Water flow | l/s | 2.73 | 3.74 | 4.43 | 5.46 |
| Water circuit | Pump available static pressure | kPa | 150 | 130 | 110 | 135 |
| | Water connections | "G | 2 1⁄2″ | 2 1⁄2″ | 2 1/2" | 2 1⁄2″ |
| | STD version (6) | dB(A) | 60 | 61 | 62 | 64 |
| Sound pressure | With SL accessory (6) | dB(A) | 58 | 59 | 60 | 62 |
| • | SSL version (6) | dB(A) | 56 | 57 | 58 | 60 |
| Maighta | Transport weight | Kg | 746 | 837 | 856 | 913 |
| vveignts | Operating weight | Kg | 755 | 855 | 875 | 935 |

| DIMENSIONS | | | 182-P | 202-P | 262-P | 302-P |
|------------|---------|----|-------|-------|-------|-------|
| L | STD | mm | 2350 | 2350 | 2350 | 2350 |
| | SSL | mm | 2350 | 2350 | 2350 | 3550 |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 |
| Н | STD | mm | 1920 | 2220 | 2220 | 2220 |
| | SSL | mm | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/ML/ST 182-P ÷ 302-P

300 800 800 1800



- 1.
- 2.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at medium temperature with 3. average climatic conditions. According to EU Regulation n. 811/2013.
- 4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Chilled water from 23 to 18 °C, ambient air 5. temperature 35 °C.
- 6. Sound pressure level measured in free field
- Sound pressure level measured in the net conditions at 1 m from the unit. According to ISO 3744.
 N.B. Weights of SSL and WP versions are specified on technical brochure.







CHAPTER 2

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS FOR COMMERCIAL & INDUSTRIAL APPLICATION

| Unit | Page |
|---------------------------|----------------|
| CHA/IK/A/WP 91÷152 | 54 - 55 |
| CHA/K 91÷151 | 56 - 57 |
| CHA/K/ST 91÷151 | 58 - 59 |
| CHA/K/FC 91÷151 | 60 - 61 |
| CHA/IK/A 172-P÷574-P | 62 - 63 |
| CHA/TK/A 182-P÷604-P | 64 - 65 |
| CHA/K/A/WP 182-P÷604-P | 66 - 67 |
| CHA/K/A/WP/ST 182-P÷604-P | 68 - 69 |
| CHA/K 182-P÷604-P | 70 - 71 |
| CHA/K/ST 182-P+604-P | 72 - 73 |
| CHA/K/FC 182-P÷604-P | 74 - 75 |
| CHA/K 182÷604 | 76 - 77 |
| CHA/K/ST 182÷604 | 78 - 79 |
| CRA/K 15÷131 | 80 - 81 |
| CRA/K 182-P÷604-P | 82 - 83 |
| CRA/K/ST 182-P+604-P | 84 - 85 |
| CRA/K 182÷604 | 86 - 87 |
| CRA/K/ST 182÷604 | <i>88 - 89</i> |
| CHA/IK/A 674-P÷2356-P | 90 - 91 |
| CHA/K/A/WP 726-P÷24012-P | <i>92 - 93</i> |
| CHA/K 726-P÷36012-P | 94 - 95 |
| CHA/K/FC 726-P÷36012-P | 96 - 97 |
| CHA/K 726÷36012 | <i>98 - 99</i> |
| CHA/K/EP 182-P÷693-P | 100 - 101 |
| CHA/K/EP 604-P÷2406-P | 102 - 103 |
| CHA/IY/EP 1352÷4402 | 104 - 105 |
| CHA/IY/WP 1352÷4402 | 106 - 107 |
| CHA/Y/A 1302÷4802 | 108 - 109 |
| CHA/Y 1202-B÷6802-B | 110 - 111 |
| CHA/Y/FC 1202-B÷6002-B | 112 - 113 |
| CHA 702-V÷5602-V | 114 - 115 |
| CHA/FC 702-V÷4602-V | 116 - 117 |
| CHA/TTH 1301-1÷4904-2 | 118 - 119 |
| CHA/TTH/FC 1301-1+4904-2 | 120 - 121 |
| CHA/TTY 1301-1÷5004-2 | 122 - 123 |
| CHA/TTY/FC 1301-1÷5004-2 | 124 - 125 |

FROM 22 KW TO 50 KW.



CHA/IK/A/WP 91÷152

A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH AXIAL FANS, INVERTER SCROLL COMPRESSORS AND PLATE EXCHANGER.



The reversible Heat Pumps of the CHA/IK/A/WP 91÷152 series, with R410A refrigerant, are designed to satisfy the needs of medium-sized service sector or industrial ambients and feature A CLASS energy efficiency.

They are used, combined with terminal units, for the heating or air conditioning of the rooms and can be supplied with Modbus RTU protocol through RS485 serial interface. Units are equipped with axial fans, Inverter Scroll compressors and plate-type exchangers. A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



INVERTER SCROLL

VERSION

CHA/IK/A/WP

Reversible Heat Pump

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DC INVERTER Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- 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 plates type, complete with water flow switch and antifreeze heater.
- Electronic thermostatic valve.
- 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- · Microprocessor control and regulation system.
- Communication with Modbus RTU protocol through RS485 serial interface.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- SL Unit silencement
- EC EC Inverter fans
- TX Coil with pre-coated fins
- PS Single circulating pump

PSI Inverter single circulating pump

LOOSE ACCESSORIES CR Remote contro

CR Remote control panel AG Rubber shock absorbers



CHA/IK/A/WP 91÷152





| MODEL | | | 91 | 102 | 132 | 152 |
|-------------------|-----------------------|---------|---------------------------------------|--------|-------|------|
| | Heating capacity (1) | kW | 22.2 | 33.4 | 41.7 | 49.7 |
| | Absorbed power (1) | kW | 6.5 | 10.1 | 12.7 | 15.5 |
| | COP (1) | | 3 42 | 3.31 | 3.28 | 3 21 |
| Heating | Heating capacity (2) | kW | 24.9 | 34.1 | 49.1 | 52.4 |
| | Absorbed power (2) | kW | 57 | 8.6 | 12.2 | 12.9 |
| | COP (2) | | 4.37 | 3.97 | 4.02 | 4.06 |
| | Heating capacity (1) | kW | 22.1 | 33.2 | 41.4 | 49.3 |
| | Absorbed power (1) | kW | 6.4 | 9.9 | 12.4 | 15.1 |
| | COP (1) | | 3.45 | 3.35 | 3.34 | 3.26 |
| | EUBOVENT Class (1) | | A | A | A | A |
| | Heating capacity (2) | kW | 24.7 | 33.9 | 48.7 | 52.0 |
| Heating (EN14511) | Absorbed nower (2) | kW | 56 | 8.4 | 11.9 | 12.6 |
| | COP (2) | | 4 41 | 4 04 | 4 09 | 4 13 |
| | SCOP (3) | | 2.58 | 2.58 | 2.58 | 2.58 |
| | Energy Efficiency (3) | % | 100 | 100 | 100 | 100 |
| | Energy Class (3) | /0 | A+ | A+ | A+ | A+ |
| | Cooling capacity (4) | kW | 20.9 | 27.3 | 36.0 | 42.6 |
| | Absorbed power (4) | kW | 65 | 91 | 12.7 | 14.2 |
| a | FFR (4) | KUU | 3 22 | 3.00 | 2.83 | 3.00 |
| Cooling | Cooling capacity (5) | kW | 30.2 | 36.2 | 48.4 | 56.7 |
| | Absorbed power (5) | kW | 7.0 | 91 | 12.8 | 14.3 |
| | FFB (5) | | 4.31 | 3.98 | 3.78 | 3 97 |
| | Cooling capacity (4) | kW | 21.0 | 27.5 | 36.3 | 43.0 |
| | Absorbed power (4) | kW | 6.4 | 89 | 12.4 | 13.8 |
| | FFR (4) | | 3.28 | 3.09 | 2.93 | 3 12 |
| | ESEEB | | 3.93 | 4 05 | 3.61 | 4 73 |
| Cooling (EN14511) | EUBOVENT Class (4) | | A | B | B | A |
| | Cooling capacity (5) | kW | 30.4 | 36.4 | 48.8 | 57.2 |
| | Absorbed power (5) | kW | 68 | 8.9 | 12.5 | 13.9 |
| | EEB (5) | | 4.47 | 4.09 | 3.90 | 4.12 |
| | Quantity | n° | 1 | 2 | 2 | 2 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 |
| | Capacity steps | n° | · · · · · · · · · · · · · · · · · · · | Sten | less | |
| | Water flow | I/s | 1.01 | 1.32 | 1.74 | 2.06 |
| Evaporator | Pressure drops | kPa | 30 | 34 | 48 | 60 |
| | Water connections | ″G | 2" | 2" | 2" | 2" |
| | Power supply | V/Ph/Hz | | 400/3- | +N/50 | |
| Electrical | Max, running current | Α | 22 | 28 | 42 | 45 |
| characteristics | Max. starting current | A | 14 | 18 | 27 | 32 |
| | Pump available static | 10 | 05 | 75 | | 05 |
| Unit with pump | pressure | кра | 85 | /5 | 70 | 85 |
| Sine with pump | Water connections | "G | 2″ | 2″ | 2″ | 2″ |
| C | STD version (6) | dB(A) | 55 | 57 | 60 | 62 |
| Sound pressure | With SL accessory (6) | dB(A) | 53 | 55 | 58 | 60 |
| \A/=: | Transport weight | Kg | 365 | 420 | 440 | 460 |
| vveignts | Operating weight | Kg | 355 | 415 | 420 | 440 |

| | | 0 |
|------|------|---|
| 132 | 152 | |
| 1200 | 1200 | |
| | | |

| DIMENSIONS | | | 91 | 102 | 132 | 152 |
|------------|-----|----|------|------|------|------|
| L | STD | mm | 1200 | 1200 | 1200 | 1200 |
| W | STD | mm | 1200 | 1200 | 1200 | 1200 |
| Н | STD | mm | 1670 | 1670 | 1740 | 1740 |

CLEARANCE AREA

CHA/IK/A/WP 91÷152

850 1000 1500 500



Electrical board side

- 1.
- 2.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Heated water from 30 to 35 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at medium temperature with average climatic conditions. According to EU Begulation p. 811/2013 3. Regulation n. 811/2013.
- 4. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Chilled water from 23 to 18 °C, ambient air 5. temperature 35 °C.
- 6. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.



FROM 25 KW TO 42 KW.

CHA/K 91÷151

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSOR AND PLATE EXCHANGER.





The liquid Chillers and Heat Pumps of the CHA/K 91÷151 series, with R410A refrigerant, are designed 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 or with intermediate heat exchangers for process cooling applications. Available in the versions with or without pumping kit, these units are equipped with particular technical and design adjustments that enable an immediate and efficient use, in addition to remarkably guiet operation.

A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|---|
| СНА/К | CHA/K/SP |
| Cooling only | Cooling only with tank and pump |
| CHA/K/WP | CHA/K/WP/SP |
| Reversible Heat Pump | Reversible Heat Pump with tank and pump |

FEATURES

- Structure with supporting frame, in peraluman and galvanized sheet.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- · Condenser with copper tube and aluminium finned coil.
- . Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Water circuit for SP version includes: insulated tank, circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- ΒT Low water temperature Kit
- CC Condensing control down to -20 °C
- TΧ Coil with pre-coated fins
- PS Single circulating pump
- FE Antifreeze heater for evaporator
- FA Antifreeze heater for tank

- CR Remote control panel IS
 - Modbus RTU protocol, RS485 serial
 - interface
- RP Coil protection metallic guards
- AG Rubber shock absorbers



CHA/K 91÷151





| MODEL | | | 91 | 101 | 131 | 151 |
|---------------------|-----------------------------------|---------|------------|------|------|------|
| | Cooling capacity (1) | kW | 24.8 | 28.6 | 33.4 | 42.2 |
| Cooling | Absorbed power (1) | kW | 8.3 | 10.7 | 11.7 | 14.5 |
| 0 | EER (1) | | 2.99 | 2.67 | 2.85 | 2.91 |
| | Cooling capacity (1) | kW | 24.6 | 28.3 | 33.2 | 41.9 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 8.5 | 11.0 | 11.9 | 14.8 |
| Cooling (EN 14511) | EER (1) | | 2.90 | 2.58 | 2.78 | 2.84 |
| | ESEER | | 3.37 | 3.04 | 3.22 | 3.28 |
| | Heating capacity (2) | kW | 30.6 | 36.7 | 41.6 | 55.3 |
| Heating | Absorbed power (2) | kW | 9.7 | 11.8 | 12.8 | 17.3 |
| - | COP (2) | | 3.15 | 3.11 | 3.25 | 3.20 |
| | Heating capacity (2) | kW | 30.6 | 36.7 | 41.6 | 55.3 |
| | Absorbed power (2) | kW | 9.8 | 11.8 | 12.9 | 17.4 |
| Llooting (ENI14E11) | COP (2) | | 3.12 | 3.11 | 3.22 | 3.18 |
| Heating (EN14511) | SCOP (3) | | 3.11 | 3.08 | 3.18 | 3.21 |
| | Energy Efficiency (3) | % | 121 | 120 | 124 | 125 |
| | Energy Class (3) | | A | A | A+ | A+ |
| Compressor | Quantity | n° | 1 | 1 | 1 | 1 |
| | Water flow | l/s | 1.18 | 1.37 | 1.60 | 2.02 |
| Evaporator | Pressure drops | kPa | 39 | 51 | 37 | 39 |
| | Water connections | "G | 1″ | 1″ | 1″ | 1″ |
| Electrical | Power supply | V/Ph/Hz | 400/3+N/50 | | | |
| characteristics | Max. running current | A | 21 | 24 | 27 | 33 |
| | Max. starting current | A | 144 | 146 | 151 | 201 |
| Unit with tank and | Pump available static pressure | kPa | 212 | 169 | 178 | 161 |
| pump | Tank water volume | | 300 | 300 | 300 | 300 |
| | Water connections | "G | 1″ | 1″ | 1″ | 1" |
| Sound pressure | STD/SP version (4) | dB(A) | 51 | 52 | 52 | 52 |
| Wajahta | Transport weight (5) | Kg | 220 | 235 | 265 | 279 |
| vveignts | Operating weight (5) | Kg | 223 | 238 | 268 | 282 |

| DIMENSIONS | | | 91 | 101 | 131 | 151 |
|------------|--------|----|------|------|------|------|
| L | STD/SP | mm | 1850 | 1850 | 1850 | 1850 |
| W | STD/SP | mm | 1000 | 1000 | 1000 | 1000 |
| Н | STD/SP | mm | 1300 | 1300 | 1300 | 1300 |

CLEARANCE AREA

CHA/K 91÷151

500 800 800 800



- 1.
- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of WP versions are specified on technical brochure.



FROM 25 KW TO 42 KW.



CHA/K/ST 91÷151

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSOR, PLATE EXCHANGER, HYDRONIC KIT AND AQUALOGIK CONTROL SYSTEM.



CHA/K/ST 91 \pm 151 series liquid Chillers and Heat Pumps, with R410A refrigerant and AQUALOGIK technology, are designed to meet the needs of small and medium-sized domestic or service sector ambients.

With a corrosion-resistant peraluman structure, they are combined with terminal units and managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Particular design features enable immediate and effective use, easy installation and lasting reliability.

A wide range of accessories, factory fitted or supplied separately, completes the outstanding versatility and functionality of the series.



AQUALOGIK

VERSION

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 oil sight glass, internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser with copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: variable speed circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

LOOSE ACCESSORIES CR Remote contro

- BT Low water temperature Kit
- TX Coil with pre-coated fins
- FE Antifreeze heater for evaporator

CR Remote control panel IS Modbus RTU protocol, RS485 serial

- interface
- RP Coil protection metallic guards
- AG Rubber shock absorbers



CHA/K/ST 91÷151





| MODEL | | | 91 | 101 | 131 | 151 |
|---------------------|-----------------------------------|---------|------------|------|------|------|
| | Cooling capacity (1) | kW | 24.8 | 28.6 | 33.4 | 42.2 |
| Cooling | Absorbed power (1) | kW | 8.3 | 10.7 | 11.7 | 14.5 |
| 0 | EER (1) | | 2.99 | 2.67 | 2.85 | 2.91 |
| | Cooling capacity (1) | kW | 24.6 | 28.3 | 33.2 | 41.9 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 8.5 | 11.0 | 11.9 | 14.8 |
| COOIING (EIN 14511) | EER (1) | | 2.90 | 2.58 | 2.78 | 2.84 |
| | ESEER | | 3.37 | 3.04 | 3.22 | 3.28 |
| | Heating capacity (2) | kW | 30.6 | 36.7 | 41.6 | 55.3 |
| Heating | Absorbed power (2) | kW | 9.7 | 11.8 | 12.8 | 17.3 |
| | COP (2) | | 3.15 | 3.11 | 3.25 | 3.20 |
| | Heating capacity (2) | kW | 30.6 | 36.7 | 41.6 | 55.3 |
| | Absorbed power (2) | kW | 9.8 | 11.8 | 12.9 | 17.4 |
| Hosting (EN1/E11) | COP (2) | | 3.12 | 3.11 | 3.22 | 3.18 |
| rieating (EN 14311) | SCOP (3) | | 3.11 | 3.08 | 3.18 | 3.21 |
| | Energy Efficiency (3) | % | 121 | 120 | 124 | 125 |
| | Energy Class (3) | | А | A | A+ | A+ |
| Compressor | Quantity | n° | 1 | 1 | 1 | 1 |
| Electrical | Power supply | V/Ph/Hz | 400/3+N/50 | | | |
| characteristics | Max. running current | A | 25 | 28 | 32 | 38 |
| | Max. starting current | A | 148 | 150 | 156 | 206 |
| | Water flow | l/s | 1.18 | 1.37 | 1.60 | 2.02 |
| Water circuit | Pump available static pressure | kPa | 221 | 181 | 250 | 181 |
| | Water connections | "G | 1″ | 1″ | 1″ | 1″ |
| Sound pressure | STD version (4) | dB(A) | 51 | 52 | 52 | 52 |
| Woights | Transport weight | Kg | 230 | 245 | 280 | 294 |
| vveignts | Operating weight | Kg | 233 | 248 | 283 | 297 |

| DIMENSIONS | | | 91 | 101 | 131 | 151 |
|------------|-----|----|------|------|------|------|
| L | STD | mm | 1850 | 1850 | 1850 | 1850 |
| W | STD | mm | 1000 | 1000 | 1000 | 1000 |
| Н | STD | mm | 1300 | 1300 | 1300 | 1300 |

CLEARANCE AREA

CHA/K/ST 91÷151

500 800 800 800



- 1.
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP version are specified on technical brochure.

FROM 28 KW TO 43 KW.



CHA/K/FC 91÷151

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS. SCROLL COMPRESSOR AND PLATE EXCHANGER.



The liquid Chillers of the CHA/K/FC 91÷151 series, with R410A refrigerant, 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 condensing coil, thus saving energy by not operating the unit's Scroll compressors. A 3-way valve system is controlled by the electronic microprocessor controller, allowing functioning in CHILLER, FREE-COOLING or MIXED (simultaneously CHILLER and FREE-COOLING) modes.



FREE COOLING

VERSION

CHA/K/FC Cooling only

CHA/K/FC/SP

Cooling only with tank and pump

FEATURES

- · Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fan type with low ventilation and special wing profile, directly coupled to external rotor motors.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch.
- R410A refrigerant.
- ٠ Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit for SP version includes: insulated tank, circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.

ACCESSORIES

ΒT

FACTORY FITTED ACCESSORIES PS

LOOSE ACCESSORIES

- Single circulating pump Low water temperature Kit
- ТΧ

Remote control panel CR

interface

- IS Modbus RTU protocol, RS485 serial
- Coil with pre-coated fins
- RP Coil protection metallic guards
- AG Rubber shock absorbers



CHA/K/FC 91÷151

| | ST STEM CEATING BA |
|----------------------|--------------------|
| R E A U R I T A S | ISO 9001 |

B U V E

| MODEL | | | 91 | 101 | 131 | 151 | |
|--------------------|-----------------------------------|---------|------------|------|------|------|--|
| | Cooling capacity (1) | kW | 27.9 | 31.4 | 37.3 | 42.8 | |
| Cooling | Absorbed power (1) | kW | 9.5 | 11.0 | 13.9 | 15.6 | |
| | EER (1) | | 2.51 | 2.60 | 2.45 | 2.30 | |
| Eroo Cooling avalo | Air temperature (2) | °C | -1.7 | -2.7 | 0.5 | -1.2 | |
| Free-cooling cycle | Absorbed power (2) | kW | 0.98 | 0.98 | 1.96 | 1.96 | |
| Compressor | Quantity | n° | 1 | 1 | 1 | 1 | |
| | Water flow | l/s | 1.55 | 1.74 | 2.07 | 2.37 | |
| Water circuit | Pressure drops | kPa | 117 | 142 | 132 | 141 | |
| | Water connections | "G | 1″ | 1″ | 1″ | 1″ | |
| Flastical | Power supply | V/Ph/Hz | 400/3+N/50 | | | | |
| Electrical | Max. running current | A | 20 | 22 | 29 | 32 | |
| CIIdIdeleIIstics | Max. starting current | A | 144 | 144 | 162 | 201 | |
| Unit with tank and | Pump available static pressure | kPa | 109 | 152 | 150 | 129 | |
| pump | Tank water volume | | 150 | 150 | 150 | 150 | |
| | Water connections | "G | 1″ | 1″ | 1″ | 1″ | |
| Sound pressure | STD/SP version (3) | dB(A) | 51 | 52 | 52 | 52 | |
| Waighta | Transport weight (4) | Kg | 415 | 430 | 470 | 485 | |
| vveigins | Operating weight (4) | Kg | 437 | 452 | 499 | 515 | |

| DIM | ENSIONS | | 91 | 101 | 131 | 151 |
|-----|---------|----|------|------|------|------|
| L | STD/SP | mm | 1850 | 1850 | 1850 | 1850 |
| W | STD/SP | mm | 900 | 900 | 900 | 900 |
| Н | STD/SP | mm | 1840 | 1840 | 1840 | 1840 |

CLEARANCE AREA

CHA/K/FC 91÷151

 500
 800
 800
 800



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



FROM 50 KW TO 179 KW.



CHA/IK/A 172-P+574-P

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, INVERTER SCROLL COMPRESSORS, MICROCHANNEL CONDENSING COILS AND PLATE EXCHANGER.



The A CLASS energy efficiency liquid Chillers of the CHA/IK/A 172-P÷574-P series, with R410A refrigerant, are designed to satisfy the needs of medium-sized service sector or industrial ambients.

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 Modbus RTU protocol through RS485 serial interface.

Equipped with axial fans, Inverter Scroll compressors, Microchannel condensing coils and plate-type exchanger, even in the super silent version. The Microchannel condensing coils ensure an high efficiency (high EER), having a better heat exchange than traditional coils. A better efficiency at partial loads (ESEER/IPLV) is guaranteed by the Inverter control on Scroll compressor. Furthermore, Inverter control is also available on circulating pump and fans (EC Inverter) for a further efficiency improvement. A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



INVERTER SCROLL

MICROCHANNEL

VERSION

CHA/IK/A

Cooling only

CHA/IK/A/SSL

Super silenced cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DC INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- · Condenser made of aluminium MICROCHANNEL condensing coils.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side in 192-P÷472-P
 models; with two independent circuits on the refrigerant side and one on the water side in 534-P÷634-P models, complete with water
 differential pressure switch.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- 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 also allows the cooling
 functioning of the unit by external temperature till -20°C.
- · Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-----|-----------------------------------|
| SL | Unit silencement |
| RFM | Cooling circuit shut-off valve on |
| | discharge line |
| RFL | Cooling circuit shut-off valve on |
| | liquid line |
| BT | Low water temperature Kit |
| EC | EC Inverter fans |
| | |



- DS Desuperheater BT Total heat recov
- RT Total heat recovery TXB Coil with epoxy treat
- TXB Coil with epoxy treatment PS Single circulating pump
 - S Single circulating pump
- PSI Inverter single circulating pump
- PDDouble circulating pumpPDIInverter double circulating pump
- FE Antifreeze heater for evaporator
- IS Modbus RTU protocol, RS485 serial interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers

CHA/IK/A 172-P÷574-P





| MODEL | | | 172-P | 192-P | 212-P | 232-P | 272-P | 302-P | 352-P | 372-P | 484-P | 574-P |
|-------------------|-----------------------------------|---------|-------|-------|--------|-------|-------|-------|--------|-------|-------|-------|
| | Cooling capacity (1) | kW | 49.9 | 57.7 | 65.7 | 74.8 | 85.9 | 97.7 | 112 | 130 | 152 | 179 |
| Cooling | Absorbed power (1) | kW | 15.4 | 17.9 | 20.2 | 23.4 | 26.7 | 30.0 | 34.7 | 40.1 | 46.7 | 55.0 |
| | EER (1) | | 3.24 | 3.22 | 3.25 | 3.20 | 3.22 | 3.26 | 3.23 | 3.24 | 3.25 | 3.25 |
| | Cooling capacity (1) | kW | 49.6 | 57.4 | 65.4 | 74.4 | 85.4 | 97.2 | 112 | 129 | 151 | 178 |
| | Absorbed power (1) | kW | 15.7 | 18.2 | 20.5 | 23.8 | 27.2 | 30.5 | 35.2 | 40.7 | 47.3 | 55.6 |
| Cooling (EN14511) | EER (1) | | 3.16 | 3.15 | 3.19 | 3.13 | 3.14 | 3.19 | 3.18 | 3.17 | 3.19 | 3.20 |
| | ESEER | | 4.11 | 4.17 | 4.07 | 4.03 | 3.97 | 4.13 | 4.05 | 4.06 | 4.01 | 4.04 |
| | EUROVENT Class | | А | А | А | А | A | А | Α | А | A | А |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | | | Step | less | | | | |
| | Water flow | l/s | 2.38 | 2.76 | 3.14 | 3.57 | 4.10 | 4.67 | 5.35 | 6.21 | 7.26 | 8.55 |
| Evaporator | Pressure drops | kPa | 41 | 40 | 32 | 39 | 47 | 40 | 35 | 44 | 33 | 30 |
| | Water connections | ″G | 1 ½″ | 1 ½″ | 2 ½″ | 2 ½″ | 2 ½″ | 2 ½" | 2 ½″ | 2 ½″ | 2 ½" | 2 ½″ |
| Flootrigal | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| charactoristics | Max. running current | A | 45 | 45 | 54 | 54 | 63 | 69 | 89 | 89 | 112 | 129 |
| | Max. starting current | A | 128 | 128 | 176 | 176 | 187 | 237 | 230 | 230 | 245 | 297 |
| Unit with pump | Pump available static pressure | kPa | 130 | 120 | 120 | 105 | 125 | 160 | 150 | 125 | 105 | 115 |
| | Water connections | ″G | 2 ½" | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 ½" | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 ½" | 2 ½″ |
| | STD version (2) | dB(A) | 57 | 57 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 62 |
| Sound pressure | With SL accessory (2) | dB(A) | 55 | 55 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 60 |
| | SSL version (2) | dB(A) | 53 | 53 | 57 | 57 | 56 | 56 | 57 | 57 | | |
| Woights | Transport weight | Kg | 584 | 653 | 712 | 721 | 730 | 817 | 1036 | 1045 | 1379 | 1424 |
| VVEIGIILS | Operating weight | Kg | 590 | 660 | 720 | 730 | 740 | 830 | 1050 | 1060 | 1400 | 1450 |

| STD mm 2350 2350 2350 2350 3550 3550 4700 4 SSL mm 2350 2350 3550 3550 3550 4700 4 W STD/SSL mm 1100 < | DIME | ENSIONS | 1 | 172-P | 192-P | 212-P | 232-P | 272-P | 302-P | 352-P | 372-P | 484-P | 574-P |
|--|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L SSL mm 2350 2350 2350 3550 3550 4700 4700 W STD/SSL mm 1100 | | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 4700 | 4700 |
| W STD/SSL mm 1100 1100 1100 1100 1100 1100 1100 | L | SSL | mm | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 4700 | 4700 | | |
| | W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| TT STD mm 1920 2220 2220 2220 2220 1920 2220 2220 | | STD | mm | 1920 | 2220 | 2220 | 2220 | 2220 | 1920 | 2220 | 2220 | 2220 | 2220 |
| ⁿ SSL mm 1920 2220 2220 1920 1920 2220 2220 2220 | п | SSL | mm | 1920 | 2220 | 2220 | 1920 | 1920 | 2220 | 2220 | 2220 | | |

CLEARANCE AREA

CHA/IK/A 172-P÷574-P

300 800 800 1800



- NOTES
- 1.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744. 2.
- N.B. Weights of SSL version are specified on technical brochure.





FROM 51 KW TO 185 KW.



CHA/TK/A 182-P+604-P

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, DIGITAL SCROLL COMPRESSORS, MICROCHANNEL CONDENSING COILS AND PLATE EXCHANGER.



The A CLASS energy efficiency liquid Chillers of the CHA/TK/A 182-P÷604-P series, with R410A refrigerant, are designed to satisfy the needs of medium-sized service sector or industrial ambients.

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 Modbus RTU protocol through RS485 serial interface.

Equipped with axial fans, Digital Scroll compressors, Microchannel condensing coils and plate-type exchanger, even in the super silent version. The Microchannel condensing coils ensure an high efficiency (high EER), having a better heat exchange than traditional coils. A better efficiency at partial loads (ESEER/IPLV) is guaranteed by the Digital Scroll technology on compressor. Furthermore, Inverter control is available on circulating pump and fans (EC Inverter) for a further efficiency improvement. A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



DIGITAL SCROLL

MICROCHANNEL

VERSION

CHA/TK/A

Cooling only

CHA/TK/A/SSL

Super silenced cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DIGITAL Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of aluminium MICROCHANNEL condensing coils.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side in 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P ÷ 604-P models, complete with water differential pressure switch.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- 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 also allows the cooling
- functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-----|-----------------------------------|
| SL | Unit silencement |
| RFM | Cooling circuit shut-off valve on |
| | discharge line |
| RFL | Cooling circuit shut-off valve on |
| | liquid line |
| BT | Low water temperature Kit |
| EC | EC Inverter fans |



- DS Desuperheater
- RT Total heat recovery
- TXB Coil with epoxy treatment
- PS Single circulating pump
- PSI Inverter single circulating pump
- PD Double circulating pump
- PDI Inverter double circulating pump
- FE Antifreeze heater for evaporator IS Modbus RTU protocol, RS485 serial interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface

- MN High and low pressure gauges CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers

CHA/TK/A 182-P÷604-P





| MODEL | | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|-------------------|-----------------------------------|---------|--------|-------|-------|-------|-------|-------|-------|-------|--------|-------|
| | Cooling capacity (1) | kW | 51.4 | 59.4 | 68.9 | 79.2 | 90.6 | 103 | 120 | 137 | 157 | 185 |
| Cooling | Absorbed power (1) | kW | 16.1 | 18.6 | 21.7 | 24.9 | 28.3 | 32.2 | 37.7 | 43.1 | 49.7 | 58.5 |
| | EER (1) | | 3.19 | 3.19 | 3.18 | 3.18 | 3.20 | 3.20 | 3.18 | 3.18 | 3.16 | 3.16 |
| | Cooling capacity (1) | kW | 51.1 | 59.0 | 68.6 | 78.8 | 90.1 | 102 | 119 | 136 | 156 | 184 |
| | Absorbed power (1) | kW | 16.4 | 19.0 | 22.0 | 25.3 | 28.8 | 32.7 | 38.2 | 43.8 | 50.3 | 59.1 |
| Cooling (EN14511) | EER (1) | | 3.12 | 3.11 | 3.12 | 3.11 | 3.13 | 3.12 | 3.12 | 3.11 | 3.10 | 3.11 |
| | ESEER | | 3.89 | 3.90 | 3.92 | 3.83 | 3.89 | 3.79 | 3.76 | 3.89 | 3.77 | 3.99 |
| | EUROVENT Class | | Α | А | А | А | А | А | А | A | A | А |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | | | Step | less | | | | |
| | Water flow | l/s | 2.46 | 2.84 | 3.29 | 3.78 | 4.33 | 4.92 | 5.73 | 6.55 | 7.50 | 8.84 |
| Evaporator | Pressure drops | kPa | 42 | 41 | 33 | 40 | 48 | 42 | 36 | 45 | 34 | 31 |
| | Water connections | "G | 1 ½″ | 1 ½″ | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 1⁄2″ | 2 ½" |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 38 | 44 | 51 | 57 | 68 | 73 | 85 | 102 | 113 | 136 |
| | Max. starting current | A | 132 | 142 | 148 | 172 | 212 | 169 | 200 | 246 | 229 | 280 |
| Unit with pump | Pump available static pressure | kPa | 130 | 120 | 115 | 105 | 130 | 160 | 155 | 135 | 115 | 125 |
| | Water connections | ″G | 2 1⁄2″ | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½" | 2 ½″ |
| | STD version (2) | dB(A) | 57 | 57 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 62 |
| Sound pressure | With SL accessory (2) | dB(A) | 55 | 55 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 60 |
| | SSL version (2) | dB(A) | 53 | 53 | 57 | 57 | 56 | 56 | 57 | 57 | | |
| Woights | Transport weight | Kg | 564 | 643 | 692 | 701 | 710 | 837 | 976 | 985 | 1359 | 1394 |
| vveigins | Operating weight | Kg | 570 | 650 | 700 | 710 | 720 | 850 | 990 | 1000 | 1380 | 1420 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 4700 | 4700 |
| L | SSL | mm | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 4700 | 4700 | | |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| | STD | mm | 1920 | 2220 | 2220 | 2220 | 2220 | 1920 | 2220 | 2220 | 2220 | 2220 |
| п | SSL | mm | 1920 | 2220 | 2220 | 1920 | 1920 | 2220 | 2220 | 2220 | | |
| | | | | | | | | | | | | |

CLEARANCE AREA

CHA/TK/A 182-P÷604-P

300 800 800 1800



Electrical board side

- NOTES
- 1.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744. 2.
- N.B. Weights of SSL version are specified on technical brochure.

CLINT 65

FROM 56 KW TO 197 KW.



CHA/K/A/WP 182-P÷604-P

A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGER.



The reversible Heat Pumps of the CHA/K/A/WP 182-P÷604-P series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients and feature A CLASS energy efficiency.

They are used, combined with terminal units, for the heating or air conditioning of the rooms and can be supplied with Modbus RTU protocol through RS485 serial interface. Equipped with axial fans, Scroll compressors and plate-type exchanger, 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



VERSION

CHA/K/A/WP

Reversible Heat Pump

CHA/K/A/WP/SSL

Super silenced 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.
- 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 182-P ÷ • 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch. On the units it is always installed an antifreeze heater.
- 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

- Automatic circuit breakers IM SI Unit silencement RFM Cooling circuit shut-off valve on
- discharge line RFL Cooling circuit shut-off valve on
- liquid line CT Condensing control down to 0 °C
- CC Condensing control down to -20 °C
- ΒT Low water temperature Kit
- FC FC Inverter fans
- DS Desuperheater
- RT Total heat recovery
- Coil with pre-coated fins TΧ
- SI Inertial tank

- Single circulating pump
- PD Double circulating pump FA
 - Antifreeze heater for tank
- SS Soft start

PS

IS

Modbus RTU protocol, RS485 serial interface

| MN | High and low pressure gauges |
|----|---------------------------------|
| CR | Remote control panel |
| RP | Coil protection metallic guards |
| AG | Rubber shock absorbers |
| AM | Spring shock absorbers |

CHA/K/A/WP 182-P÷604-P





| MODEL | | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|--------------------|-----------------------------------|---------|-------|-------|-------|-------|--------|--------|--------|-------|-------|--------|
| | Heating capacity (1) | kW | 55.7 | 63.6 | 71.4 | 81.6 | 94.2 | 109 | 124 | 142 | 163 | 197 |
| Heating | Absorbed power (1) | kW | 16.9 | 19.5 | 21.8 | 24.4 | 28.2 | 33.3 | 37.2 | 43.2 | 49.9 | 59.0 |
| 0 | COP (1) | | 3.30 | 3.26 | 3.28 | 3.34 | 3.34 | 3.27 | 3.33 | 3.29 | 3.27 | 3.34 |
| | Heating capacity (1) | kW | 56.0 | 63.9 | 71.7 | 81.9 | 94.6 | 109 | 124 | 143 | 164 | 198 |
| | Absorbed power (1) | kW | 17.1 | 19.8 | 22.2 | 24.8 | 28.6 | 33.7 | 37.8 | 44.1 | 50.9 | 60.2 |
| | COP (1) | | 3.27 | 3.23 | 3.23 | 3.30 | 3.31 | 3.23 | 3.28 | 3.24 | 3.22 | 3.29 |
| Heating (EN14511) | EUROVENT Class | | А | A | А | A | A | Α | A | A | A | A |
| | SCOP (2) | | 3.47 | 3.38 | 3.40 | 3.58 | 3.68 | 3.56 | 3.75 | 3.65 | 3.71 | 3.72 |
| | Energy Efficiency (2) | % | 135 | 132 | 133 | 140 | 144 | 139 | 147 | 143 | 145 | 146 |
| | Energy Class (2) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - |
| | Cooling capacity (3) | kW | 48.2 | 54.9 | 62.5 | 71.9 | 82.3 | 94.5 | 108 | 125 | 139 | 161 |
| Cooling | Absorbed power (3) | kW | 15.8 | 18.7 | 20.7 | 23.7 | 28.5 | 32.0 | 35.6 | 41.8 | 48.0 | 56.7 |
| | EER (3) | | 3.05 | 2.94 | 3.02 | 3.03 | 2.89 | 2.95 | 3.03 | 2.99 | 2.90 | 2.84 |
| | Cooling capacity (3) | kW | 48.0 | 54.6 | 62.2 | 71.6 | 82.0 | 94.2 | 108 | 124 | 138 | 160 |
| | Absorbed power (3) | kW | 16.0 | 19.0 | 21.0 | 24.0 | 28.8 | 32.3 | 36.0 | 42.4 | 48.6 | 57.4 |
| Cooling (EN14511) | EER (3) | | 3.00 | 2.87 | 2.96 | 2.98 | 2.85 | 2.92 | 3.00 | 2.92 | 2.84 | 2.79 |
| | ESEER | | 3.71 | 3.70 | 3.71 | 3.81 | 3.90 | 3.85 | 3.66 | 3.63 | 3.78 | 3.67 |
| | EUROVENT Class | | В | C | В | В | С | В | В | В | C | C |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | | 1 |
| | Water flow | l/s | 2.30 | 2.62 | 2.99 | 3.44 | 3.93 | 4.52 | 5.16 | 5.97 | 6.64 | 7.69 |
| Evaporator | Pressure drops | kPa | 28 | 30 | 31 | 28 | 28 | 23 | 29 | 39 | 38 | 37 |
| | Water connections | "G | 1 ½″ | 1 ½″ | 1 ½″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½″ | 2 1⁄2″ |
| Floctrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 35 | 41 | 48 | 54 | 65 | 72 | 81 | 102 | 109 | 132 |
| | Max. starting current | A | 130 | 140 | 144 | 169 | 209 | 169 | 197 | 246 | 225 | 276 |
| Unit with tank and | Pump available static pressure | kPa | 140 | 135 | 130 | 125 | 160 | 175 | 160 | 140 | 130 | 140 |
| pump | Tank water volume | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 600 | 600 |
| | Water connections | "G | 2 ½″ | 2 ½″ | 2 ½" | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½″ | 2 1⁄2″ |
| | STD version (4) | dB(A) | 57 | 57 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 62 |
| Sound pressure | With SL accessory (4) | dB(A) | 55 | 55 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 60 |
| | SSL version (4) | dB(A) | 53 | 53 | 57 | 57 | 56 | 56 | 57 | 57 | 57 | 58 |
| Wajahts | Transport weight (5) | Kg | 635 | 644 | 693 | 760 | 807 | 926 | 1076 | 1126 | 1235 | 1414 |
| vvergints | Operating weight (5) | Kg | 640 | 650 | 700 | 770 | 820 | 940 | 1090 | 1140 | 1250 | 1430 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 4700 | 4700 | 4700 |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/SSL | mm | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K/A/WP 182-P÷604-P

300 800 800 1800





- 1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
- Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Bogulation p. 911/2012
- Regulation n. 811/2013.
 Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According
- to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of SSL version are specified on
- N.B. Weights of SSL version are specified or technical brochure.

•



FROM 56 KW TO 197 KW.



CHA/K/A/WP/ST 182-P÷604-

A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER, HYDRONIC KIT AND AQUALOGIK CONTROL SYSTEM.



CHA/K/A/WP/ST 182-P÷604-P series reversible Heat Pumps, with R410A refrigerant, AQUALOGIK technology and A CLASS energy efficiency, are designed for medium-sized service sector or industrial-type ambients.

They are used, together with terminal units, for the heating or air conditioning of rooms and are managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump, equipped with Inverter, and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with axial fans, Scroll compressors and plate-type exchanger, even in the super silent version, they are complete with a hydronic unit. A wide range of accessories, factory fitted or supplied separately, completes the extreme versatility and functionality of this range.



AQUALOGIK

VERSION

CHA/K/A/WP/ST

Reversible Heat Pump with AQUALOGIK technology

CHA/K/A/WP/SSL/ST

Super silenced 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.
- 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 182-P ÷ ٠ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch. On the units it is always installed an antifreeze heater.
- 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 also allows the cooling functioning of the unit by external temperature till -20°C
- Microprocessor control and regulation system with AQUALOGIK technology.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SI Unit silencement RFM Cooling circuit shut-off valve on
- discharge line Cooling circuit shut-off valve on RFL
- liquid line
- ΒT Low water temperature Kit
- FC EC Inverter fans
- DS Desuperheater
- RT Total heat recovery
- TΧ Coil with pre-coated fins



SS Soft start

IS

Modbus RTU protocol, RS485 serial interface

- High and low pressure gauges ΜN
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers AM
 - Spring shock absorbers

CHA/K/A/WP/ST 182-P+604-P





| MODEL | | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|-------------------|-----------------------------------|---------|-------|--------|-------|-------|-------|--------|--------|-------|-------|-------|
| | Heating capacity (1) | kW | 55.7 | 63.6 | 71.4 | 81.6 | 94.2 | 109 | 124 | 142 | 163 | 197 |
| Heating | Absorbed power (1) | kW | 16.9 | 19.5 | 21.8 | 24.4 | 28.2 | 33.3 | 37.2 | 43.2 | 49.9 | 59.0 |
| - | COP (1) | | 3.30 | 3.26 | 3.28 | 3.34 | 3.34 | 3.27 | 3.33 | 3.29 | 3.27 | 3.34 |
| | Heating capacity (1) | kW | 56.0 | 63.9 | 71.7 | 81.9 | 94.6 | 109 | 124 | 143 | 164 | 198 |
| | Absorbed power (1) | kW | 17.1 | 19.8 | 22.2 | 24.8 | 28.6 | 33.7 | 37.8 | 44.1 | 50.9 | 60.2 |
| | COP (1) | | 3.27 | 3.23 | 3.23 | 3.30 | 3.31 | 3.23 | 3.28 | 3.24 | 3.22 | 3.29 |
| Heating (EN14511) | EUROVENT Class | | А | A | A | A | A | А | A | A | A | A |
| | SCOP (2) | | 3.47 | 3.38 | 3.40 | 3.58 | 3.68 | 3.56 | 3.75 | 3.65 | 3.71 | 3.72 |
| | Energy Efficiency (2) | % | 135 | 132 | 133 | 140 | 144 | 139 | 147 | 143 | 145 | 146 |
| | Energy Class (2) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - |
| | Cooling capacity (3) | kW | 48.2 | 54.9 | 62.5 | 71.9 | 82.3 | 94.5 | 108 | 125 | 139 | 161 |
| Cooling | Absorbed power (3) | kW | 15.8 | 18.7 | 20.7 | 23.7 | 28.5 | 32.0 | 35.6 | 41.8 | 48.0 | 56.7 |
| | EER (3) | | 3.05 | 2.94 | 3.02 | 3.03 | 2.89 | 2.95 | 3.03 | 2.99 | 2.90 | 2.84 |
| | Cooling capacity (3) | kW | 48.0 | 54.6 | 62.2 | 71.6 | 82.0 | 94.2 | 108 | 124 | 138 | 160 |
| | Absorbed power (3) | kW | 16.0 | 19.0 | 21.0 | 24.0 | 28.8 | 32.3 | 36.0 | 42.4 | 48.6 | 57.4 |
| Cooling (EN14511) | EER (3) | | 3.00 | 2.87 | 2.96 | 2.98 | 2.85 | 2.92 | 3.00 | 2.92 | 2.84 | 2.79 |
| | ESEER | | 3.71 | 3.70 | 3.71 | 3.81 | 3.90 | 3.85 | 3.66 | 3.63 | 3.78 | 3.67 |
| | EUROVENT Class | | В | C | B | В | С | В | В | B | C | С |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressors | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | 4 | 1 |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| charactoristics | Max. running current | A | 39 | 45 | 51 | 57 | 68 | 77 | 86 | 106 | 114 | 136 |
| | Max. starting current | A | 133 | 143 | 148 | 173 | 212 | 173 | 201 | 250 | 229 | 280 |
| | Water flow | l/s | 2.30 | 2.62 | 2.99 | 3.44 | 3.93 | 4.52 | 5.16 | 5.97 | 6.64 | 7.69 |
| Water circuit | Pump available static pressure | kPa | 140 | 135 | 130 | 125 | 160 | 150 | 145 | 130 | 120 | 105 |
| | Water connections | "G | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½" | 2 ½" |
| | STD version (4) | dB(A) | 57 | 57 | 61 | 61 | 61 | 61 | 62 | 62 | 62 | 62 |
| Sound pressure | With SL accessory (4) | dB(A) | 55 | 55 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 60 |
| | SSL version (4) | dB(A) | 53 | 53 | 57 | 57 | 56 | 56 | 57 | 57 | 57 | 58 |
| Waights | Transport weight | Kg | 650 | 659 | 708 | 775 | 822 | 946 | 1096 | 1146 | 1255 | 1434 |
| vveigins | Operating weight | Kg | 655 | 665 | 715 | 785 | 830 | 960 | 1110 | 1160 | 1270 | 1450 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 4700 | 4700 | 4700 |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Н | STD/SSL | mm | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K/A/WP/ST 182-P÷604-P

300 800 800 1800



- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
 Seasonal energy efficiency of ambient
- Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation p. 04/2012
- Regulation n. 811/2013.
 Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL version are specified on technical brochure.



FROM 48 KW TO 178 KW.



CHA/K 182-P+604-P

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



The liquid Chillers and Heat Pumps of the CHA/K 182-P÷604-P series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients. 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 Modbus RTU protocol through RS485 serial interface.

Equipped with axial fans, Scroll compressors and plate-type exchanger, 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|-------------------------------------|
| СНА/К | CHA/K/SSL |
| Cooling only | Super silenced cooling only |
| CHA/K/WP | CHA/K/WP/SSL |
| Reversible Heat Pump | Super silenced 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.

PS

PD

FE

IS

- 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 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- 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 Automatic circuit breakers
- SL Unit silencement
- RFM Cooling circuit shut-off valve on discharge line
- RFL Cooling circuit shut-off valve on
- liquid line
- CT Condensing control down to 0 °C
- CC Condensing control down to -20 °C
- BT Low water temperature Kit
- EC EC Inverter fans
- DS Desuperheater
- RT Total heat recovery
- TX Coil with pre-coated fins
- SI Inertial tank

- Single circulating pump
- Double circulating pump
- Antifreeze heater for evaporator Antifreeze heater for tank
- FA Antifreeze heate SS Soft start
 - Modbus RTU protocol, RS485 serial

- MNHigh and low pressure gaugesCRRemote control panelRPCoil protection metallic guardsAGRubber shock absorbers
- AM Spring shock absorbers

CHA/K 182-P÷604-P





| MODEL | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P | |
|---------------------|-----------------------------------|---------|-------|-------|-------|-------|--------|--------|--------|--------|-------|--------|
| | Cooling capacity (1) | kW | 47.6 | 54.9 | 63.5 | 72.9 | 83.4 | 95.9 | 110 | 127 | 147 | 178 |
| Cooling | Absorbed power (1) | kW | 16.1 | 18.8 | 21.8 | 25.0 | 28.3 | 31.6 | 37.9 | 43.3 | 50.1 | 58.2 |
| Ū. | EER (1) | | 2.96 | 2.92 | 2.91 | 2.92 | 2.95 | 3.03 | 2.90 | 2.93 | 2.93 | 3.06 |
| | Cooling capacity (1) | kW | 47.3 | 54.5 | 63.1 | 72.4 | 82.9 | 95.3 | 110 | 126 | 147 | 177 |
| Cooling (ENI14E11) | Absorbed power (1) | kW | 16.4 | 19.2 | 22.2 | 25.4 | 28.7 | 32.3 | 38.5 | 43.9 | 50.9 | 59.2 |
| 6001111g (EIN14311) | EER (1) | | 2.88 | 2.84 | 2.84 | 2.85 | 2.89 | 2.95 | 2.85 | 2.87 | 2.88 | 2.99 |
| | ESEER | | 3.64 | 3.52 | 3.50 | 3.64 | 3.85 | 3.62 | 3.40 | 3.51 | 3.52 | 3.64 |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 |
| Heating | Absorbed power (2) | kW | 17.3 | 19.6 | 23.1 | 25.4 | 28.8 | 33.4 | 38.5 | 43.8 | 50.5 | 60.4 |
| | COP (2) | | 3.13 | 3.15 | 3.09 | 3.16 | 3.14 | 3.17 | 3.12 | 3.08 | 3.05 | 3.10 |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 |
| | Absorbed power (2) | kW | 17.3 | 19.6 | 23.1 | 25.4 | 28.8 | 33.4 | 38.5 | 43.8 | 50.5 | 60.4 |
| Heating (EN14511) | COP (2) | | 3.13 | 3.15 | 3.09 | 3.16 | 3.14 | 3.16 | 3.12 | 3.08 | 3.06 | 3.10 |
| | SCOP (3) | | 3.33 | 3.29 | 3.22 | 3.38 | 3.46 | 3.48 | 3.51 | 3.41 | 3.50 | 3.48 |
| | Energy Efficiency (3) | % | 130 | 128 | 125 | 132 | 135 | 136 | 137 | 133 | 137 | 136 |
| | Energy Class (3) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | 4 | 1 | |
| | Water flow | l/s | 2.27 | 2.62 | 3.03 | 3.48 | 3.98 | 4.58 | 5.27 | 6.06 | 7.04 | 8.49 |
| Evaporator | Pressure drops | kPa | 45 | 48 | 43 | 48 | 43 | 58 | 46 | 53 | 48 | 48 |
| | Water connections | "G | 1 ½″ | 1 ½″ | 1 ½″ | 1 ½″ | 1 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½" |
| Floctrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 35 | 41 | 48 | 54 | 65 | 69 | 81 | 98 | 105 | 132 |
| | Max. starting current | A | 130 | 140 | 144 | 169 | 209 | 166 | 197 | 242 | 221 | 276 |
| Unit with tank and | Pump available static pressure | kPa | 120 | 110 | 110 | 110 | 140 | 150 | 140 | 120 | 110 | 100 |
| pump | Tank water volume | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 600 | 600 |
| | Water connections | "G | 2 ½″ | 2 ½″ | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ |
| | STD version (4) | dB(A) | 56 | 56 | 60 | 60 | 60 | 60 | 61 | 61 | 61 | 61 |
| Sound pressure | With SL accessory (4) | dB(A) | 54 | 54 | 58 | 58 | 58 | 58 | 59 | 59 | 59 | 59 |
| | SSL version (4) | dB(A) | 52 | 52 | 56 | 56 | 56 | 55 | 55 | 55 | 56 | |
| Woights | Transport weight (5) | Kg | 595 | 624 | 663 | 682 | 791 | 878 | 927 | 1036 | 1135 | 1374 |
| vveignts | Operating weight (5) | Kg | 600 | 630 | 670 | 690 | 800 | 890 | 940 | 1050 | 1150 | 1390 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/SSL | mm | 1920 | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K 182-P÷604-P





- 1.
- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of SSL and WP versions are specified on technical brochure.



FROM 48 KW TO 178 KW.



CHA/K/ST 182-P÷604-P

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



CHA/K/ST 182-P÷604-P series liquid Chillers and Heat Pumps, with R410A refrigerant and AQUALOGIK technology, are designed for medium-sized service sector or industrial-type ambients.

They are used, together with terminal units, for air conditioning of rooms, or to remove the heat created during industrial processes.

They are managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump, equipped with Inverter, and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with axial fans, Scroll compressors and plate-type exchanger, even in the super silent version, they are complete with a hydronic unit. A wide range of accessories, factory fitted or supplied separately, completes the extreme versatility and functionality of this range.



AQUALOGIK

| VERSION | |
|--|---|
| CHA/K/ST | CHA/K/SSL/ST |
| Cooling only with AQUALOGIK technology | Super silenced cooling only with AQUALOGIK technology |
| CHA/K/WP/ST | CHA/K/WP/SSL/ST |
| Reversible Heat Pump with AQUALOGIK technology | Super silenced 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.
- 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 182-P ÷ • 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.

RT

IS

Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SL Unit silencement RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on liquid line RΤ Low water temperature Kit
- FC EC Inverter fans
- DS Desuperheater

- Total heat recovery
- FE Antifreeze heater for evaporator
- ТΧ Coil with pre-coated fins
- SS Soft start
 - Modbus RTU protocol, RS485 serial interface

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers



CHA/K/ST 182-P+604-P





| MODEL | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P | |
|--------------------|-----------------------------------|---------|-------|--------|-------|--------|--------|--------|--------|-------|--------|--------|
| | Cooling capacity (1) | kW | 47.6 | 54.9 | 63.5 | 72.9 | 83.4 | 95.9 | 110 | 127 | 147 | 178 |
| Cooling | Absorbed power (1) | kW | 16.1 | 18.8 | 21.8 | 25.0 | 28.3 | 31.6 | 37.9 | 43.3 | 50.1 | 58.2 |
| - | EER (1) | | 2.96 | 2.92 | 2.91 | 2.92 | 2.95 | 3.03 | 2.91 | 2.93 | 2.94 | 3.05 |
| | Cooling capacity (1) | kW | 47.3 | 54.5 | 63.1 | 72.4 | 82.9 | 95.3 | 110 | 126 | 147 | 177 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 16.4 | 19.2 | 22.2 | 25.4 | 28.7 | 32.3 | 38.5 | 43.9 | 50.9 | 59.2 |
| COOIIII (EN 14311) | EER (1) | | 2.88 | 2.84 | 2.84 | 2.85 | 2.89 | 2.95 | 2.85 | 2.87 | 2.88 | 2.99 |
| | ESEER | | 3.64 | 3.52 | 3.50 | 3.64 | 3.85 | 3.62 | 3.40 | 3.51 | 3.52 | 3.64 |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 |
| Heating | Absorbed power (2) | kW | 17.3 | 19.6 | 23.1 | 25.4 | 28.8 | 33.4 | 38.5 | 43.8 | 50.5 | 60.4 |
| | COP (2) | | 3.13 | 3.15 | 3.09 | 3.16 | 3.14 | 3.16 | 3.12 | 3.08 | 3.06 | 3.10 |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 |
| Heating (EN14511) | Absorbed power (2) | kW | 17.3 | 19.6 | 23.1 | 25.4 | 28.8 | 33.4 | 38.5 | 43.8 | 50.5 | 60.4 |
| | COP (2) | | 3.13 | 3.15 | 3.09 | 3.16 | 3.14 | 3.16 | 3.12 | 3.08 | 3.06 | 3.10 |
| | SCOP (3) | | 3.33 | 3.29 | 3.22 | 3.38 | 3.46 | 3.48 | 3.51 | 3.41 | 3.50 | 3.48 |
| | Energy Efficiency (3) | % | 130 | 128 | 125 | 132 | 135 | 136 | 137 | 133 | 137 | 136 |
| | Energy Class (3) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressors | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | 3 4 | | | | 4 |
| Floctrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 39 | 45 | 51 | 57 | 68 | 73 | 86 | 102 | 110 | 136 |
| | Max. starting current | A | 133 | 143 | 148 | 173 | 212 | 170 | 201 | 246 | 226 | 280 |
| | Water flow | l/s | 2.27 | 2.62 | 3.03 | 3.48 | 3.98 | 4.58 | 5.27 | 6.06 | 7.04 | 8.49 |
| Water circuit | Pump available static pressure | kPa | 120 | 110 | 110 | 100 | 140 | 130 | 125 | 110 | 95 | 65 |
| | Water connections | "G | 2 ½" | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ |
| | STD version (4) | dB(A) | 56 | 56 | 60 | 60 | 60 | 60 | 61 | 61 | 61 | 61 |
| Sound pressure | With SL accessory (4) | dB(A) | 54 | 54 | 58 | 58 | 58 | 58 | 59 | 59 | 59 | 59 |
| | SSL version (4) | dB(A) | 52 | 52 | 56 | 56 | 56 | 55 | 55 | 55 | 56 | |
| Woights | Transport weight | Kg | 610 | 639 | 678 | 697 | 806 | 898 | 947 | 1056 | 1155 | 1394 |
| vvergnits | Operating weight | Kg | 615 | 645 | 685 | 705 | 815 | 910 | 960 | 1070 | 1170 | 1410 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Н | STD/SSL | mm | 1920 | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K/ST 182-P÷604-P

300 800 800 1800



- 1. Chilled water from 12 to 7 $^{\circ}\text{C},$ ambient air
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.





FROM 53 KW TO 174 KW.



CHA/K/FC 182-P÷604-P

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGER.



The liquid Chillers of the CHA/K/FC 182-P÷604-P series, with R410A refrigerant, offer innovative technology 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 condensing coil, thus saving energy by not operating the unit's Scroll compressors. A 3-way valve system is controlled by the electronic microprocessor controller, allowing functioning in CHILLER, FREE-COOLING or MIXED (simultaneously CHILLER and FREE-COOLING) modes.



FREE COOLING

VERSION

CHA/K/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.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of FREE-COOLING 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 182-P ÷ ٠ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P÷604-P models, complete with water differential pressure switch.
- R410A refrigerant.
- Digital high and low pressure gauges.
- Electrical board includes: main switch with door safety interlock, fuses, overload protection for compressors and thermocontacts for fans. ٠
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers SI Unit silencement
- RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on
- liquid line ΒT Low water temperature Kit
- FC EC Inverter fans
- ΤX Coil with pre-coated fins
- Inertial tank SI
- PS
- Single circulating pump
- PD Double circulating pump

- SS Soft start
- IS Modbus RTU protocol, RS485 serial interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface

- High and low pressure gauges MN
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers

CHA/K/FC 182-P÷604-P



| MODEL | | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|--------------------|-----------------------------------|------------------|-------|--------|-------|-------|-------|--------|--------|--------|-------|-------|
| | Cooling capacity (1) | kW | 52.7 | 59.5 | 68.1 | 76.7 | 85.7 | 99.1 | 114 | 130 | 151 | 174 |
| Cooling | Absorbed power (1) | kW | 18.1 | 20.3 | 23.3 | 26.1 | 29.3 | 36.8 | 42.2 | 48.4 | 54.4 | 64.9 |
| | EER (1) | | 2.91 | 2.93 | 2.92 | 2.94 | 2.92 | 2.69 | 2.70 | 2.69 | 2.78 | 2.68 |
| Free Cooling avale | Air temperature (2) | 0° | 2.1 | 1.3 | 0.0 | -2.4 | -3.5 | 1.0 | 0.0 | -1.1 | -3.0 | -4.8 |
| Free-cooling cycle | Absorbed power (2) | kW | 2 | 2 | 2 | 2 | 2 | 6 | 6 | 6 | 8 | 8 |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | _ | 2 | | | | 3 | _ | 4 | |
| | Water flow | l/s | 2.72 | 3.07 | 3.52 | 3.96 | 4.43 | 5.09 | 5.88 | 6.70 | 7.78 | 8.93 |
| Water circuit | Pressure drops | kPa | 115 | 105 | 120 | 100 | 100 | 100 | 135 | 145 | 102 | 106 |
| | Water connections | "G | 2″ | 2″ | 2″ | 2″ | 2″ | 2 ½″ | 2 ½″ | 2 ½″ | 2 ½″ | 2 ½″ |
| Flootrigal | Power supply | V/Ph/Hz 400/3/50 | | | | | | | | | | |
| characteristics | Max. running current | A | 35 | 41 | 48 | 54 | 65 | 76 | 85 | 102 | 113 | 136 |
| | Max. starting current | A | 130 | 140 | 144 | 169 | 209 | 173 | 201 | 246 | 229 | 280 |
| Unit with tank and | Pump available static pressure | kPa | 125 | 130 | 115 | 125 | 115 | 195 | 155 | 135 | 165 | 155 |
| pump | Tank water volume | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 600 | 600 |
| | Water connections | "G | 2 ½″ | 2 1⁄2″ | 2 ½" | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½″ |
| Sound proseuro | STD version (3) | dB(A) | 59 | 59 | 59 | 59 | 59 | 60 | 60 | 60 | 61 | 61 |
| Sound pressure | With SL accessory (3) | dB(A) | 57 | 57 | 57 | 57 | 57 | 58 | 58 | 58 | 59 | 59 |
| Woighte | Transport weight (4) | Kg | 923 | 932 | 951 | 980 | 999 | 1308 | 1317 | 1350 | 1472 | 1510 |
| weights | Operating weight (4) | Kg | 970 | 980 | 1000 | 1030 | 1050 | 1390 | 1400 | 1435 | 1560 | 1600 |

| DIME | | ç | 182-P | 202-P | 2/12_P | 262-P | 302-P | 363-P | 202-P | 153-P | 521-P | 604-P |
|------|-----|----|-------|-------|--------|-------|-------|-------|-------|-------|-------|-------|
| | | 0 | 102-1 | 202-1 | 2421 | 202-1 | 302-1 | 303-1 | 535-1 | 455-1 | 524-1 | 004-1 |
| L | STD | mm | 3550 | 3550 | 3550 | 3550 | 3550 | 4700 | 4700 | 4700 | 4700 | 4700 |
| W | STD | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Н | STD | mm | 2220 | 2220 | 2220 | 2220 | 2220 | 2235 | 2235 | 2235 | 2235 | 2235 |

CLEARANCE AREA

CHA/K/FC 182-P÷604-P

300 800 800 1800



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



FROM 49 KW TO 179 KW.



CHA/K 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The liquid Chillers and Heat Pumps of the CHA/K 182÷604 series, with R410A refrigerant, are designed for medium-sized service sector or industrial ambients.

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 Modbus RTU protocol through RS485 serial interface.

Equipped with axial fans, Scroll compressors and shell and tube exchanger, 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|-------------------------------------|
| CHA/K | CHA/K/SSL |
| Cooling only | Super silenced cooling only |
| CHA/K/WP | CHA/K/WP/SSL |
| Reversible Heat Pump | Super silenced 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.

ΡU

- 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 one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models, complete with water differential pressure switch.
- 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

| IIVI | Automatic circuit breakers |
|-------|---|
| SL | Unit silencement |
| RFM | Cooling circuit shut-off valve on discharge line |
| RFL | Cooling circuit shut-off valve on liquid line |
| CT | Condensing control down to 0 °C |
| CC | Condensing control down to -20 °C |
| BT | Low water temperature Kit |
| EC | EC Inverter fans |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| HRT/P | Total heat recovery in parallel |
| ΤX | Coil with pre-coated fins |
| | |

SP Inertial tank Single circulating pump

- PD Double circulating pump SPU Inertial tank and single circulating
- pump SPD Inertial tank and double circulating
- pump FE Antifreeze heater for evaporator
 - Antifreeze heater for evaporator
- FB and tank
- SS Soft start
- IS Modbus RTU protocol, RS485 serial interface

| MN | High and low pressure gauges |
|----|---------------------------------|
| CR | Remote control panel |
| RP | Coil protection metallic guards |
| AG | Rubber shock absorbers |
| AM | Spring shock absorbers |
| FL | Flow switch |
CHA/K 182÷604





| MODEL | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 | |
|--------------------|-----------------------------------|---------|------|------|------|--------|--------|--------|--------|--------|--------|------|
| | Cooling capacity (1) | kW | 49.0 | 55.0 | 62.4 | 73.3 | 84.3 | 95.2 | 109 | 129 | 149 | 179 |
| Cooling | Absorbed power (1) | kW | 16.6 | 18.8 | 21.5 | 25.3 | 28.6 | 31.6 | 37.5 | 43.7 | 50.7 | 58.8 |
| Ū | EER (1) | | 2.95 | 2.93 | 2.90 | 2.90 | 2.95 | 3.01 | 2.91 | 2.95 | 2.94 | 3.04 |
| | Cooling capacity (1) | kW | 48.8 | 54.7 | 62.0 | 72.8 | 83.9 | 94.7 | 108 | 128 | 148 | 178 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 16.8 | 19.1 | 21.9 | 25.8 | 29.0 | 32.1 | 38.1 | 44.3 | 51.4 | 59.5 |
| 600111g (EN 14311) | EER (1) | | 2.90 | 2.86 | 2.83 | 2.82 | 2.89 | 2.95 | 2.83 | 2.89 | 2.88 | 2.99 |
| | ESEER | | 3.74 | 3.57 | 3.44 | 3.60 | 3.85 | 3.60 | 3.37 | 3.61 | 3.54 | 3.67 |
| | Heating capacity (2) | kW | 55.7 | 61.9 | 70.2 | 80.7 | 91.4 | 105 | 119 | 137 | 156 | 188 |
| Heating | Absorbed power (2) | kW | 17.8 | 19.6 | 22.8 | 25.7 | 29.1 | 33.4 | 38.1 | 44.2 | 51.1 | 61.0 |
| | COP (2) | | 3.13 | 3.16 | 3.08 | 3.14 | 3.14 | 3.14 | 3.12 | 3.10 | 3.05 | 3.08 |
| | Heating capacity (2) | kW | 56.0 | 62.2 | 70.7 | 81.3 | 91.9 | 106 | 120 | 138 | 157 | 189 |
| | Absorbed power (2) | kW | 18.0 | 20.0 | 23.5 | 26.6 | 29.8 | 34.2 | 39.1 | 45.1 | 52.3 | 62.3 |
| Heating (EN1/511) | COP (2) | | 3.11 | 3.11 | 3.01 | 3.06 | 3.08 | 3.10 | 3.07 | 3.06 | 3.00 | 3.03 |
| | SCOP (3) | | 3.33 | 3.29 | 3.22 | 3.37 | 3.47 | 3.46 | 3.51 | 3.44 | 3.50 | 3.47 |
| | Energy Efficiency (3) | % | 130 | 128 | 125 | 131 | 135 | 135 | 137 | 134 | 137 | 136 |
| | Energy Class (3) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | | 4 |
| | Water flow | l/s | 2.31 | 2.60 | 2.95 | 3.46 | 3.98 | 4.50 | 5.15 | 6.09 | 7.04 | 8.45 |
| Evaporator | Pressure drops | kPa | 22 | 29 | 50 | 55 | 40 | 39 | 45 | 36 | 43 | 38 |
| | Water connections | "G | 1 ½″ | 1 ½″ | 2″ | 2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 3″ | 3″ | 3″ |
| Floctrical | Power supply | V/Ph/Hz | | | | | 400/ | /3/50 | | | | |
| characteristics | Max. running current | A | 35 | 41 | 48 | 54 | 65 | 69 | 81 | 98 | 105 | 132 |
| | Max. starting current | A | 130 | 140 | 144 | 169 | 209 | 166 | 197 | 242 | 221 | 276 |
| Unit with tank and | Pump available static pressure | kPa | 140 | 125 | 105 | 100 | 140 | 165 | 140 | 135 | 110 | 110 |
| pump | Tank water volume | | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 660 | 660 |
| | Water connections | "G | 2 ½″ | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ |
| | STD version (4) | dB(A) | 56 | 56 | 60 | 60 | 60 | 60 | 61 | 61 | 61 | 61 |
| Sound pressure | With SL accessory (4) | dB(A) | 54 | 54 | 58 | 58 | 58 | 58 | 59 | 59 | 59 | 59 |
| | SSL version (4) | dB(A) | 52 | 52 | 56 | 56 | 56 | 55 | 55 | 55 | 56 | |
| Weights (| Transport weight (5) | Kg | 641 | 661 | 701 | 719 | 844 | 931 | 971 | 1112 | 1192 | 1428 |
| | Operating weight (5) | Kg | 660 | 680 | 720 | 740 | 870 | 960 | 1000 | 1150 | 1230 | 1470 |

| DIME | INSIONS | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 |
|------|---------|----|------|------|------|------|------|------|------|------|------|------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/SSL | mm | 1920 | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K 182÷604

300 800 800 1800



NOTES

- 1.
- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of SSL and WP versions are specified on technical brochure.



FROM 49 KW TO 179 KW.



CHA/K/ST 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS, SHELL AND TUBE EXCHANGER, HYDRONIC KIT AND AQUALOGIK CONTROL SYSTEM.



CHA/K/ST 182÷604 series liquid Chillers and Heat Pumps, with R410A refrigerant and AQUALOGIK technology, are designed for medium-sized service sector or industrial-type ambients.

They are used, together with terminal units, for air conditioning of rooms, or to remove the heat created during industrial processes.

They are managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump, equipped with Inverter, and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with axial fans, Scroll compressors and shell and tube exchanger, even in the super silent version, they are complete with a hydronic unit. A wide range of accessories, factory fitted or supplied separately, completes the extreme versatility and functionality of this range.



AQUALOGIK

| VERSION | |
|--|---|
| CHA/K/ST | CHA/K/SSL/ST |
| Cooling only with AQUALOGIK technology | Super silenced cooling only with AQUALOGIK technology |
| CHA/K/WP/ST | CHA/K/WP/SSL/ST |
| Reversible Heat Pump with AQUALOGIK technology | Super silenced 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.
- 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 one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models, complete with water differential pressure switch.
- 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.

IS

Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SL Unit silencement
- RFM Cooling circuit shut-off valve on
- discharge line RFL Cooling circuit shut-off valve on
- liauid line ΒT Low water temperature Kit
- EC EC Inverter fans
- HR Desuperheater

- HRT/S Total heat recovery in series HRT/P Total heat recovery in parallel
- ТΧ Coil with pre-coated fins
- FE Antifreeze heater for evaporator
- SS Soft start
 - Modbus RTU protocol, RS485 serial interface

- High and low pressure gauges MN
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers AM Spring shock absorbers
- FL
 - Flow switch



CHA/K/ST 182÷604





| MODEL | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 | | |
|--------------------|-----------------------------------|---------|------|--------|------|--------|------|--------|--------|------|--------|--------|--|
| | Cooling capacity (1) | kW | 49.0 | 55.0 | 62.4 | 73.3 | 84.3 | 95.2 | 109 | 129 | 149 | 179 | |
| Cooling | Absorbed power (1) | kW | 16.6 | 18.8 | 21.5 | 25.3 | 28.6 | 31.6 | 37.5 | 43.7 | 50.7 | 58.8 | |
| Ū | EER (1) | | 2.95 | 2.93 | 2.90 | 2.90 | 2.95 | 3.01 | 2.91 | 2.95 | 2.94 | 3.04 | |
| | Cooling capacity (1) | kW | 48.8 | 54.7 | 62.0 | 72.8 | 83.9 | 94.7 | 108 | 128 | 148 | 178 | |
| Cooling (EN1/E11) | Absorbed power (1) | kW | 16.8 | 19.1 | 21.9 | 25.8 | 29.0 | 32.1 | 38.1 | 44.3 | 51.4 | 59.5 | |
| COOLING (EIV14511) | EER (1) | | 2.90 | 2.86 | 2.83 | 2.82 | 2.89 | 2.95 | 2.83 | 2.89 | 2.88 | 2.99 | |
| | ESEER | | 3.74 | 3.57 | 3.44 | 3.60 | 3.85 | 3.60 | 3.37 | 3.61 | 3.54 | 3.67 | |
| | Heating capacity (2) | kW | 55.7 | 61.9 | 70.2 | 80.7 | 91.4 | 105 | 119 | 137 | 156 | 188 | |
| Heating | Absorbed power (2) | kW | 17.8 | 19.6 | 22.8 | 25.7 | 29.1 | 33.4 | 38.1 | 44.2 | 51.1 | 61.0 | |
| | COP (2) | | 3.13 | 3.16 | 3.08 | 3.14 | 3.14 | 3.14 | 3.12 | 3.10 | 3.05 | 3.08 | |
| | Heating capacity (2) | kW | 56.0 | 62.2 | 70.7 | 81.3 | 91.9 | 106 | 120 | 138 | 157 | 189 | |
| | Absorbed power (2) | kW | 18.0 | 20.0 | 23.5 | 26.6 | 29.8 | 34.2 | 39.1 | 45.1 | 52.3 | 62.3 | |
| Heating (EN14511) | COP (2) | | 3.11 | 3.11 | 3.01 | 3.06 | 3.08 | 3.10 | 3.07 | 3.06 | 3.00 | 3.03 | |
| | SCOP (3) | | 3.33 | 3.29 | 3.22 | 3.37 | 3.47 | 3.46 | 3.51 | 3.44 | 3.50 | 3.47 | |
| | Energy Efficiency (3) | % | 130 | 128 | 125 | 131 | 135 | 135 | 137 | 134 | 137 | 136 | |
| | Energy Class (3) | | A+ | A+ | A+ | A+ | - | - | - | - | - | - | |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | |
| Compressors | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| | Capacity steps | n° | | | 2 | | | 3 | | | | 4 | |
| Flootrigal | Power supply | V/Ph/Hz | | | | | 400/ | 0/3/50 | | | | | |
| characteristics | Max. running current | A | 39 | 45 | 51 | 57 | 68 | 73 | 86 | 102 | 110 | 136 | |
| | Max. starting current | A | 133 | 143 | 148 | 173 | 212 | 170 | 201 | 246 | 226 | 280 | |
| | Water flow | l/s | 2.31 | 2.60 | 2.95 | 3.46 | 3.98 | 4.50 | 5.15 | 6.09 | 7.04 | 8.45 | |
| Water circuit | Pump available static pressure | kPa | 140 | 125 | 105 | 100 | 140 | 140 | 125 | 130 | 105 | 75 | |
| | Water connections | ″G | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | |
| | STD version (4) | dB(A) | 56 | 56 | 60 | 60 | 60 | 60 | 61 | 61 | 61 | 61 | |
| Sound pressure | With SL accessory (4) | dB(A) | 54 | 54 | 58 | 58 | 58 | 58 | 59 | 59 | 59 | 59 | |
| | SSL version (4) | dB(A) | 52 | 52 | 56 | 56 | 56 | 55 | 55 | 55 | 56 | | |
| Weights T | Transport weight | Kg | 655 | 675 | 715 | 735 | 860 | 950 | 990 | 1130 | 1210 | 1450 | |
| | Operating weight | Kg | 660 | 690 | 730 | 750 | 875 | 970 | 1010 | 1150 | 1230 | 1470 | |

| DIME | INSIONS | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 |
|------|---------|----|------|------|------|------|------|------|------|------|------|------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/SSL | mm | 1920 | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K/ST 182÷604

300 800 800 1800



NOTES

- 1. Chilled water from 12 to 7 $^{\circ}\text{C},$ ambient air
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.



CAQUA CLINT CLINT UN

CRA/K 15+131

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, ROTARY/SCROLL COMPRESSOR AND PLATE EXCHANGER.



The indoor liquid Chillers and Heat Pumps of the CRA/K 15÷131 series, with R410A refrigerant, are designed for 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 or with intermediate heat exchangers for process cooling applications.

Available in the versions with or without pumping kit, 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, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|---|
| CRA/K | CRA/K/SP |
| Cooling only | Cooling only with tank and pump |
| CRA/K/WP | CRA/K/ WP/SP |
| Reversible Heat Pump | Reversible Heat Pump with tank and pump |

FEATURES

- Self-supporting prepainted steel frame.
- Rotary/Scroll compressor with internal overheat protection and crankcase heater, if needed.
- Double inlet radial type fan statically and dynamically balanced directly driven by a electric motor (15÷81) or belt driven connected to a threephase electric motor (91÷131).
- Condenser in copper tubes and aluminium finned coil complete with drain pan for WP version only.
- Evaporator AISI 316 stainless steel braze welded plates type, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- R410A refrigerant.
- Electrical panel includes: main switch with door lock device, fuses, compressor and pump remote control switch (51÷131).
- Water circuit for SP version includes: insulated tank, circulating pump, safety valve, gauge and expansion vessel.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- BT Low water temperature Kit
- Condensing control down to -20 °C CC ΤX
- Coil with pre-coated fins PS
 - Single circulating pump
- FE Antifreeze heater for evaporator
- FA Antifreeze heater for tank

- CR Remote control panel IS
 - Modbus RTU protocol, RS485 serial
 - interface
- RP Coil protection metallic guards
- AG Rubber shock absorbers



CRA/K 15÷131





| MODEL | | | | | 15 | 18 | | 21 | 2 | 5 | 31 | 41 | | 51 |
|---------------------------------|--|---|-----------------------|--------------------------|---|---|------------------------------------|--|------------------------------------|----------------------------|---|--|----------------------------|---|
| Cooling | Cooling capacity (1 Absorbed power (1 EER (1) |) | kW kW | 2 | l.2 .5 .80 | 5.1 1.8 2.83 | | 6.4 2.2 2.91 | 7 2 2. | .5 .6 88 | 8.6 3.0 2.87 | 10.4 3.6 2.8 | 4 9 | 12.2 4.8 2.54 |
| Cooling (EN14511) | Cooling capacity (1 Absorbed power (1 EER (1) |) | kW kW | 2 | l.2 .5 .75 | 5.1 1.9 2.76 | | 6.3 2.3 2.78 | 7 2 2. | .4 .7 78 | 8.5 3.1 2.77 | 10.3 3.7 2.73 | 3 | <u>12.1</u> <u>4.9</u> <u>2.46</u> 2.79 |
| Heating | Heating capacity (2 Absorbed power (2 COP (2) | <u>2)</u>) | kW kW | 2 | .77 5.0 .9 63 | <u> </u> | | <u>8.0</u> 2.8 2.8 | 3. 8 3 | .7 .1 .1 | <u> </u> | 12.4 4.4 2.8 | 2 1 2 | 2.76 14.8 5.6 2.64 |
| Heating (EN14511) | Heating capacity (2 Absorbed power (2 COP (2) SCOP (3) Energy Efficiency (3 Energy Class (3) | 2)) 3) | kW kW | 2 | 60 .9 .62 .95 15 A | 6.0 2.2 2.73 2.95 115 A | | 8.0 2.8 2.86 2.94 115 A | 8 3 2. 2. 1 1 | .7 .1 81 96 15 | 10.3 3.7 2.78 2.94 115 A | 12.4 4.4 2.8 2.90 115 A | 1 3 5 | 14.8 5.6 2.63 2.94 115 A |
| Compressor | Type Quantity | | n° | | 1 | Rc 1 | otary | 1 1 | | | Scroll 1 | | | 1 |
| Evaporator | Water flow Pressure drops Water connections | | I/s kPa "G | 0 | 20 18 1″ | 0.24 24 1″ | | 0.31 0.36 35 20 1" 1" | | 36 0 ″ | 0.41 29 1″ | 0.50 37 1″ |) | 0.58 35 1″ |
| Available static | STD version | | Pa | | 90 | 90 | | 80 | 8 | 0 | 80 | 80 | | 115 |
| Electrical characteristics | Power supply Max. running curre Max. starting curre | nt | V/Ph/Hz A | | 10 | 12 | - | 230 13 65 | 1/1/50 | 4 | 17 | 21 | | 400/3+N/50 11 61 |
| Unit with tank and | Pump available sta pressure | tic | kPa | | 16 16 | 40 | | 45 | 5 | 0 | 51 | 42 | | 145 |
| | Water connections "G | | "G | | 1″ | 1″ | | 1" | 1 | <i>"</i> | 1" | 1" | | 1" |
| Sound pressure | STD/SP version (4) Transport weight (5 | sport weight (5) Kg | | 1 | 19 28 | 49 129 | | <u>49</u> 49 131 13 | | 9 51 34 139 | | 52 | | 200 |
| Weights | Operating weight (| 5) | Kg | 1 | 29 | 130 | | 132 | 13 | 35 | 140 | 142 | 2 | 202 |
| MODEL | Casling agentity (1 | <u>, </u> | 1.) // | 1 | 61 15 0 | /1 | | 8 | 1 | 9 | | 101 | | 131 |
| Cooling | Absorbed power (1 EER (1) |) | kW | | 5.8 2.64 | 6.8 | | 7. | . <u>.</u> .4 77 | 10 | 48 | <u> </u> | | <u> </u> |
| Cooling (EN14511) | Cooling capacity (1 Absorbed power (1 EER (1) |) | kW kW | | 15.2 5.9 2.58 | 18.5 6.9 2.67 | | 20.3 7.6 2.69 | | <u> </u> | | 28.3 12.2 2.33 2.69 | | <u>33.2</u> <u>13.9</u> <u>2.39</u> 2.70 |
| Heating | Heating capacity (2 Absorbed power (2 COP (2) | 2) | kW kW | | <u>18.8</u> 7.0 2.69 | <u> </u> | | 24 | .4 .8 77 | <u> </u> | | <u>36.7</u> 13.0 2.82 | | <u>41.6</u> <u>14.8</u> 2.81 |
| Heating (EN14511) | Heating capacity (2 Absorbed power (2 COP (2) SCOP (3) Energy Efficiency (3 Energy Class (3) | 2)) 3) | kW kW | | 18.8 7.0 2.69 2.94 115 A | 21.9 7.9 2.77 3.04 119 A | 21.9 7.9 2.77 3.04 119 | | 24.4 8.8 2.77 3.00 117 | |).6 1.5 67 94 15 A | 36.7 13.0 2.82 2.98 116 A | | 41.6 14.8 2.81 2.98 116 A |
| Compressor | Type | | nº | | 1 | 1 | | 1 | Sc | roll | 1 | 1 | | 1 |
| Evaporator | Water flow Pressure drops Water connections | | I/s kPa "G | | 0.73 23 1″ | 0.89 | | 0.9 3 1 | 98 7 ″ | 1. 3 1 | 18 9 ″ | 1.37 51 1″ | | 1.60 37 1″ |
| Available static | STD version | | Pa | | 115 | 115 | | 11 | 15 | 15 | 50 | 150 | | 160 |
| Electrical characteristics | Power supply Max. running curre | nt | V/Ph/Hz A | | 14 | 14 | | 1 | 400/3 5 7 | +N/50 2 | 7 | 33 | | 36 |
| Unit with tank and | Pump available sta | tic | kPa | | 146 | 123 | | 10 |)8 | 20 |)5 | 182 | | 165 |
| hauh | Water connections | | "G | | 1" | 150 | | 15 | <u>)U</u> " | 150 1" | | 150 1″ | | 1" |
| Sound pressure Weights | STD/SP version (4) Transport weight (5 Operating weight (9 | 5) 5) | dB(A) Kg Kg | | 52 210 212 | 53 212 214 | | 62 214 216 | | 62 349 352 | | 62 355 358 | | 63 370 373 |
| DIMENSIONSLSTD/SPWSTD/SPHSTD/SP | 15 18 m 900 900 m 550 550 m 1425 142 | 3 2 0 9 0 5 25 14 | 21 00 50 425 | 25 900 550 1425 | 31 900 550 1425 | 41 900 550 1425 | 51 900 690 172 |) <u>(</u>) <u>(</u> 5 1 | 61 900 590 725 | 71 900 690 1725 | 81 900 690 1725 | 91 1500 800 1425 | 101 1500 800 1425 | 131 1500 800 1425 |

CLEARANCE AREA

CRA/K 15÷41

100 800 800 800





CRA/K 51÷81



CRA/K 91÷131 1200 800 800 100



NOTES

- Chilled water from 12 to 7 °C, ambient air 1. temperature 35 °C.
- 2. Heated water from 40 to 45 °C, ambient air

temperature 7 °C d.b./6 °C w.b. 3. Efficienza energetica stagionale riscaldamento d'ambiente a bassa temperatura in condizioni climatiche average

secondo il Regolamento UE n. 811/2013. 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

Unit without tank and pump. N.B. Weights of WP versions are specified on technical brochure.



FROM 48 KW TO 178 KW.



CRA/K 182-P÷604-P

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



The indoor liquid Chillers and Heat Pumps of the CRA/K 182-P÷604-P series, with R410A refrigerant, are designed for medium-sized service 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 Modbus RTU protocol through RS485 serial interface.

Equipped with radial fans, Scroll compressors and plate-type exchanger, even in the version with high ESP 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|---|
| CRA/K | CRA/K/AP |
| Cooling only | Cooling only with high ESP fans |
| CRA/K/WP | CRA/K/WP/AP |
| Reversible Heat Pump | 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.
- Radial type fans coupled to 3-phase motors by V belt and variable pulley.
- 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 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P+604-P models, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- 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 Automatic circuit breakers
- SL Unit silencement
- RFM Cooling circuit shut-off valve on discharge line
- RFL Cooling circuit shut-off valve on
- liquid line
- CC Condensing control down to -20 °C
- ΒT Low water temperature Kit
- DS Desuperheater
- RT Total heat recovery
- ТΧ Coil with pre-coated fins
- SI Inertial tank PS
- Single circulating pump PD Double circulating pump

- FF Antifreeze heater for evaporator FA
 - Antifreeze heater for tank
- SS Soft start IS
 - Modbus RTU protocol, RS485 serial interface

LOOSE ACCESSORIES

ΜN High and low pressure gauges CR Remote control panel RP Coil protection metallic guards AG Rubber shock absorbers AM Spring shock absorbers

CRA/K 182-P÷604-P





| MODEL | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P | | |
|---------------------|--|---------|-------|--------|-------|--------|--------|--------|--------|-------|------|--------|
| | Cooling capacity (1) | kW | 47.6 | 54.9 | 63.5 | 72.9 | 83.4 | 95.9 | 110 | 127 | 147 | 178 |
| Cooling | Absorbed power (1) | kW | 17.0 | 20.4 | 24.2 | 27.4 | 30.6 | 33.8 | 41.9 | 47.3 | 55.0 | 64.4 |
| 0 | EER (1) | | 2.80 | 2.69 | 2.62 | 2.66 | 2.73 | 2.84 | 2.63 | 2.68 | 2.67 | 2.76 |
| | Cooling capacity (1) | kW | 47.3 | 54.5 | 63.1 | 72.4 | 82.9 | 94.8 | 110 | 126 | 147 | 177 |
| | Absorbed power (1) | kW | 17.5 | 20.8 | 24.7 | 27.9 | 31.1 | 35.1 | 42.6 | 48.0 | 55.8 | 65.3 |
| COOLING (EIN 14511) | EER (1) | | 2.70 | 2.62 | 2.56 | 2.60 | 2.67 | 2.70 | 2.58 | 2.63 | 2.63 | 2.71 |
| | ESEER | | 3.29 | 3.04 | 2.98 | 3.06 | 3.20 | 3.14 | 2.76 | 2.91 | 2.84 | 2.83 |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 |
| Heating | Absorbed power (2) | kW | 18.2 | 21.3 | 25.5 | 27.8 | 31.2 | 35.8 | 42.5 | 47.8 | 55.5 | 66.8 |
| 0 | COP (2) | | 2.97 | 2.90 | 2.80 | 2.89 | 2.90 | 2.96 | 2.82 | 2.82 | 2.77 | 2.80 |
| | Heating capacity (2) | kW | 54.3 | 63.0 | 71.7 | 80.6 | 90.7 | 107 | 120 | 135 | 155 | 187 |
| | Absorbed power (2) | kW | 18.4 | 22.5 | 25.8 | 28.1 | 31.5 | 37.2 | 42.9 | 48.2 | 56.0 | 67.4 |
| Heating (EN14E11) | COP (2) | | 2.95 | 2.80 | 2.78 | 2.87 | 2.88 | 2.88 | 2.80 | 2.80 | 2.77 | 2.77 |
| neating (EN14311) | SCOP (3) | | 3.25 | 3.11 | 3.02 | 3.12 | 3.15 | 3.23 | 3.07 | 3.10 | 3.10 | 3.10 |
| | Energy Efficiency (3) | % | 127 | 121 | 118 | 122 | 123 | 126 | 120 | 121 | 121 | 121 |
| | Energy Class (3) | | A+ | A | A | A | A | - | - | - | - | - |
| Compressor | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | 4 | 4 |
| | Water flow | l/s | 2.27 | 2.62 | 3.03 | 3.48 | 3.98 | 4.58 | 5.27 | 6.06 | 7.04 | 8.49 |
| Evaporator | Pressure drops | kPa | 45 | 48 | 43 | 48 | 43 | 50 | 46 | 53 | 48 | 48 |
| | Water connections | ″G | 1 ½″ | 1 ½″ | 1 ½″ | 1 ½″ | 1 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½″ | 2 1⁄2″ |
| Available static | STD version | Pa | 165 | 147 | 120 | 120 | 105 | 115 | 135 | 135 | 190 | 105 |
| pressure | High ESP version | Pa | 298 | 288 | 263 | 263 | 245 | 256 | | | 400 | |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 38 | 45 | 52 | 58 | 69 | 74 | 90 | 106 | 116 | 145 |
| | Max. starting current | A | 132 | 144 | 149 | 174 | 213 | 170 | 205 | 250 | 232 | 289 |
| Unit with tank and | Pump available static pressure | kPa | 120 | 110 | 110 | 110 | 140 | 150 | 140 | 120 | 130 | 100 |
| pump | Tank water volume | | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 400 | 600 | 600 |
| | Water connections | "G | 2 ½" | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 ½" | 2 1⁄2″ |
| | STD version (4) | dB(A) | 65 | 65 | 66 | 66 | 66 | 67 | 67 | 67 | 67 | 67 |
| Sound pressure | STD version with SL accessory (4) | dB(A) | 62 | 62 | 63 | 63 | 63 | 64 | 64 | 64 | 64 | 64 |
| | High ESP version (4) | dB(A) | 66 | 66 | 67 | 67 | 67 | 68 | | | 68 | |
| | High ESP version with SL accessory (4) | dB(A) | 63 | 63 | 64 | 64 | 64 | 65 | | | 65 | |
| Woights | Transport weight (5) | Kg | 665 | 674 | 738 | 757 | 781 | 938 | 991 | 1011 | 1240 | 1354 |
| Weights | Operating weight (5) | Kg | 670 | 680 | 745 | 765 | 790 | 950 | 1005 | 1025 | 1255 | 1370 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| L | STD/AP | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| W | STD/AP | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Н | STD/AP | mm | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 |

CLEARANCE AREA

CRA/K 182-P÷604-P

300 800 800 1800



NOTES

- 1.
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of WP versions are specified on technical brochure.



FROM 48 KW TO 178 KW.



CRA/K/ST 182-P÷604-P

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS, PLATE EXCHANGER, HYDRONIC KIT AND AQUALOGIK CONTROL SYSTEM.



The indoor liquid Chillers and Heat Pumps of the CRA/K/ST 182-P÷604-P series, with R410A refrigerant and AQUALOGIK technology, are designed for medium-sized service sector or industrial systems with particular difficulty in positioning units outside the building.

They are used, together with terminal units, for air conditioning of rooms, or to remove the heat created during industrial processes and are managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump, equipped with Inverter, and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with radial fans, Scroll compressors and plate-type exchangers even in the version with high ESP 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



AQUALOGIK

| VERSION | |
|--|--|
| CRA/K/ST | CRA/K/AP/ST |
| Cooling only with AQUALOGIK technology | Cooling only with high ESP fans and AQUALOGIK technology |
| CRA/K/WP/ST | CRA/K/WP/AP/ST |
| Reversible Heat Pump with AQUALOGIK technology | Reversible Heat Pump with high ESP fans and 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.
- Radial type fans coupled to 3-phase motors by V belt and variable pulley.
- 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 182-P ÷ 453-P models; with two independent circuits on the refrigerant side and one on the water side in 524-P+604-P models, complete with water differential pressure switch. On the heat pump units it is always installed an antifreeze heater.
- 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.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.

IS

Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SI Unit silencement
- RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on
- liauid line
- ΒT Low water temperature Kit

DS Desuperheater

- RT Total heat recovery Coil with pre-coated fins
- TΧ FF Antifreeze heater for evaporator
- Soft start SS
 - Modbus RTU protocol, RS485 serial interface

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers AM
 - Spring shock absorbers



CRA/K/ST 182-P+604-P





| MODEL | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P | | |
|--------------------|--|---------|-------|-------|-------|--------|-------|--------|-------|-------|-------|--------|--|
| | Cooling capacity (1) | kW | 47.6 | 54.9 | 63.5 | 72.9 | 83.4 | 95.9 | 110 | 127 | 147 | 178 | |
| Cooling | Absorbed power (1) | kW | 17.0 | 20.4 | 24.2 | 27.4 | 30.6 | 33.8 | 41.9 | 47.3 | 55.0 | 64.4 | |
| 0 | EER (1) | | 2.80 | 2.69 | 2.62 | 2.66 | 2.73 | 2.84 | 2.63 | 2.68 | 2.67 | 2.76 | |
| | Cooling capacity (1) | kW | 47.3 | 54.5 | 63.1 | 72.4 | 82.9 | 94.8 | 110 | 126 | 147 | 177 | |
| Cooling (EN14E11) | Absorbed power (1) | kW | 17.5 | 20.8 | 24.7 | 27.9 | 31.1 | 35.1 | 42.6 | 48.0 | 55.8 | 65.3 | |
| COOLING (EIV14511) | EER (1) | | 2.70 | 2.62 | 2.56 | 2.60 | 2.67 | 2.70 | 2.58 | 2.63 | 2.63 | 2.71 | |
| | ESEER | | 3.29 | 3.04 | 2.98 | 3.06 | 3.20 | 3.14 | 2.76 | 2.91 | 2.84 | 2.83 | |
| | Heating capacity (2) | kW | 54.1 | 61.8 | 71.4 | 80.3 | 90.4 | 106 | 120 | 135 | 154 | 187 | |
| Heating | Absorbed power (2) | kW | 18.2 | 21.3 | 25.5 | 27.8 | 31.2 | 35.8 | 42.5 | 47.8 | 55.5 | 66.8 | |
| - | COP (2) | | 2.97 | 2.90 | 2.80 | 2.89 | 2.90 | 2.96 | 2.82 | 2.82 | 2.77 | 2.80 | |
| | Heating capacity (2) | kW | 54.3 | 63.0 | 71.7 | 80.6 | 90.7 | 107 | 120 | 135 | 155 | 187 | |
| | Absorbed power (2) | kW | 18.4 | 22.5 | 25.8 | 28.1 | 31.5 | 37.2 | 42.9 | 48.2 | 56.0 | 67.4 | |
| Hoating (EN1/E11) | COP (2) | | 2.95 | 2.80 | 2.78 | 2.87 | 2.88 | 2.88 | 2.80 | 2.80 | 2.77 | 2.77 | |
| Heating (EN14311) | SCOP (3) | | 3.25 | 3.11 | 3.02 | 3.12 | 3.15 | 3.23 | 3.07 | 3.10 | 3.10 | 3.10 | |
| | Energy Efficiency (3) | % | 127 | 121 | 118 | 122 | 123 | 126 | 120 | 121 | 121 | 121 | |
| | Energy Class (3) | | A+ | A | A | A | A | - | - | - | - | - | |
| Compressor | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 | |
| | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | |
| | Capacity steps | n° | 2 | | | | 3 | | L | 1 | | | |
| Available static | STD version | Pa | 165 | 147 | 120 | 120 | 105 | 115 | 135 | 135 | 190 | 105 | |
| pressure | High ESP version | Pa | 298 | 288 | 263 | 263 | 245 | 256 | | | 400 | | |
| Flootrical | Power supply | V/Ph/Hz | | | _ | _ | 400/ | /3/50 | | | | | |
| characteristics | Max. running current | A | 41 | 48 | 55 | 61 | 73 | 78 | 94 | 111 | 121 | 149 | |
| | Max. starting current | A | 135 | 147 | 152 | 177 | 217 | 175 | 210 | 255 | 236 | 293 | |
| | Water flow | l/s | 2.27 | 2.62 | 3.03 | 3.48 | 3.98 | 4.58 | 5.27 | 6.06 | 7.04 | 8.49 | |
| Water circuit | Pump available static pressure | kPa | 120 | 110 | 110 | 100 | 140 | 130 | 125 | 110 | 95 | 65 | |
| | Water connections | "G | 2 ½″ | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 ½" | 2 ½″ | 2 ½" | 2 1⁄2″ | |
| | STD version (4) | dB(A) | 65 | 65 | 66 | 66 | 66 | 67 | 67 | 67 | 67 | 67 | |
| Sound procesure | STD version with SL accessory (4) | dB(A) | 62 | 62 | 63 | 63 | 63 | 64 | 64 | 64 | 64 | 64 | |
| Sound pressure | High ESP version (4) | dB(A) | 66 | 66 | 67 | 67 | 67 | 68 | | | 68 | | |
| | High ESP version with SL accessory (4) | dB(A) | 63 | 63 | 64 | 64 | 64 | 65 | | | 65 | | |
| Woights | Transport weight | Kg | 680 | 689 | 753 | 772 | 796 | 958 | 1011 | 1031 | 1260 | 1374 | |
| Weights | Operating weight | Kg | 685 | 695 | 760 | 780 | 805 | 970 | 1025 | 1045 | 1275 | 1390 | |

| DIMENSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 524-P | 604-P | |
|------------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|
| L | STD/AP n | nm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| W | STD/AP n | nm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| Η | STD/AP n | nm | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 |

CLEARANCE AREA

CRA/K/ST 182-P÷604-P

300 800 800 1800



Electrical board side



- 1.
- 2.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 3. Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP versions are specified on technical brochure.

.



FROM 49 KW TO 179 KW.



CRA/K 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The indoor liquid Chillers and Heat Pumps of the CRA/K 182÷604 series, with R410A refrigerant, are designed for medium-sized service 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 Modbus RTU protocol through RS485 serial interface.

Equipped with radial fans, Scroll compressors and shell and tube exchanger, even in the version with high ESP 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



| VERSION | |
|----------------------|---|
| CRA/K | CRA/K/AP |
| Cooling only | Cooling only with high ESP fans |
| CRA/K/WP | CRA/K/WP/AP |
| Reversible Heat Pump | 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.
- Radial type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator with one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models, complete with water differential pressure switch.
- 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 | Automatic circuit breakers |
|-------|-----------------------------------|
| SL | Unit silencement |
| RFM | Cooling circuit shut-off valve on |
| | discharge line |
| RFL | Cooling circuit shut-off valve on |
| | liquid line |
| CC | Condensing control down to -20 °C |
| BT | Low water temperature Kit |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| HRT/P | Total heat recovery in parallel |
| ΤX | Coil with pre-coated fins |
| SP | Inertial tank |
| PU | Single circulating pump |

PD Double circulating pump

SPU Inertial tank and single circulating pump SPD Inertial tank and double circulating

- PD Inertial tank and double circulating pump
- FEAntifreeze heater for evaporatorFBAntifreeze heater for evaporator
- and tank SS Soft start

IS

Modbus RTU protocol, RS485 serial interface

| MN | High and low pressure gauges |
|----|---------------------------------|
| CR | Remote control panel |
| RP | Coil protection metallic guards |
| AG | Rubber shock absorbers |
| AM | Spring shock absorbers |
| FL | Flow switch |



CRA/K 182÷604





| MODEL | MODEL | | | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 |
|---------------------|--|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Cooling capacity (1) | kW | 49.0 | 55.0 | 62.4 | 73.3 | 84.3 | 95.2 | 109 | 129 | 149 | 179 |
| Cooling | Absorbed power (1) | kW | 17.6 | 20.6 | 24.0 | 27.8 | 31.0 | 34.1 | 41.6 | 47.6 | 55.8 | 65.2 |
| 5 | EER (1) | | 2.78 | 2.67 | 2.60 | 2.64 | 2.72 | 2.79 | 2.62 | 2.71 | 2.67 | 2.75 |
| | Cooling capacity (1) | kW | 48.4 | 54.7 | 62.0 | 72.8 | 83.9 | 94.7 | 108 | 128 | 148 | 178 |
| 0 I. (ENI44E44) | Absorbed power (1) | kW | 17.9 | 20.7 | 24.2 | 28.3 | 31.3 | 35.1 | 42.1 | 48.4 | 56.4 | 65.9 |
| COOLING (EIN 14511) | EER (1) | | 2.70 | 2.64 | 2.56 | 2.57 | 2.68 | 2.70 | 2.57 | 2.64 | 2.62 | 2.70 |
| | ESEER | | 3.36 | 3.05 | 2.90 | 3.03 | 3.23 | 3.07 | 2.74 | 2.94 | 2.86 | 2.87 |
| | Heating capacity (2) | kW | 55.7 | 61.9 | 70.2 | 80.7 | 91.4 | 105 | 119 | 137 | 156 | 188 |
| Heating | Absorbed power (2) | kW | 18.8 | 21.3 | 25.1 | 28.2 | 31.5 | 35.8 | 42.1 | 48.3 | 56.2 | 67.5 |
| 5 | COP (2) | | 2.96 | 2.91 | 2.80 | 2.86 | 2.90 | 2.93 | 2.83 | 2.84 | 2.78 | 2.79 |
| | Heating capacity (2) | kW | 56.0 | 62.2 | 70.7 | 81.3 | 91.9 | 106 | 120 | 138 | 157 | 189 |
| | Absorbed power (2) | kW | 19.0 | 21.7 | 25.8 | 29.1 | 32.2 | 36.6 | 43.1 | 49.2 | 57.4 | 68.8 |
| Llooting (EN14E11) | COP (2) | | 2.95 | 2.87 | 2.74 | 2.79 | 2.85 | 2.90 | 2.78 | 2.80 | 2.74 | 2.75 |
| Heating (EN 14511) | SCOP (3) | | 3.25 | 3.11 | 3.01 | 3.09 | 3.16 | 3.19 | 3.07 | 3.11 | 3.09 | 3.09 |
| | Energy Efficiency (3) | % | 127 | 121 | 117 | 121 | 123 | 125 | 120 | 121 | 121 | 121 |
| | Energy Class (3) | | A+ | A | A | A | A | A+ | A | A | A | A |
| Compressor | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | | 4 |
| | Water flow | l/s | 2.31 | 2.60 | 2.95 | 3.46 | 3.98 | 4.50 | 5.15 | 6.09 | 7.04 | 8.45 |
| Evaporator | Pressure drops | kPa | 22 | 29 | 50 | 55 | 40 | 39 | 45 | 36 | 45 | 38 |
| | Water connections | "G | 1 ½″ | 1 ½″ | 2″ | 2″ | 2 ½″ | 2 ½" | 2 1⁄2″ | 3″ | 2 ½″ | 3″ |
| Available static | STD version | Pa | 165 | 147 | 120 | 120 | 105 | 115 | 135 | 135 | 190 | 105 |
| pressure | High ESP version | Pa | 298 | 288 | 263 | 263 | 245 | 256 | | | 400 | |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 38 | 45 | 52 | 58 | 69 | 74 | 90 | 106 | 116 | 145 |
| CHARACLEHISLICS | Max. starting current | A | 132 | 144 | 149 | 174 | 213 | 170 | 205 | 250 | 232 | 289 |
| Unit with tank and | Pump available static pressure | kPa | 140 | 125 | 105 | 100 | 140 | 165 | 140 | 135 | 110 | 110 |
| pump | Tank water volume | | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 470 | 660 | 660 |
| | Water connections | "G | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1/2" | 2 1/2" | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ |
| | STD version (4) | dB(A) | 65 | 65 | 66 | 66 | 66 | 67 | 67 | 67 | 67 | 67 |
| Cound management | STD version with SL accessory (4) | dB(A) | 62 | 62 | 63 | 63 | 63 | 64 | 64 | 64 | 64 | 64 |
| Sound pressure | High ESP version (4) | dB(A) | 66 | 66 | 67 | 67 | 67 | 68 | | | 68 | |
| | High ESP version with SL accessory (4) | dB(A) | 63 | 63 | 64 | 64 | 64 | 65 | | | 65 | |
| Woights | Transport weight (5) | Kg | 711 | 711 | 776 | 794 | 834 | 991 | 1036 | 1087 | 1297 | 1408 |
| vveigins | Operating weight (5) | Kg | 730 | 730 | 795 | 815 | 860 | 1020 | 1065 | 1125 | 1335 | 1450 |

| DIMENSIONS | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 | |
|------------|--------|-----|------|------|------|------|------|------|------|------|------|------|
| L | STD/AP | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| W | STD/AP | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/AP | mm | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 |

CLEARANCE AREA

CRA/K 182÷604

300 800 800 1800



NOTES 1.

- 2.
- 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Unit without tank and pump.
 N.B. Weights of WP versions are specified on technical brochure.



FROM 49 KW TO 179 KW.



CRA/K/ST 182÷604

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH RADIAL FANS, SCROLL COMPRESSORS, SHELL AND TUBE EXCHANGER, HYDRONIC KIT AND AQUALOGIK CONTROL SYSTEM.



The indoor liquid Chillers and Heat Pumps of the CRA/K/ST 182÷604 series, with R410A refrigerant and AQUALOGIK technology, are designed for medium-sized service sector or industrial systems with particular difficulty in positioning units outside the building.

They are used, together with terminal units, for air conditioning of rooms, or to remove the heat created during industrial processes and are managed by the AQUALOGIK smart control system which optimises the water set point and modulates the power supply voltage of the pump, equipped with Inverter, and the fans, thus making the use of the inertial tank superfluous. This obtains high energy efficiency, quiet operation and optimised dimensions and costs.

Equipped with radial fans, Scroll compressors and shell and tube exchanger, even in the version with high ESP 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



AQUALOGIK

| VERSION | |
|--|--|
| CRA/K/ST | CRA/K/AP/ST |
| Cooling only with AQUALOGIK technology | Cooling only with high ESP fans and AQUALOGIK technology |
| CRA/K/WP/ST | CRA/K/WP/AP/ST |
| Reversible Heat Pump with AQUALOGIK technology | Reversible Heat Pump with high ESP fans and 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.
- Radial type fans coupled to 3-phase motors by V belt and variable pulley.
- Condenser with copper tube and aluminium finned coil.
- Shell and tube type evaporator with one circuit on the refrigerant side and one on the water side in 182 ÷ 453 models; with two independent circuits on the refrigerant side and one on the water side in 524÷604 models, complete with water differential pressure switch.
- 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 modulating adjustment of the dampers. This device allows also the cooling functioning of the unit by external temperature till -20°C.
- Water circuit includes: INVERTER circulating pump, safety valve and expansion vessel.
- Microprocessor control and regulation system with AQUALOGIK technology.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SLUnit silencementRFMCooling circuit shut-off valve on
- discharge line RFL Cooling circuit shut-off valve on liquid line
- BT Low water temperature Kit
- HR Desuperheater
- HRT/S Total heat recovery in series
- HRT/P Total heat recovery in parallel
- TX Coil with pre-coated fins
- FE Antifreeze heater for evaporator SS Soft start IS Modbus RTU protocol, RS485 set
 - Modbus RTU protocol, RS485 serial interface

- MN High and low pressure gauges
- CR Remote control panel
 - RP Coil protection metallic guards
 - AG Rubber shock absorbers
 - AM Spring shock absorbers
 - FL Flow switch



CRA/K/ST 182÷604





| MODEL | MODEL | | | | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 |
|---------------------|-----------------------------------|---------|------|----------|------|--------|--------|------|--------|--------|--------|------|
| | Cooling capacity (1) | kW | 49.0 | 55.0 | 62.4 | 73.3 | 84.3 | 95.2 | 109 | 129 | 149 | 179 |
| Cooling | Absorbed power (1) | kW | 17.6 | 20.6 | 24.0 | 27.8 | 31.0 | 34.1 | 41.6 | 47.6 | 55.8 | 65.2 |
| 0 | EER (1) | | 2.78 | 2.67 | 2.60 | 2.64 | 2.72 | 2.79 | 2.62 | 2.71 | 2.67 | 2.75 |
| | Cooling capacity (1) | kW | 48.4 | 54.7 | 62.0 | 72.8 | 83.9 | 94.7 | 108 | 128 | 148 | 178 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 17.9 | 20.7 | 24.2 | 28.3 | 31.3 | 35.1 | 42.1 | 48.4 | 56.4 | 65.9 |
| COOIIIIQ (EIV14511) | EER (1) | | 2.70 | 2.64 | 2.56 | 2.57 | 2.68 | 2.70 | 2.57 | 2.64 | 2.62 | 2.70 |
| | ESEER | | 3.36 | 3.05 | 2.90 | 3.03 | 3.23 | 3.07 | 2.74 | 2.94 | 2.86 | 2.87 |
| | Heating capacity (2) | kW | 55.7 | 61.9 | 70.2 | 80.7 | 91.4 | 105 | 119 | 137 | 156 | 188 |
| Heating | Absorbed power (2) | kW | 18.8 | 21.3 | 25.1 | 28.2 | 31.5 | 35.8 | 42.1 | 48.3 | 56.2 | 67.5 |
| | COP (2) | | 2.96 | 2.91 | 2.80 | 2.86 | 2.90 | 2.93 | 2.83 | 2.84 | 2.78 | 2.79 |
| | Heating capacity (2) | kW | 56.0 | 62.2 | 70.7 | 81.3 | 91.9 | 106 | 120 | 138 | 157 | 189 |
| | Absorbed power (2) | kW | 19.0 | 21.7 | 25.8 | 29.1 | 32.2 | 36.6 | 43.1 | 49.2 | 57.4 | 68.8 |
| Heating (EN14511) | COP (2) | | 2.95 | 2.87 | 2.74 | 2.79 | 2.85 | 2.90 | 2.78 | 2.80 | 2.74 | 2.75 |
| | SCOP (3) | | 3.25 | 3.11 | 3.01 | 3.09 | 3.16 | 3.19 | 3.07 | 3.11 | 3.09 | 3.09 |
| | Energy Efficiency (3) | % | 127 | 121 | 117 | 121 | 123 | 125 | 120 | 121 | 121 | 121 |
| | Energy Class (3) | | A+ | A | A | A | - | - | - | - | - | - |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| | Capacity steps | n° | | | 2 | | | | 3 | | | 4 |
| Available static | STD version | Pa | 165 | 147 | 120 | 120 | 105 | 115 | 135 | 135 | 190 | 105 |
| pressure | High ESP version | Pa | 298 | 288 | 263 | 263 | 245 | 256 | | | 400 | |
| Floctrical | Power supply | V/Ph/Hz | | 400/3/50 | | | | | | | | |
| characteristics | Max. running current | A | 41 | 48 | 55 | 61 | 73 | 78 | 94 | 111 | 121 | 149 |
| | Max. starting current | A | 135 | 147 | 152 | 177 | 217 | 175 | 210 | 255 | 236 | 293 |
| | Water flow | l/s | 2.31 | 2.60 | 2.95 | 3.46 | 3.98 | 4.50 | 5.15 | 6.09 | 7.04 | 8.45 |
| Water circuit | Pump available static pressure | kPa | 140 | 125 | 105 | 100 | 140 | 140 | 125 | 130 | 105 | 75 |
| | Water connections | "G | 2 ½″ | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 1/2" | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ |
| | STD version (4) | dB(A) | 65 | 65 | 66 | 66 | 66 | 67 | 67 | 67 | 67 | 67 |
| Sound prosouro | STD version with SL accessory (4) | dB(A) | 62 | 62 | 63 | 63 | 63 | 64 | 64 | 64 | 64 | 64 |
| Sound hiessnie | High ESP version (4) | dB(A) | 66 | 66 | 67 | 67 | 67 | 68 | | | 68 | |
| | High ESP version with SL | dB(A) | 63 | 63 | 64 | 64 | 64 | 65 | | | 65 | |
| \A/=:==== | accessory (4) | | | | | | | | | | | |
| Woights | Transport weight | Kg | 725 | 725 | 790 | 810 | 850 | 1010 | 1055 | 1105 | 1315 | 1430 |

| DIMENSIONS | | 182 | 202 | 242 | 262 | 302 | 363 | 393 | 453 | 524 | 604 | |
|------------|--------|-----|------|------|------|------|------|------|------|------|------|------|
| L | STD/AP | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 |
| W | STD/AP | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/AP | mm | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 | 2005 |

CLEARANCE AREA

CRA/K/ST 182÷604

300 800 800 1800





- 1.
- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Begulation p. 811/2013 Regulation n. 811/2013.
- 4. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of WP versions are specified on technical brochure.

.



FROM 196 KW TO 668 KW.



CHA/IK/A 674-P÷2356-P

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, INVERTER SCROLL COMPRESSORS, MICROCHANNEL CONDENSING COILS AND PLATE EXCHANGER.



The CHA/IK/A 674-P÷2356-P MULTIPOWER units are characterized by the highest efficiency, all in A CLASS energy efficiency, featuring Microchannel condensing coils and Scroll Inverter compressor: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system. The machine is equipped with R410A refrigerant, guaranteeing full adherence to the protocol standards in the Kyoto Treaty (O.D.P.=0) and providing high energy efficiency. This results in heat loads less than 50% EER surpassing any traditional cooler. In this way, the machine can obtain high energy yield with decisively elevated ESEER/IPLV values, elimination of generated power surges, elimination of inertial accumulation tanks and excellent silent functioning, since the fans adjust their speeds to the actual system load, providing benefits especially during the night. The use of components built in large series making them highly reliable and management of an elevated number of compressors allows increased life span and reduction of machine stopping risks: a faulty compressor will not compromise cooler functioning, which will continue to function with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.



*©*multi

рпе

INVERTER SCROLL

MICROCHANNEL

VERSION

CHA/IK/A

Cooling only

CHA/IK/A/SSL

Super silenced cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- DC INVERTER Scroll and ON-OFF Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of aluminium MICROCHANNEL condensing coils.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, ٠ complete with water differential pressure switch.
- Cooling circuit shut-off valve on liquid line in 1004-P÷2356-P models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges. •
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | PDI | Inverter double circulating pump |
|-----|---|------|---|
| SL | Unit silencement | FE | Antifreeze heater for evaporator |
| RFM | Cooling circuit shut-off valve on discharge line | IS | Modbus RTU protocol, RS485 serial interface |
| RFL | Cooling circuit shut-off valve on liquid line | ISB | BACnet MSTP protocol, RS485 serial interface |
| ΒT | Low water temperature Kit | ISBT | BACnet TCP/IP protocol, Ethernet |
| EC | EC Inverter fans | | port |
| DS | Desuperheater | ISL | LonWorks protocol, FFT-10 serial |
| RT | Total heat recovery | | interface |
| TXB | Coil with epoxy treatment | IAV | Remote set-point, 0-10 V signal |
| PS | Single circulating pump | IAA | Remote set-point, 4-20 mA signal |
| PSI | Inverter single circulating pump | IAS | Remote signal for second set-point |
| PD | Double circulating pump | | activation |
| | | | |

| MN | High and low pressure gauges |
|----|---------------------------------|
| CR | Remote control panel |
| RP | Coil protection metallic guards |
| AG | Rubber shock absorbers |

- Rubber shock absorbers AM Spring shock absorbers
- rotocol, FFT-10 serial -point, 0-10 V signal
- -point, 4-20 mA signal
- nal for second set-point
 - IDL Demand limit from digital input



CHA/IK/A 674-P÷2356-P





| MODEL | | | 674-P | 784-P | 1004-P | 1054-P | 1154-P | 1256-P | 1456-P | 1606-P | 1756-P | 2356-P | |
|-------------------|-----------------------------------|-------------|----------|-------|--------|--------|--------|--------|--------|--------|--------|--------|--|
| | Cooling capacity (1) | kW | 196 | 234 | 287 | 316 | 349 | 383 | 422 | 458 | 515 | 668 | |
| Cooling | Absorbed power (1) | kW | 60 | 72 | 89 | 97 | 108 | 119 | 132 | 143 | 161 | 209 | |
| 0 | EER (1) | | 3.27 | 3.25 | 3.22 | 3.26 | 3.23 | 3.22 | 3.20 | 3.20 | 3.20 | 3.20 | |
| | Cooling capacity (1) | kW | 195 | 233 | 286 | 315 | 348 | 382 | 421 | 457 | 514 | 666 | |
| | Absorbed power (1) | kW | 61 | 73 | 90 | 98 | 109 | 120 | 133 | 144 | 162 | 211 | |
| Cooling (EN14511) | EER (1) | | 3.20 | 3.19 | 3.18 | 3.21 | 3.19 | 3.18 | 3.17 | 3.17 | 3.17 | 3.16 | |
| | ESEER | | 4.07 | 4.01 | 4.05 | 4.07 | 4.16 | 4.10 | 4.18 | 4.26 | 4.28 | 4.33 | |
| | EUROVENT Class | | Α | А | А | А | А | А | А | А | А | А | |
| Compressor | Quantity | n° | 2+2 | 2+2 | 2+2 | 2+2 | 2+2 | 3+3 | 3+3 | 3+3 | 3+3 | 3+3 | |
| | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | Capacity steps | n° Stepless | | | | | | | | | | | |
| | Water flow | l/s | 9.36 | 11.18 | 13.71 | 15.10 | 16.67 | 18.30 | 20.16 | 21.88 | 24.61 | 31.92 | |
| Evaporator | Pressure drops | kPa | 38 | 36 | 35 | 37 | 40 | 32 | 33 | 36 | 32 | 37 | |
| | Water connections | DN | 80 | 80 | 80 | 80 | 80 | 150 | 150 | 150 | 150 | 150 | |
| Electrical | Power supply | V/Ph/Hz | 400/3/50 | | | | | | | | | | |
| characteristics | Max. running current | A | 137 | 156 | 194 | 211 | 173 | 250 | 202 | 320 | 355 | 460 | |
| | Max. starting current | A | 305 | 334 | 407 | 424 | 386 | 428 | 415 | 534 | 617 | 800 | |
| Unit with pump | Pump available static pressure | kPa | 200 | 170 | 175 | 235 | 220 | 210 | 195 | 210 | 200 | 165 | |
| | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 150 | 150 | 150 | 150 | 150 | |
| | STD version (2) | dB(A) | 67 | 68 | 68 | 72 | 72 | 73 | 73 | 74 | 74 | 74 | |
| Sound pressure | With SL accessory (2) | dB(A) | 64 | 65 | 65 | 69 | 69 | 70 | 70 | 71 | 71 | 71 | |
| | SSL version (2) | dB(A) | 62 | 62 | 62 | 63 | 63 | 64 | 64 | 65 | 65 | | |
| Woighte | Transport weight | Kg | 1951 | 2064 | 2211 | 2461 | 2511 | 2806 | 2868 | 3228 | 3416 | 3912 | |
| vveignis | Operating weight | Kg | 1970 | 2090 | 2250 | 2500 | 2550 | 2850 | 2920 | 3280 | 3480 | 3990 | |

| DIME | INSIONS | | 674-P | 784-P | 1004-P | 1054-P | 1154-P | 1256-P | 1456-P | 1606-P | 1756-P | 2356-P |
|------|---------|----|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | STD | mm | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 |
| L | SSL | mm | 5000 | 5000 | 5000 | 6200 | 6200 | 6200 | 6200 | 7200 | 7200 | |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD/SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

CLEARANCE AREA

CHA/IK/A 674-P÷2356-P

500 1800 1000 1800





- 1.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744. 2.
- N.B. Weights of SSL version are specified on technical brochure.



FROM 227 KW TO 762 KW.



CHA/K/A/WP 726-P÷24012-P

A CLASS ENERGY EFFICIENCY AIRCOOLED REVERSIBLE HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGER.



The CHA/K/A/WP 726-P÷24012-P MULTIPOWER reversible Heat Pumps are characterized by the highest efficiency, all in A CLASS energy efficiency. MULTIPOWER is an extremely flexible and reliable machine: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system. The machine is equipped with R410A refrigerant, guaranteeing full adherence to the protocol standards in the Kyoto Treaty (O.D.P.=0) and providing high energy efficiency. The machine can obtain an high energy yield with decisively elevated ESEER/IPLV values, elimination of generated power surges, elimination of inertial accumulation tanks and excellent silent functioning, since the fans adjust their speeds to the actual system load, providing benefits especially during the night. The use of components built in large series making them highly reliable and the management of an elevated number of compressors allows increased life span and reduction of machine stopping risks: a faulty compressor will not compromise cooler functioning, which will continue to function with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.



VERSION

CHA/K/A/WP

Reversible Heat Pump

CHA/K/A/WP/SSL

Super silenced 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.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch. On the unit is always installed an antifreeze heater.
- Cooling circuit shut-off valve on liquid line in 1048-P÷24012-P models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, overload protection for compressors and thermocontacts for fans.
- · Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers SL Unit silencement
- RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on liquid line
- СТ Condensing control down to 0 °C
- CC Condensing control down to -20 °C
- ΒT Low water temperature Kit
- EC EC Inverter fans
- DS Desuperheater
- RT Total heat recovery
- Coil with pre-coated fins TX
- Single circulating pump PS

- PSI Inverter single circulating pump PD
- Double circulating pump PDI Inverter double circulating pump
 - Soft start
- SS

IS

- Modbus RTU protocol, RS485 serial interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- ΙΔ\/ Remote set-point, 0-10 V signal
- IAA Remote set-point, 4-20 mA signal
- IAS Remote signal for second set-point activation
- IDL Demand limit from digital input

- High and low pressure gauges MN
- CR Remote control panel RP Coil protection metallic guards
- AG
- AM
- Rubber shock absorbers Spring shock absorbers

CHA/K/A/WP 726-P÷24012-P





6

LINT 93

| MODEL | | | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P |
|--|--|---|---|---|--|--|--|---|---|
| | Heating capacity (1) | kW | 227 | 256 | 272 | 294 | 342 | 369 | 389 |
| Heating | Absorbed power (1) | kW | 66 | 75 | 81 | 85 | 102 | 106 | 112 |
| Houting | COP (1) | | 3 44 | 3 41 | 3.36 | 3 46 | 3 35 | 3 48 | 3 47 |
| | Heating capacity (1) | kW | 228 | 257 | 273 | 295 | 343 | 370 | 390 |
| | Absorbed power (1) | kW | 68 | 77 | 83 | 87 | 105 | 108 | 115 |
| Heating (EN14E11) | COP (1) | | 3.35 | 3.34 | 3.29 | 3.39 | 3.27 | 3.43 | 3.39 |
| Heating (EN 14511) | EUROVENT Class | | A | A | А | A | A | A | A |
| | SCOP (2) | | 4.05 | 4.17 | 3.99 | 4.08 | 4.02 | 4.14 | 4.10 |
| | Energy Efficiency (2) | % | 159 | 164 | 157 | 160 | 158 | 163 | 161 |
| | Cooling capacity (3) | kW | 194 | 217 | 239 | 259 | 294 | 322 | 339 |
| Cooling | Absorbed power (3) | kW | 68 | 75 | 78 | 85 | 100 | 107 | 113 |
| | EER (3) | 114/ | 2.85 | 2.89 | 3.06 | 3.05 | 2.94 | 3.01 | 3.00 |
| | Looling capacity (3) | KVV | 193 | 210 | <u>Z38</u> | 258 | 293 | 321 | 338 |
| Cooling (EN14511) | | KVV | 2 00 | 2.04 | 2.01 | 2.00 | 2.00 | 2.07 | 2.06 |
| Cooling (LIN14511) | ECER | | 2.00 | 2.04 | 3.01 | 3.00 | 2.30 | 2.37 | 2.90 |
| | | | 0.04 C | 0.03 C | | 3.03 R | <u> </u> | 4.03 R | R 4.01 |
| | Quantity | n° | 3+3 | 3+3 | 3+3 | 3+3 | 4+4 | 4+4 | 4+4 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| compresser | Capacity steps | n° | | 6 | j | | | 8 | |
| | Water flow | l/s | 9.27 | 10.37 | 11.42 | 12.37 | 14.05 | 15.38 | 16.20 |
| Evaporator | Pressure drops | kPa | 44 | 55 | 42 | 38 | 49 | 37 | 41 |
| | Water connections | DN | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | Power supply | V/Ph/Hz | | | | 400/3/50 | | | |
| Electrical characteristics | Max. running current | A | 152 | 166 | 187 | 199 | 224 | 241 | 258 |
| | Max. starting current | A | 276 | 299 | 354 | 367 | 357 | 409 | 426 |
| Unit with numn | Pump available static pressure | kPa | 195 | 165 | 230 | 220 | 240 | 235 | 230 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| 0 | STD version (4) | dB(A) | 69 | 6/ | 68 | 68 | 68 | 69 | /0 |
| Sound pressure | With SL accessory (4) | dB(A) | 66 | 64 | 65 | 65 | 65 | 60 | 67 |
| | SSL Version (4) | UB(A) | 1054 | 2201 | 2400 | 2427 | 2567 | 2020 | 2020 |
| Weights | | Kg | 1934 | 2291 | 2409 | 2437 | 2507 | 2850 | 2860 |
| | operating weight | l ng | 13/0 | 2010 | 2400 | 2400 | 2000 | 2000 | 2000 |
| | | | | | | | | | |
| MODEL | 7 | 1 | 13010-P | 15010-1 | P 1681 | 2-P 18 | 012-P | 21012-P | 24012-P |
| MODEL | Heating capacity (1) | kW | 13010-P 420 | 15010- 476 | P 1681 | 2-P 18 | 012-P 566 | 21012-P 677 | 24012-P 762 |
| MODEL | Heating capacity (1) Absorbed power (1) | kW kW | 13010-P 420 125 | 15010-l 476 141 | P 1681 | 2-P 18 | 012-P 566 169 | 21012-P 677 202 | 24012-P 762 226 |
| MODEL Heating | Heating capacity (1) Absorbed power (1) COP (1) | kW kW | 13010-P 420 125 3.36 | 15010-1 476 141 3.38 | P 1681 533 15 3.3 | 2-P 18 2 7 9 | 012-P 566 169 3.35 | 21012-P 677 202 3.35 | 24012-P 762 226 3.37 |
| MODEL | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) | kW kW kW | 13010-P 420 125 3.36 422 128 | 15010-1 476 141 3.38 478 | P 1681 533 15 3.3 533 | 2-P 18 2 | 012-P 566 169 3.35 568 | 21012-P 677 202 3.35 679 206 | 24012-P 762 226 3.37 764 220 |
| MODEL | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) | kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 | 15010-1 476 141 3.38 478 144 | P 1681 533 15 3.3 533 533 160 | 2-P 18 2 7 9 3 0 2 | 012-P 566 169 3.35 568 172 3.20 | 21012-P 677 202 3.35 679 206 3.30 | 24012-P 762 226 3.37 764 230 3.32 |
| MODEL Heating Heating (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUBOVENT Class | kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 | 15010-1 476 141 3.38 478 144 3.32 | P 1681 533 15 3.3 533 533 160 3.3 3.3 | 2-P 18 2 7 9 3 0 3 | 012-P 566 169 3.35 568 172 3.30 A | 21012-P 677 202 3.35 679 206 3.30 A | 24012-P 762 226 3.37 764 230 3.32 A |
| MODEL Heating Heating (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) | kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 406 | 15010-1 476 141 3.38 478 144 3.32 A A | P 1681 533 15 3.3 533 533 160 3.3 3.4 4.0 | 2-P 18 2 7 9 3 0 3 5 5 | 012-P 566 169 3.35 568 172 3.30 A | 21012-P 677 202 3.35 679 206 3.30 A A | 24012-P 762 226 3.37 764 230 3.32 A |
| MODEL Heating Heating (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) | kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 | P 1681 533 15 3.3 533 533 160 3.3 A 4.0 4.0 | 2-P 18 2 | 012-P 566 169 3.35 568 172 3.30 A - | 21012-P 677 202 3.35 679 206 3.30 A - | 24012-P 762 226 3.37 764 230 3.32 A - |
| MODEL Heating Heating (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) | kW kW kW kW % | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 | P 1681 533 15 3.3 533 533 16 16 3.3 3.3 A 4.0 0 155 47 | 2-P 18 2 - 7 - 9 - 3 - 5 - 9 - 5 - 5 - | 012-P 566 169 3.35 568 172 3.30 A - 512 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 | 24012-P 762 226 3.37 764 230 3.32 A - 671 |
| MODEL Heating Heating (EN14511) Cooling | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) | kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 | P 1681 533 155 3,33 533 160 3,33 A 4,0 155 4,75 4,75 160 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 2 | 012-P 566 169 3.35 568 172 3.30 A - 512 172 172 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 |
| MODEL Heating Heating (EN14511) Cooling | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) | kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 | P 1681 533 15 3.3 533 160 3.3 3.3 4.0 4.0 155 475 475 2.9 | 2-P 18 2 7 9 3 0 3 5 9 5 2 3 3 | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 |
| MODEL Heating Heating (EN14511) Cooling | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) | kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 | P 1681 533 15 3.3 533 160 3.3 3.3 4.0 4.0 155 479 166 2.9 474 | 2-P 18 2 7 9 3 0 - 3 - 5 - 2 - 3 - - - | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 510 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 |
| MODEL Heating Heating (EN14511) Cooling | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) | kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 | P 1681 533 15 3,3 533 533 533 533 160 3,3 3 3,3 4,0 4,0 155 4,7 165 2,9 4,7 165 | 2-P 18 2 7 9 3 0 3 5 9 5 2 3 4 3 3 | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 510 174 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 207 2.88 595 209 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) | kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 | P 1681 533 15 3.3 533 533 160 3.3 3 A 4.0 155 477 166 2.9 477 166 2.9 | 2-P 18 2 - 7 - 9 - 3 - 5 - 9 - 5 - 9 - 3 - 5 - 9 - 3 - 4 - 3 - 1 - | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 510 174 2.93 | 21012-P 677 202 3.35 679 206 3.30 A - - - 597 207 2.88 595 209 2.85 | 24012-P 762 226 3.37 764 230 3.32 A - 671 241 2.78 669 243 2.75 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) EE | kW kW kW kW % kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 | P 1681 533 15 3,3 533 16 3,3 16 3,3 16 3,3 4 4,0 15 5 4 7 16 2,9 47/ 16 2,9 47/ 16 2,9 3,9 3,9 3,9 | 2-P 18 2 7 7 9 3 0 3 - 5 9 55 - 2 - 3 - 4 - 3 - 1 - 8 - | 012-P 566 169 3.35 568 172 3.30 A - 512 512 172 2.98 510 174 2.93 3.99 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) EE | kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 2.92 419 146 2.87 3.96 C | P 1681 533 15 3,3 533 16 3,3 533 16 3,3 4 4,0 155 47 16 2,9 47, 16 2,9 47, 16 2,9 47, 16 2,9 47, 16 2,9 47, 16 2,9 47, 16 2,9 47, 16 2,9 2,9 47, 16 5,9 16 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 16 5,9 17 5,9 17 5,9 16 5,9 16 5,9 16 16 16 16 16 16 16 16 16 16 16 16 16 | 2-P 18 2 7 7 9 3 0 3 5 9 55 2 3 3 1 8 2 | 012-P 566 169 3.35 568 172 3.30 A 512 172 2.98 510 174 2.93 3.99 B 0.0 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 2.2 2.2 2.2 2.2 2.2 2.2 2.2 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 20 20 20 20 20 20 20 20 20 20 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Definition | kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2.2 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 | P 1681 533 155 3,33 533 160 3,33 40 4,0 155 477 160 2,9 477 160 2,9 477 160 2,9 477 160 2,9 8 8 6 4 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 2 3 4 3 1 1 8 6 6 | 012-P 566 169 3.35 568 172 3.30 A 512 172 2.98 510 174 2.93 3.99 B 6+6 2 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 6 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 6+6 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) ESEER EUROVENT Class Quantity Refrigerant circuits Construction | kW kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 | P 1681 533 15 3,3 533 160 3,3 3,3 4,0 4,0 155 4,75 166 2,9 4,75 166 2,9 3,9 8 8 8 6 4 164 2,9 | 2-P 18 2 7 9 3 0 3 5 9 55 2 33 4 33 1 8 6 | 012-P 566 169 3.35 568 172 3.30 A 512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 174 2.91 10 11 10 10 10 10 10 10 10 10 10 10 10 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 6+6 2 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Wotor flow | kW kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 2011 | P 1681 533 15 3,3 533 160 3,3 3,3 4 4,0 155 155 166 2,9 474 166 2,9 474 166 2,9 9 474 166 2,9 9 474 166 2,9 9 8 8 8 6 4 1 | 2-P 18 2 7 9 3 0 - 3 - 5 - 2 - 3 - 5 - 2 - 3 - 5 - 2 - 3 - 4 - 8 - 6 - | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28,52 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 6+6 2 220 220 220 220 220 220 220 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Proseur drope | kW kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 | P 1681 533 15 3,3 533 160 3,3 3,3 533 160 3,3 3,3 40 4,0 155 2,9 477 166 2,9 477 166 2,9 9 477 166 2,9 9 477 166 2,9 9 8 8 6 4 4 7 2,9 2,9 2,9 2,9 2,9 2,9 2,9 2,9 2,9 2,9 | 2-P 18 2 7 9 3 0 - 3 - 5 - 9 - 5 - 2 - 3 - 5 - 2 - 3 - 4 - 3 - 6 - 60 - 30 - | 012-P 566 169 3.35 568 172 3.30 A 512 172 2.98 510 174 2.93 3.99 B B 6+6 2 10 24.46 27 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 23 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 241 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 32.06 30 30 30 30 30 30 30 30 30 30 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water conpections | kW kW kW kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 | P 1681 533 155 3.3 160 3.3 A 4.0 155 4.7 165 2.9 4.7 165 2.9 3.9 B 6+1 2.2 2.0 32 2.2 15 3.3 16 16 15 15 15 15 15 15 15 15 15 15 | 2-P 18 2 7 9 3 0 - 3 - 5 - 9 - 5 - 9 - 5 - 9 - 5 - 2 - 3 - 4 - 3 - 4 - 3 - 6 - - - 39 - 60 - 39 - 60 - 70 - | 012-P 566 169 3.35 568 172 3.30 A 512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 30 150 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Capacity steps Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply | kW kW kW kW kW kW kW kW kW kW | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 | P 1681 533 155 3.33 533 166 3.33 A A 4.00 155 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 3.99 8 8 6 477 166 2.99 167 167 2.99 167 167 167 167 167 167 167 167 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 4 3 1 8 6 - 9 2 3 0 1 1 8 - 0 - 0 - | 012-P 566 169 3.35 568 172 3.30 A - 5512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 2 28.52 33 150 | 24012-P 762 226 3.37 764 230 3.32 A - 671 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 30 150 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (5) Water (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max, running current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 | P 1681 533 155 3,33 563 166 3,33 A 4,00 155 477 166 2,99 477 166 2,99 477 166 2,99 477 166 2,99 477 166 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 477 165 2,99 165 2,99 165 2,99 165 2,99 165 2,99 165 165 165 165 165 165 165 165 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 4 3 1 8 6 | 012-P 566 169 3.35 568 172 3.30 A - 512 1772 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 | 21012-P 677 202 3.35 679 206 3.30 A 597 207 2.88 595 209 2.85 3.93 C 64-6 2 28.52 33 150 446 | 24012-P 762 226 3.37 764 230 3.32 A |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Coling capacity (3) Absorbed power (3) EER (3) Colantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. running current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 3.94 C 5+5 2 17.15 46 80 274 407 | 15010-1 476 141 3.38 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 | P 1681 533 155 3.33 166 3.33 A 4.0 155 4.77 166 2.99 4.77 166 2.99 4.77 166 2.99 4.77 166 2.99 4.77 166 2.99 4.77 166 2.99 3.99 8 6 6 4 157 3.33 169 169 169 169 169 169 169 169 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 2 3 4 3 1 6 6 0 400/3/50 8 5 | 012-P 566 169 3.35 568 172 3.30 A - 512 1772 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 391 558 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 446 623 | 24012-P 762 226 3.37 764 230 3.32 A 671 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 30 150 500 678 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) ESER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 | 15010-1 476 141 3.38 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 | P 1681 533 155 3.33 533 160 3.33 A 4.0 4.0 155 477 166 2.9 477 166 2.9 3.9 8.8 6.44 2.9 3.2 150 3.2 150 3.2 150 3.2 160 160 160 150 160 160 160 160 160 160 160 16 | 2-P 18 2 7 9 3 0 3 5 9 5 2 3 4 3 6 5 6 99 2 30 4 30 1 6 9 60 9 60 2 0 400/3/50 8 5 55 5 | 012-P 566 169 3.35 568 172 3.30 A - 512 1772 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 391 558 190 | 21012-P 677 202 3.35 679 206 3.30 A - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 446 623 185 | 24012-P 762 226 3.37 764 230 32 A 671 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 30 150 - 500 678 175 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Coling capacity (3) Absorbed power (3) EER (3) Colountity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 | P 1681 533 15 3,3 533 160 3,3 3,3 4,0 3,3 4,0 155 160 2,9 475 166 2,9 475 166 2,9 475 166 2,9 475 166 2,9 475 166 2,9 475 166 2,9 3,9 3,9 3,9 3,9 3,9 3,9 3,9 3,9 3,9 3 | 2-P 18 2 7 9 3 0 - 3 - 5 - 9 - 5 - 2 - 3 - 5 - 2 - 3 - 4 - 3 - 6 - - - 60 - 60 - 6 - 5 - 6 - 5 - 5 - 5 - 5 - 5 - 0 - | 012-P 566 169 3.35 568 172 3.30 A - 512 172 2.98 510 174 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 391 558 190 100 | 21012-P 677 202 3.35 679 206 3.30 A - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 446 623 150 | 24012-P 762 226 3.37 764 230 3.32 A - - 671 241 2.78 669 243 2.75 3.97 C 6+6 2 30 30 150 500 678 175 150 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 70 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 73 | P 1681 53: 15: 3.3 53: 16: 3.3 A A 4.0 15: 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 47: 16: 2.9 3.9 8 8 6 47: 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 15: 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 16: 2.9 15: 16: 2.9 15: 16: 2.9 15: 15: 15: 15: 16: 2.9 15: 16: 2.9 15: 15: 15: 15: 15: 15: 15: 15: | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 5 9 5 2 3 1 8 - 6 - 99 2 00 - 30 - 1 - 8 - 00 - 5 - 5 - 00 - 5 - 5 - 00 - | 012-P 566 169 3.35 568 172 3.30 A - - 512 512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 158 190 100 73 | 21012-P 677 202 3.35 679 206 3.30 A - - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 - 446 623 150 73 | 24012-P 762 226 3.37 764 230 3.32 A 671 241 241 2.78 669 243 2.75 3.97 C 6+6 2 32.06 30 150 500 678 175 150 74 |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Capacity steps Quantity Refrigerant circuits Capacity steps Water connections Power supply Max. running current Max. starting current Pure souriable static pressure Water connections STD version (4) With SL accessory (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 70 67 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 73 | P 1681 533 155 3.33 533 166 3.33 A A 4.00 155 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 477 166 2.99 3.9 8 8 6 41 157 167 167 167 167 175 175 175 175 175 175 175 17 | 2-P 18 2 7 9 3 0 3 5 9 5 9 5 2 3 1 8 - 6 - 9 2 33 1 8 - 65 - 0 - 400/3/50 8 55 - 50 - 0 - 8 - 10 - | 012-P 566 169 3.35 568 172 3.30 A - - 5512 172 2.98 510 174 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 391 558 190 100 73 70 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 28.52 33 150 446 623 185 150 73 70 | 24012-P 762 226 3.37 764 230 3.32 A |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) With SL accessory (4) SSL version (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 70 67 62 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 73 70 63 | P 1681 533 155 3.3 166 3.3 A 4.0 155 477 166 2.9 477 166 2.9 477 166 2.9 477 166 2.9 477 166 2.9 3.9 B 64+ 525 525 525 525 525 525 527 200 100 707 64 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 4 3 3 1 8 6 9 400/3/50 8 5 5 5 0 400/3/50 8 5 5 5 0 8 5 5 0 8 1 1 | 012-P 566 169 3.35 568 172 3.30 A - - 512 172 2.98 510 174 2.93 3.99 B 6+6 2 10 24.46 37 150 158 190 100 73 70 65 1 | 21012-P 677 202 3.35 679 206 3.30 A - - 597 207 2.88 595 209 2.85 3.93 C 6+6 2 2 28.52 33 150 - 28.52 33 150 - 446 623 185 150 73 70 - | 24012-P 762 226 3.37 764 230 3.32 A |
| MODEL Heating Heating (EN14511) Cooling Cooling (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure Weights | Heating capacity (1) Absorbed power (1) COP (1) Heating capacity (1) Absorbed power (1) COP (1) EUROVENT Class SCOP (2) Energy Efficiency (2) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Cooling capacity (3) Absorbed power (3) EER (3) Coaling capacity (3) Absorbed power (3) EER (3) Coaling capacity (3) Absorbed power (3) EER (3) Coaling capacity (1) Absorbed power (3) EER (3) Capacity steps Water flow Pressure drops Water flow Pressure drops Water connections Power supply Max. running current Max. running current Max starting current Pump available static pressure Water connections STD version (4) <td< td=""><td>kW kW kW kW kW kW kW kW kW kW kW kW kW k</td><td>13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 70 67 62 3019</td><td>15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 73 70 63 3164</td><td>P 1681 533 155 3.33 563 166 3.33 A 4.0 155 4.77 166 2.99 3.39 8 8 6 4 157 2.99 3.99 8 157 157 157 166 157 167 167 167 167 167 167 167 16</td><td>2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 4 3 3 1 8 6 0 400/3/50 8 5 5 5 0 3 400/3/50 8 5 5 0 3 1 1 8 5 0 3 10 1 11 1 12 1</td><td>012-P 566 169 3.35 568 172 3.30 A - - - 512 172 2.98 510 174 2.93 3.99 B 6+6 2 20 10 24.46 37 3558 190 100 73 70 65 3832 656</td><td>21012-P 677 202 3.35 679 206 3.30 A 597 207 2.88 595 209 2.85 3.93 C 646 2 2 28.52 33 150 28.52 33 150 446 623 185 150 73 70 4660</td><td>24012-P 762 226 3.37 764 230 3.32 A</td></td<> | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 13010-P 420 125 3.36 422 128 3.30 A 4.06 159 359 127 2.83 358 128 2.80 3.94 C 5+5 2 17.15 46 80 274 407 215 100 70 67 62 3019 | 15010-1 476 141 3.38 478 144 3.32 A 4.04 159 421 144 2.92 419 146 2.87 3.96 C 5+5 2 8 20.11 46 80 324 492 185 100 73 70 63 3164 | P 1681 533 155 3.33 563 166 3.33 A 4.0 155 4.77 166 2.99 3.39 8 8 6 4 157 2.99 3.99 8 157 157 157 166 157 167 167 167 167 167 167 167 16 | 2-P 18 2 7 7 9 3 0 3 5 9 5 2 3 4 3 3 1 8 6 0 400/3/50 8 5 5 5 0 3 400/3/50 8 5 5 0 3 1 1 8 5 0 3 10 1 11 1 12 1 | 012-P 566 169 3.35 568 172 3.30 A - - - 512 172 2.98 510 174 2.93 3.99 B 6+6 2 20 10 24.46 37 3558 190 100 73 70 65 3832 656 | 21012-P 677 202 3.35 679 206 3.30 A 597 207 2.88 595 209 2.85 3.93 C 646 2 2 28.52 33 150 28.52 33 150 446 623 185 150 73 70 4660 | 24012-P 762 226 3.37 764 230 3.32 A |

| DIME | INSIONS | | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P | 16812-P | 18012-P | 21012-P | 24012-P |
|------|---------|----|-------|-------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|
| 1 | STD | mm | 2800 | 4000 | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 | 7200 |
| L | SSL | mm | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 | | |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD/SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

CLEARANCE AREA

CHA/K/A/WP 726-P÷24012-P

500 1800 1000 1800



NOTES

Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013. Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Sound power level according to Standard ISO 3744 and Eurovent 8/1.

- 2
- 3.
- N.B. Weights of SSL version are specified on technical brochure.





() multi

CHA/K 726-P÷36012-P

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



CHA/K 726-P÷36012-P MULTIPOWER is an extremely flexible and reliable machine: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system. The machine is equipped with R410A refrigerant, guaranteeing full adherence to the protocol standards in the Kyoto Treaty (O.D.P.=0), and features high energy yield, elimination of generated power surges, elimination of inertial accumulation tanks and excellent silent functioning, since the fans adjust their speeds to the actual system load, providing benefits especially during the night. The use of components built in large series, making them highly reliable, and the management of an elevated number of compressors allows increased life span and reduction of machine stopping risks: a faulty compressor will not compromise cooler functioning, which will continue to function with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.

*©*multi ошег

VERSION

CHA/K

Cooling only

CHA/K/WP

Reversible Heat Pump

CHA/K/SSL Super silenced cooling only

CHA/K/WP/SSL

Super silenced 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.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch. On Heat Pump units is always installed an antifreeze heater.
- Cooling circuit shut-off valve on liquid line in 1048-P÷36012-P models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | PDI | Inverter double circulating pump |
|-----|-----------------------------------|------|------------------------------------|
| SL | Unit silencement | FE | Antifreeze heater for evaporator |
| RFM | Cooling circuit shut-off valve on | SS | Soft start |
| | discharge line | IS | Modbus RTU protocol, RS485 serial |
| RFL | Cooling circuit shut-off valve on | | interface |
| | liquid line | ISB | BACnet MSTP protocol, RS485 |
| CT | Condensing control down to 0 °C | | serial interface |
| CC | Condensing control down to -20 °C | ISBT | BACnet TCP/IP protocol, Ethernet |
| BT | Low water temperature Kit | | port |
| EC | EC Inverter fans | ISL | LonWorks protocol, FFT-10 serial |
| DS | Desuperheater | | interface |
| RT | Total heat recovery | IAV | Remote set-point, 0-10 V signal |
| ΤX | Coil with pre-coated fins | IAA | Remote set-point, 4-20 mA signal |
| PS | Single circulating pump | IAS | Remote signal for second set-point |
| PSI | Inverter single circulating pump | | activation |
| PD | Double circulating pump | IDL | Demand limit from digital input |

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- ΔM Spring shock absorbers

CHA/K 726-P+36012-P





| MODEL | | | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P |
|---|---|--|---|---|---|--|---|--|---|---|--|
| - | Cooling capacity (1) | kW | 199 | 226 | 251 | 276 | 304 | 335 | 367 | 403 | 444 |
| Cooling | Absorbed power (1) | kW | 69 | 80 | 85 | .94 | 104 | 113 | 122 | 132 | 155 |
| oboling | FFR (1) | | 2.88 | 2.83 | 2.95 | 2.94 | 2.92 | 2.96 | 3 01 | 3 05 | 2.86 |
| | Cooling capacity (1) | kW | 198 | 225 | 250 | 275 | 303 | 334 | 365 | 402 | 442 |
| | Absorbed power (1) | kW | 70 | 81 | 86 | 95 | 105 | 115 | 124 | 134 | 157 |
| Cooling (EN14511) | EER (1) | | 2.84 | 2.78 | 2.89 | 2.89 | 2.87 | 2.91 | 2.95 | 3.00 | 2.81 |
| | ESEER | | 3.54 | 3.65 | 3.66 | 3.77 | 3.76 | 3.88 | 3.73 | 3.90 | 3.75 |
| | Heating capacity (2) | kW | 228 | 255 | 283 | 310 | 338 | 369 | 401 | 441 | 510 |
| Heating | Absorbed power (2) | kW | 73 | 83 | 90 | 103 | 108 | 121 | 132 | 141 | 164 |
| 5 | COP (2) | | 3.12 | 3.07 | 3.14 | 3.01 | 3.13 | 3.05 | 3.04 | 3.13 | 3.11 |
| | Heating capacity (2) | kW | 228 | 255 | 283 | 311 | 338 | 370 | 402 | 442 | 511 |
| | Absorbed power (2) | kW | 73.1 | 83.4 | 90.1 | 103 | 108 | 122 | 133 | 142 | 165 |
| Heating (EN14511) | COP (2) | | 3.12 | 3.06 | 3.15 | 3.01 | 3.12 | 3.04 | 3.03 | 3.12 | 3.10 |
| | SCOP (3) | | 3.69 | 3.76 | 3.81 | 3.61 | 3.67 | 3.67 | 3.64 | 3.79 | 3.76 |
| | Energy Efficiency (3) | % | 145 | 147 | 149 | 141 | 144 | 144 | 143 | 149 | 147 |
| | Quantity | n° | 3+3 | 3+3 | 3+3 | 3+3 | 4+4 | 4+4 | 4+4 | 5+5 | 5+5 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | | 3 | | | | 8 | | |
| | Water flow | l/s | 9.51 | 10.80 | 11.99 | 13.19 | 14.52 | 16.01 | 17.53 | 19.25 | 21.21 |
| Evaporator | Pressure drops | kPa | 40 | 51 | 62 | 54 | 50 | 49 | 59 | 47 | 59 |
| | Water connections | DN | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 | 80 |
| | Power supply | V/Ph/Hz | | | | | 400/3/50 | | | | |
| Electrical characteristics | Max. running current | A | 152 | 166 | 179 | 191 | 216 | 233 | 250 | 274 | 316 |
| | Max. starting current | A | 276 | 299 | 347 | 359 | 349 | 401 | 418 | 407 | 484 |
| Unit with nump | Pump available static pressure | kPa | 199 | 167 | 228 | 215 | 237 | 225 | 201 | 194 | 155 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| | STD version (4) | dB(A) | 66 | 66 | 67 | 69 | 67 | 69 | 70 | 68 | 69 |
| Sound pressure | With SL accessory (4) | dB(A) | 63 | 63 | 64 | 66 | 64 | 65 | 66 | 65 | 66 |
| | SSL version (4) | dB(A) | 57 | 57 | 59 | 61 | 58 | 60 | 62 | 59 | 61 |
| Weights | Transport weight | Kg | 1654 | 1674 | 1763 | 1961 | 2199 | 2457 | 2566 | 2610 | 3179 |
| VVolgitto | Operating weight | Kg | 1670 | 1690 | 1780 | 1980 | 2220 | 2480 | 2590 | 2640 | 3210 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MODEL | | | 16812-P | 18012- | P 21012 | 2-P 2401 | 2-P 27 | 012-P 30 | 0012-P 3 | 3012-P | 36012-P |
| MODEL | Cooling capacity (1) | kW | 16812-P 495 | 18012 - 546 | P 21012 | 2-P 2401 | 2-P 270 | 0 12-P 3 0 | 0012-P 3 845 | 33012-P 942 | 36012-P 1051 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) | kW kW | 16812-P 495 170 | 18012 - 546 184 | P 21012 602 211 | 2-P 2401 | 2-P 270 | 012-P 30 751 275 | 0012-P 3 845 303 | 33012-P 942 336 | 36012-P 1051 365 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) | kW kW | 16812-P 495 170 2.91 | 18012- 546 184 2.97 | P 21012 602 211 2.85 | 2-P 2401 67 24 2.7 | 2-P 270 11 3 76 2 | D12-P 30 751 275 2.73 2.73 | 0012-P 3 845 303 2.79 3 | 33012-P 942 336 2.80 | 36012-P 1051 365 2.88 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) | kW kW kW | 16812-P 495 170 2.91 493 | 18012- 546 184 2.97 544 | P 21012 602 211 2.85 599 | 2-P 2401 67 24 24 2.7 66 | 2-P 270 1 1 3 2 76 2 9 1 | D12-P 30 751 275 2.73 273 749 275 | 0012-P 3 845 303 2.79 842 | 33012-P 942 336 2.80 939 | 36012-P 1051 365 2.88 1047 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) | kW kW kW kW | 16812-P 495 170 2.91 493 172 | 18012- 546 184 2.97 544 186 | P 21012 602 211 2.85 599 214 | 2-P 2401 67 24 24 2.7 66 24 | 2-P 270 1 2 3 2 9 3 6 2 | D12-P 30 751 275 275 273 749 277 | 0012-P 3 845 303 2.79 842 306 306 | 33012-P 942 336 2.80 939 339 | 36012-P 1051 365 2.88 1047 369 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) | kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 | 18012- 546 184 2.97 544 186 2.92 | P 21012 602 211 2.85 599 214 2.81 | 2-P 2401 67 24 6 2.7 66 24 2.7 | 2-P 270 1 3 3 2 76 2 9 3 6 3 72 2 | 012-P 30 751 275 2.73 749 277 2.70 | 0012-P 3 845 303 2.79 842 306 2.75 | 33012-P 942 336 2.80 939 339 2.77 | 36012-P 1051 365 2.88 1047 369 2.84 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER | kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 | 18012- 546 184 2.97 544 186 2.92 3.72 | P 21012 602 211 2.85 599 214 2.81 3.67 | 2-P 2401 67 24 6 27 66 24 27 66 24 2.7 3.7 | 2-P 270 1 1 3 2 76 2 19 - 6 2 72 2 76 3 | D12-P 30 751 275 2.73 749 277 2.70 3.67 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 3.69 3.69 | 33012-P 942 336 2.80 939 339 2.77 3.73 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) | kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 | 18012- 546 184 2.97 544 186 2.92 3.72 620 | P 21012 602 211 2.85 599 214 2.81 3.67 684 | 2-P 2401 67 24 66 24 27 66 24 27 7 37 77 | 2-P 270 1 3 3 76 2 9 6 3 3 72 2 2 76 3 3 6 3 3 6 3 3 | D12-P 30 751 275 2.73 749 277 2.70 3.67 861 | 0012-P 3 845 303 2 2.79 842 306 2 306 2.75 3.69 962 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) | kW kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 | 2-P 2401 67 24 66 24 2.7 66 24 2.7 77 77 24 | 2-P 270 1 3 3 3 3 3 76 2 2 9 3 3 76 2 2 76 3 3 6 3 3 6 4 9 9 3 3 | O12-P 30 751 275 275 275 2.73 749 277 2.70 3.67 361 282 27 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 312 | 942 336 2.80 939 339 2.77 3.73 1078 349 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 3.10 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 | 2-P 2401 67 24 66 24 2.7 77 77 24 2 3.1 | 2-P 270 1 3 76 2 9 5 76 2 76 2 76 3 76 2 76 3 6 1 9 2 2 3 | 012-P 30 751 275 2.73 749 277 2.70 8.67 861 282 3.05 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) | kW kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 | 2-P 2401 67 24 66 24 2.7 66 24 7 23.7 777 24 3.1 777 777 | 2-P 270 1 3 2 3 2 2 9 - 2 6 2 2 76 2 2 66 9 2 9 2 2 7 8 2 | 012-P 30 751 275 2.73 749 2.77 2.70 3.67 861 282 3.05 862 862 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 963 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 | 2-P 2401 67 24 66 24 2.7 66 24 3.7 77 24 3.1 77 25 25 | 2-P 270 1 3 3 36 2 9 66 3 6 72 2 2 76 3 5 9 3 3 3 10 1 1 1 13 3 2 2 2 16 5 5 5 5 9 3 2 3 7 1 10 3 3 3 3 3 3 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3.61 282 3.05 362 283 283 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 945 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) COP (2) | kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 | 18012- 546 184 2.97 544 186 2.92 620 202 3.07 621 203 3.07 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 | 2-P 2401 67 24 66 24 2.7 66 24 3.7 77 24 3.1 77 25 3.1 | 2-P 270 1 3 3 3 3 3 76 2 2 99 7 6 90 7 1 1 2 3 7 1 3 0 2 3 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3861 282 3.05 362 283 3.05 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 963 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) COP (2) SCOP (3) Facem Efficience (2) | kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - | 18012- 546 184 2.97 544 186 2.92 620 202 3.07 621 203 3.07 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 | 2-P 2401 67 24 66 24 2.7 66 24 3.7 77 24 3.1 77 25 3.1 | 2-P 270 1 3 2 3 2 2 9 - - 6 2 2 76 3 - 6 1 - 9 - - 2 3 - 7 1 - 0 - - 1 - - | 012-P 30 751 275 275 277 277 277 3.67 861 282 3.05 862 283 3.05 - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 3.09 1079 350 3.08 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) | kW kW kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 5.224 2.306 | 2-P 2401 67 24 66 66 24 2.7 7 3.7 77 24 3.1 77 25 3.3.1 77 25 3.3.1 | 2-P 270 1 3 33 5 99 5 66 2 76 3 76 3 77 1 0 5 1 5 6 1 | 012-P 30 751 275 275 277 277 277 2.70 3.67 361 282 3.05 3.05 3.05 - - - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - - - | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - - | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - - - - - - - - - - - - - |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)SCOP (3)Energy Efficiency (3)QuantityDefinition | kW kW kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 6+2 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - - 6+6 2 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - - - - - - - - - - - - - - - - - | 2-P 2401 67 24 66 66 24 24 2.7 77 24 3.7 77 24 3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.3.1 77 25 3.1 77 25 3.1 77 77 25 3.1 77 77 25 3.1 77 77 77 25 3.1 77 77 25 3.1 77 77 77 25 3.1 77 77 77 77 77 24 3.1 77 77 77 77 77 77 77 77 77 77 77 77 24 3.1 77 77 77 77 77 77 77 77 77 77 24 77 77 77 77 77 77 24 77 77 77 77 77 77 77 24 77 77 77 77 77 77 77 77 77 77 25 3.1 77 77 77 77 77 77 77 77 77 77 77 77 77 | 2-P 270 1 3 3 76 2 3 99 5 6 72 2 3 66 1 9 7 1 3 0 3 1 1 2 3 6 1 1 6 0 1 | 012-P 30 751 275 2.73 749 277 2.70 3.67 861 282 3.05 862 283 3.05 - - - - - - - - - - - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - - 6+6 2 - | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - - 6+6 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) ScoP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity chose | kW kW kW kW kW kW kW kW | 16812-P 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 565 183 3.09 - - - 6+6 2 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - - 6+6 2 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - 646 22 | 2-P 2401 67 24 66 24 2.7 3.7 77 24 3.1 77 25 3.1 - - 66 - 67 24 3.1 77 24 - - - 6 - 6 - 6+ 2 | 2-P 270 1 3 3 33 3 3 76 2 3 99 3 3 66 3 3 7 1 3 0 3 3 6 1 3 6 1 3 | 012-P 30 751 275 2.73 749 2.77 2.70 3.67 861 282 3.05 362 283 3.05 - - - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - - 6+6 2 2 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 3.09 1079 350 3.09 - 6+6 2 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - - 6+6 2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Wetsner for wet | kW kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 565 183 3.09 - - 6+6 2 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 - 6+6 2 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - 646 2 2 | 2-P 2401 67 24 66 24 27 3.7 77 24 3.1 77 25 3.1 64 25 | 2-P 270 1 3 2 33 2 2 66 2 2 72 2 2 66 3 2 9 2 2 7 9 2 1 3 3 6 1 3 6 1 3 | 012-P 30 751 275 2.73 749 2.77 2.70 3.67 361 282 3.05 862 283 3.05 - - - 5+6 2 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Parageurg drage | kW kW kW kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 23.65 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 621 203 3.07 621 203 3.07 - - 6+6 2 26.09 60 | P 21012 602 211 2.85 599 214 2.81 3.66 684 223 3.07 685 224 3.06 - - - 685 224 224 3.06 - - - 28.70 28.70 28.70 28.70 28.70 28.70 28.70 28.70 28.70 20 | 2-P 2401 67 24 66 24 2.7 66 24 7.7 24 3.7 777 24 3.1 77 25 3.1 6 - 6 4 25 3.1 777 25 3.3.1 - 6 - 6 4 20 32. | 2-P 270 1 3 2 33 2 2 66 2 2 72 2 2 66 3 2 9 3 2 10 0 3 | 012-P 30 751 275 275 2.73 749 277 2.70 3.67 3661 282 3.05 3.62 283 3.05 - - - - 6+6 2 5.88 41 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - - 6+6 2 40.37 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - - 6+6 2 50.21 50.21 57 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Wotzer compensione | kW kW kW kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 - 6+6 2 - 23.65 49 90 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 620 90 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - 685 224 3.06 2.87 685 224 3.06 2.87 58 90 | 2-P 2401 67 24 66 24 2.7 66 24 3.7 77 24 3.1 77 25 3.1 - 6+ 25 3.1 - - 6+ 2 6 32. 41 32. | 2-P 270 1 3 3 33 3 3 76 2 3 99 3 3 72 2 3 66 10 3 66 10 3 00 3 3 00 3 3 | 012-P 30 751 275 275 277 277 277 2.70 3.67 3861 282 3.05 3862 283 3.05 - - 3+66 2 5.88 41 160 160 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 1E0 1 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - 6+6 2 50.21 52 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Paware unply | kW kW kW kW kW kW kW kW kW kW kW kW | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 - 6+6 2 23.65 49 80 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 620 60 80 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - 685 224 3.06 2.24 3.06 2.24 3.06 2.24 3.06 2.24 3.06 2.24 3.06 2.24 3.06 2.24 3.07 5.24 5.25 5.27 5.27 5.27 5.27 5.27 5.27 5.27 | 2-P 2401 67 24 66 24 77 66 24 3.7 77 24 3.1 77 25 3.1 6 44 5 3.1 6 32 6 32 44 15 | 2-P 270 1 3 3 3 3 3 76 2 2 9 3 3 72 2 2 76 3 3 1 3 5 0 3 3 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3.61 282 3.05 3.05 3.05 - - - 6+6 2 2 - 5.88 41 150 - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 150 - | 33012-P 942 336 2.80 939 339 2.77 339 2.77 339 2.77 339 339 2.77 339 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 - 6+6 2 50.21 52 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max, running current | kW kW kW kW kW kW kW kW kW kW kW kV kV kV kV h/Hz kPa DN V/Ph/Hz | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 2 23.65 49 80 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 6+6 58 80 - | 2-P 2401 67 24 66 24 2.7 66 24 3.7 77 24 3.7 77 24 3.1 77 25 3.31 - 6 6+ 2 - 6 32. 43 15 | 2-P 270 1 3 3 5 99 5 6 2 76 3 76 3 7 1 0 5 10 06 06 3 9 3 0 3 0 5 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3.61 282 3.05 362 283 3.05 - - - - - - - - 5.88 41 150 - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 150 - | 33012-P 942 336 2.80 939 339 339 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 746 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max, running current Max, running current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - - 6+6 2 2 23.65 49 80 - | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 375 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 6+6 58 80 - - 28.7/(| 2-P 2401 67 24 66 66 24 3.7 77 24 3.1 77 24 3.1 77 25 3.1 - 6 6+ 25 32. 6 32. 48 60 | 2-P 270 1 3 3 76 2 9 99 5 3 66 3 3 7 4 0 1 3 3 6 1 1 6 0 3 0 3 3 0 3 3 0 5 1 | 012-P 30 751 275 2.75 2.75 2.77 2.77 2.70 3.67 361 282 3.05 362 283 3.305 - - - - 5.88 41 150 545 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - - 6+6 2 - 40.37 51 150 - | 33012-P 942 336 2.80 939 339 3377 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 7466 1007 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static processes | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - - 6+6 2 - - 6+6 2 - - 6+6 2 - - - 6+6 2 - - - - - 6+6 2 - - - - - - - - - - - - - - - - - - | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 375 543 172 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 646 3.06 224 3.06 - - 646 3.07 685 80 - - - 646 4.22 3.07 685 80 - - - 646 3.07 685 80 - - - 685 80 - - - - 685 80 - - - - - - - - - - - - - | 2-P 2401 67 24 66 24 6. 2.7 6. 3.7 77 24 3.1 77 24 3.1 77 24 3.1 77 25 3.1 - - 6 32. 61 32. 63 32. 48 66 66 15 | 2-P 270 1 3 2 33 2 3 76 2 2 66 2 2 7 4 0 1 2 3 0 2 3 0 3 3 0 3 3 0 5 1 2 1 1 | 012-P 30 751 275 2775 277 2.70 3.67 3.67 361 282 3.05 3.05 3.05 3.05 3.05 3.05 3.05 5.88 41 150 545 759 212 | 0012-P 3 845 303 2.79 842 306 2 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 51 150 598 812 183 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 3.49 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 171 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 746 1007 131 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pure vanable static pressure | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 - 6+6 2 - - 6+6 2 - - 6+6 2 - - - 6+6 2 - - - 518 980 - - - - - - - - - - - - - - - - - - - | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 375 543 173 100 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 646 2 28.76 58 80 - 28.76 58 80 - - 28.76 58 20 - - - - - - - - - - - - - | 2-P 2401 67 24 66 24 2.7 66 2.4 3.7 77 24 3.1 77 24 3.1 77 24 3.1 77 25 3.1 6 3.2 6+ 2 6 32. 6 32. 6 32. 6 32. 6 32. 6 66 15 48 66 16 | 2-P 270 1 3 2 76 2 2 99 7 1 66 2 2 7 1 1 0 2 2 1 3 3 0 3 3 0 3 3 0 5 1 2 1 2 | 012-P 30 751 275 275 273 749 277 2.70 3.67 361 282 3.05 3.62 283 3.05 - - - - - - 5+6 2 5.88 41 150 - 545 759 212 150 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.69 962 312 3.08 963 313 3.08 - 6+6 2 1 40.37 51 150 598 812 183 150 150 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 3.49 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 170 150 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 50 746 1007 131 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections Powers upply | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 565 183 3.09 - - - 6+6 2 2 3.65 49 80 80 350 518 191 100 89 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 375 543 173 100 70 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 646 2 28.70 58 80 - 28.70 58 80 - 28.70 58 80 - 28.70 59 80 - 28.70 59 80 - - - - - - - - - - - - - | 2-P 2401 67 24 66 24 27 3.7 77 24 3.1 77 24 3.1 77 24 3.1 77 25 3.1 - 6 64 2 65 32. 48 66 16 16 15 7 | 2-P 270 1 3 2 33 2 2 66 2 2 7 2 2 66 10 2 00 3 3 00 3 3 10 00 3 9 0 1 10 1 2 11 2 1 2 1 1 11 2 1 12 1 2 11 2 1 12 3 1 | 012-P 30 751 275 275 2.73 749 277 2.70 3.67 361 282 3.05 3.67 362 283 3.05 - - - 5+6 2 5.88 41 150 - 545 759 212 150 73 - | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 150 - 598 812 183 150 73 - | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 171 150 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 50 746 1007 131 150 746 150 746 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 - - 6+6 2 2 3.65 49 80 - - 518 191 100 68 8 55 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 646 2 26.09 60 80 375 543 173 100 67 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - - - - 685 224 3.06 - - - - - - - - - - - - - - - - - - - | 2-P 2401 67 24 66 24 2.7 66 24 2.7 3.7 77 24 3.1 77 24 3.1 77 25 3.1 6 4 25 3.1 5 3.2 6+ 2 6 45 48 66 16 15 77 7 | 2-P 270 1 3 33 2 76 2 99 3 72 2 66 3 9 3 1 3 66 10 00 3 00 3 00 5 11 2 12 1 13 3 00 3 11 3 12 1 13 1 | 012-P 30 751 275 275 273 749 277 2.70 3.07 361 282 3.05 3.05 362 283 3.05 - - - - - 546 2 55.88 41 150 - 545 759 212 150 73 70 | 0012-P 3 845 303 3.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 150 - 598 812 183 150 73 70 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 171 150 73 70 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 746 1007 131 150 74 71 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections ST version (4) With SL accessory (4) SSL version (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2.91 493 172 2.87 3.71 564 182 3.10 565 183 3.09 - - 6+6 2 - - 6+6 2 - - 6+6 2 - - 6+6 2 - - 53.65 49 80 - - - 618 518 191 100 68 65 568 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 621 203 3.07 62 26.09 60 80 375 543 173 100 70 67 62 | P 21012 602 211 2.85 599 214 2.81 3.66 684 223 3.07 685 224 3.06 - - - - 685 224 3.06 - - - - - 646 2 2 28.70 58 80 - - - 28.70 59 9 60 422 59 9 60 40 20 11 2.85 59 9 2.14 2.81 59 9 2.14 2.81 59 9 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.14 2.81 2.81 5.99 2.14 2.81 5.99 2.14 2.81 5.99 2.85 5.99 2.14 2.81 5.99 2.24 2.81 5.99 2.24 2.24 5.99 2.24 2.24 5.99 2.24 5.99 2.24 2.24 5.99 2.24 5.99 5.99 2.24 5.99 5.99 5.99 5.99 5.99 5.99 5.99 5.9 | 2-P 2401 67 24 66 24 2.7 66 24 2.7 3.7 777 24 3.1 77 24 3.1 77 25 3.1 - 6 4 3.1 5 3.2 6+ 2 6 45 48 66 16 15 7.3 70 6 16 7.3 70 | 2-P 270 1 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3.61 282 3.05 3.62 283 3.05 3.05 - 546 2 55.88 41 150 759 212 150 73 70 64 - | 0012-P 3 845 303 3.79 842 306 2.75 3.69 962 312 3.08 963 313 3.08 - 6+6 2 40.37 51 150 - 598 812 183 150 73 70 | 33012-P 942 336 2.80 939 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 171 150 73 70 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 746 1007 131 150 74 150 74 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) With SL accessory (4) SSL version (4) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812-F 495 170 2,91 493 172 2,87 3,71 564 182 3,10 565 183 3,09 - - - 6+6 2 2 23.65 49 80 - - 2 23.65 49 80 - - 2 350 518 191 100 68 65 65 65 60 3394 | 18012- 546 184 2.97 544 186 2.92 3.72 620 202 3.07 621 203 3.07 - 6+6 2 26.09 60 80 375 543 173 100 70 62 3463 | P 21012 602 211 2.85 599 214 2.81 3.67 684 223 3.07 685 224 3.06 - - 646 58 80 - 28.76 58 80 - 28.76 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 80 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - 646 58 - - - 646 58 - - - 646 58 - - - 646 58 - - - - 646 58 - - - - 646 - - - - - - - - - - - - - | 2-P 2401 67 24 66 66 27 3.7 77 24 3.7 77 24 3.1 77 25 3.31 - 6 6+ 25 32. 6 32. 48 66 15 70 70 70 6 15 70 36 | 2-P 270 1 3 3 5 66 2 99 5 66 1 99 5 12 2 7 1 0 5 10 5 10 5 11 2 2 1 0 5 11 2 11 2 12 2 11 2 12 3 0 5 33 0 33 0 33 3 0 5 33 3 37 4 | 012-P 30 751 275 275 273 749 277 2.70 3.67 3.61 282 3.05 3.62 283 3.05 - - 646 2 5.88 41 150 759 212 150 73 70 64 200 | 0012-P 3 845 303 2.79 842 306 2.75 3.69 962 312 3.69 963 313 3.08 - 6+6 2 40.37 51 598 812 183 150 73 70 65 4518 | 33012-P 942 336 2.80 939 339 339 339 339 339 339 339 339 2.77 3.73 1078 349 3.09 1079 350 3.08 - 6+6 2 45.01 42 150 676 938 171 150 73 70 | 36012-P 1051 365 2.88 1047 369 2.84 3.81 1210 383 3.16 1211 384 3.15 6+6 2 50.21 52 150 746 1007 131 150 746 710 74 71 |

| DIME | INSIONS | | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P | 16812-P | 18012-P | 21012-P | 24012-P | 27012-P | 30012-P | 33012-P | 36012-P |
|------|---------|----|-------|-------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| 1 | STD | mm | 2800 | 2800 | 2800 | 2800 | 4000 | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 | 7200 |
| L | SSL | mm | 2800 | 2800 | 2800 | 2800 | 4000 | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 6200 | 7200 | 7200 | | |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD/SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

CLEARANCE AREA

CHA/K 726-P÷36012-P

500 1800 1000 1800



NOTES

1.

- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013. Sound pressure level measured in free field conditions at 1 m from the unit. According to 100 2744
- 4. to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.



6

FROM 208 KW TO 1102 KW.



CHA/K/FC 726-P+36012-P

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGER.



The liquid Chillers of the CHA/K/FC 726-P÷36012-P series, with R410A refrigerant, provide advanced technology, flexible and reliable, through an intelligent control module which optimizes the operating times and the powers delivered by the Scroll compressors, according to the needs of the systems, both civil and industrial, where the production of chilled water is required in continuous service throughout the year. During the cold months, in FREE-COOLING operating mode, the liquid returning from the system is cooled directly, by way of the forced convection of outside air through the condensing coil, thus reducing the energy required for the Scroll compressors operation that the units are equipped with. A system of 3-way valves, controlled by the electronic microprocessor controller that manages the entire unit, can, depending on outside air temperature, operate in the CHILLER, FREE-COOLING or MIXED (CHILLER and FREE-COOLING at the same time) mode. CHA/K/FC 726-P÷36012-P allows the reduction of inrush currents generated, the elimination of inertial accumulation tanks and an excellent silent functioning, as the fans adjust their speed to the actual load of the system, providing great benefits especially at night.



FREE COOLING

VERSION

CHA/K/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.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valve on liquid line in 1048-P÷36012-P models.
- · Electronic thermostatic valve.
- ٠ Digital high and low pressure gauges.
- R410A refrigerant. .
- Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic | circuit | breakers |
|----|-----------|---------|----------|
|----|-----------|---------|----------|

- SL Unit silencement RFM Cooling circuit shut-off valve on discharge line RFL Cooling circuit shut-off valve on liquid line
- Low water temperature Kit ΒT
- FC EC Inverter fans
- Coil with pre-coated fins TΧ
- PS Single circulating pump
- PSI Inverter single circulating pump
- PD Double circulating pump
- PDI Inverter double circulating pump

SS Soft start

- IS Modbus RTU protocol, RS485 serial interface
- BACnet MSTP protocol, RS485 ISB serial interface
- ISBT BACnet TCP/IP protocol, Ethernet
- port ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal
- Remote set-point, 4-20 mA signal IAA
- IAS Remote signal for second set-point
 - activation
 - IDL Demand limit from digital input

- High and low pressure gauges MN
- CR Remote control panel RP
 - Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers



CHA/K/FC 726-P+36012-P

pressure

Max. running current

Max. starting current

Pump available static

With SL accessory (3)

Water connections

STD version (3)

Transport weight

Operating weight

Electrical

characteristics

Unit with pump

Sound pressure

Weights



| MODEL | | | 726-P | 786-P | 826-P | 906-P | 1048 | B-P 1128 | -P 1208-I | P 13010-P | 15010-P |
|--------------------|-----------------------------------|-----------------------|---------|---------|-------|--------|--------|----------------|-------------|-----------|----------|
| | Cooling capacity (1) | kW | 208 | 236 | 263 | 290 | 32 | 8 365 | 401 | 441 | 483 |
| Cooling | Absorbed power (1) | kW | 76 | 87 | 88 | 98 | 10 | 8 123 | 132 | 147 | 163 |
| 0 | EER (1) | | 2.74 | 2.71 | 2.99 | 2.96 | 3.0 | 4 2.9 | 3.04 | 3.00 | 2.96 |
| Free Cooling avale | Air temperature (2) | °C | -2.0 | -2.8 | -2.5 | -0.2 | -2. | 7 -3.5 | i -1.0 | -2.0 | -1.0 |
| Free-Cooling cycle | Absorbed power (2) | kW | 7.0 | 7.0 | 10.5 | 10.5 | 14. | 0 14.0 |) 14.0 | 14.0 | 17.5 |
| | Quantity | n° | 3+3 | 3+3 | 3+3 | 3+3 | 4+ | 4 4+4 | 4+4 | 5+5 | 5+5 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | | | 4 | | | | | 6 |
| | Water flow | l/s | 11.02 | 12.38 | 13.87 | 15.31 | 17.3 | 32 19.3 | 4 21.21 | 23.33 | 25.52 |
| Water circuit | Pressure drops | kPa | 102 | 126 | 165 | 124 | 11 | 2 108 | 115 | 100 | 120 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 10 | 0 100 | 100 | 100 | 100 |
| Fleetsieel | Power supply | V/Ph/Hz | | | | | 400/3 | 3/50 | | | |
| Electrical | Max. running current | A | 152 | 166 | 187 | 199 | 23 | 2 249 | 266 | 282 | 332 |
| | Max. starting current | A | 276 | 299 | 354 | 367 | 36 | 5 417 | 433 | 415 | 500 |
| Unit with pump | Pump available static pressure | kPa | 155 | 165 | 115 | 140 | 12 | 5 110 | 130 | 140 | 115 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 10 | 0 100 | 100 | 100 | 100 |
| Sound proceuro | STD version (3) | dB(A) | 66 | 67 | 68 | 69 | 69 |) 70 | 70 | 70 | 71 |
| Sound pressure | With SL accessory (3) | dB(A) | 64 | 64 | 65 | 66 | 66 | 67 | 67 | 67 | 67 |
| Woights | Transport weight | Kg | 2175 | 2185 | 2360 | 2435 | 299 | 30 302 | 3220 | 3510 | 3920 |
| vveignts | Operating weight | Kg | 2310 | 2320 | 2500 | 2630 | 319 | 90 322 | 3470 | 3770 | 4250 |
| MODEL | | | 16812-P | 18012-P | 21012 | -P 240 | 12-P | 27012-P | 30012-P | 33012-P | 36012-P |
| | Cooling consoity (1) | k\۸/ | 526 | 500 | 665 | 7 | 20 | 027 | 020 | 1014 | 1102 |
| Cooling | Absorbed power (1) | | 170 | 100 | 220 | 21 | 36 | 205 | 240 | 260 | /12 |
| Cooling | FER (1) | KVV | 2 00 | 2.06 | 2.30 | 2 | 77 | 2 71 | 2 71 | 2.76 | 2.67 |
| | Air tomporature (2) | ംറ | 2.33 | 2.30 | 2.03 | 2. | 11 | 2.71 | 2.71 | 0.1 | 2.07 |
| Free-Cooling cycle | All temperature (2) | | 17.5 | 17.5 | -3.0 | -0 | 0.0 | 24.5 | -0.1 | 21.5 | 21 5 |
| | Absorbed power (2) | KVV n ⁰ | | 6.6 | 6,6 | 6 | 1.0 | <u></u> 6+6 | <u>20.0</u> | 51.5 | <u> </u> |
| Comprossor | Refrigerant eircuite | n ^o | 2 | 2 | 2 | | 7 | 2 | 2 | 2 | 2 |
| 001111163301 | Capacity stops | n° | ۷. | L | Z | · | - 0 | ۷. | 2 | 2 | ۷ |
| | Water flow | 1/6 | 28.28 | 31.00 | 25.11 | 30 | 80 | 13.64 | /18 52 | 52 51 | 58 13 |
| Water circuit | Pressure drops | kPa | 121 | 132 | 1/10 | 1 | 52 | 172 | 151 | 162 | 173 |
| | Water connections | | 125 | 125 | 140 | 1 | 50 | 150 | 150 | 150 | 150 |
| | Power supply | V/Ph/Hz | 1ZJ | 120 | 120 | 16 | /100/3 | 2/50 | 130 | 100 | 100 |
| Flootnigal | i owor auppry | V/II/II/ | | | | | 400/0 | J/ JU | | | |

A

Α

kPa

DN

dB(A)

dB(A)

Kg Kg

5240

| DIME | NSIONS | | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P | 16812-P | 18012-P | 21012-P | 24012-P | 27012-P | 30012-P | 33012-P | 36012-P |
|------|--------|----|-------|-------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| L | STD | mm | 4000 | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 6200 | 7200 | 7200 | 8400 | 9600 | 10600 | 10600 |
| W | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| 11 | OTD | | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 | 0000 |

| DIM | ENSION | IS | 726-P | 786-P | 826-P | 906-P | 1048-P | 1128-P | 1208-P | 13010-P | 15010-P | 16812-P | 18012-P | 21012-P | 24012-P | 27012-F | 9 30012-P | 33012-P | 36012-P |
|-----|--------|----|-------|-------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|---------|---------|-----------|---------|---------|
| _ | STD | mm | 4000 | 4000 | 4000 | 4000 | 5000 | 5000 | 5000 | 5000 | 6200 | 6200 | 6200 | 7200 | 7200 | 8400 | 9600 | 10600 | 10600 |
| N | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| - | STD | mm | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 |
| | | 1 | | | | | | | | | | | | | | | 1 | | |

CHA/K/FC 726-P÷36012-P

500 1800 1000 1800



774

7410

7530

- 1. Chilled water (with ethylene glycol at 30%) from 15 to 10 °C, ambient air temperature 35 °C.
- Ambient air temperature at which the cooling capacity indicated in point (1) is 2. reached.
- 3. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.



CHA/K 726÷36012

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCROLL COMPRESSORS AND SHELL AND TUBE EXCHANGER.



CHA/K 726÷36012 is an extremely flexible and reliable machine: an intelligent control module optimizes functioning times and supplied power from the Scroll compressors based on heat load demands in the system. The machine is equipped with R410A refrigerant, guaranteeing full adherence to the protocol standards in the Kyoto Treaty (O.D.P.=0), and features high energy yield, elimination of generated power surges, elimination of inertial accumulation tanks and excellent silent functioning, since the fans adjust their speeds to the actual system load, providing benefits especially during the night. The use of components built in large series, making them highly reliable, and the management of an elevated number of compressor will not compromise cooler functioning, which will continue to function with decreased power levels. In addition, maintenance operations are decisively reduced due to the high reliability of the machines and their components.

@multi power

VERSION

| VENOIOIT | |
|----------------------|-------------------------------------|
| CHA/K | CHA/K/SSL |
| Cooling only | Super silenced cooling only |
| CHA/K/WP | CHA/K/WP/SSL |
| Reversible Heat Pump | Super silenced 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.
- 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 independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valve on liquid line in 1048÷36012 models.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R410A refrigerant.
- Electrical board includes: main switch with door safety interlock, fuses or magnetothermic switches, overload protection for compressors and thermocontacts for fans.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | PDI | Inverter double circulating pump |
|-------|-----------------------------------|------|------------------------------------|
| SL | Unit silencement | FE | Antifreeze heater for evaporator |
| RFM | Cooling circuit shut-off valve on | SS | Soft start |
| | discharge line | IS | Modbus RTU protocol, RS485 serial |
| RFL | Cooling circuit shut-off valve on | | interface |
| | liquid line | ISB | BACnet MSTP protocol, RS485 |
| CT | Condensing control down to 0 °C | | serial interface |
| CC | Condensing control down to -20 °C | ISBT | BACnet TCP/IP protocol, Ethernet |
| ΒT | Low water temperature Kit | | port |
| EC | EC Inverter fans | ISL | LonWorks protocol, FFT-10 serial |
| HR | Desuperheater | | interface |
| HRT/S | Total heat recovery in series | IAV | Remote set-point, 0-10 V signal |
| HRT/P | Total heat recovery in parallel | IAA | Remote set-point, 4-20 mA signal |
| ТΧ | Coil with pre-coated fins | IAS | Remote signal for second set-point |
| PU | Single circulating pump | | activation |
| PUI | Inverter single circulating pump | IDL | Demand limit from digital input |
| PD | Double circulating pump | | |

| MN | High and low pressure gauges |
|----|------------------------------|
| CR | Remote control panel |

- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers
- FL Flow switch



CHA/K 726+36012





| MODEL | | | 726 | 786 | 826 | 906 | 1048 | 1128 | 1208 | 13010 | 15010 |
|--|--|---|---|---|--|--|---|---|---|---|---|
| | Cooling capacity (1) | kW | 200 | 224 | 248 | 270 | 302 | 328 | 367 | 404 | 445 |
| Coolina | Absorbed power (1) | kW | 70 | 80 | 86 | 97 | 105 | 115 | 121 | 136 | 158 |
| g | EER (1) | | 2.86 | 2.80 | 2.88 | 2.78 | 2.88 | 2.85 | 3.03 | 2.97 | 2.82 |
| | Cooling capacity (1) | kW | 199 | 223 | 247 | 269 | 301 | 326 | 365 | 403 | 444 |
| Cooling (EN1/E11) | Absorbed power (1) | kW | 71 | 81 | 87 | 98 | 106 | 117 | 123 | 137 | 159 |
| COOIIIIg (EN 1451 I) | EER (1) | | 2.80 | 2.75 | 2.84 | 2.74 | 2.84 | 2.79 | 2.97 | 2.94 | 2.79 |
| | ESEER | | 3.47 | 3.69 | 3.70 | 3.62 | 3.72 | 3.72 | 3.80 | 3.83 | 3.86 |
| | Heating capacity (2) | kW | 229 | 252 | 280 | 304 | 336 | 362 | 401 | 442 | 512 |
| Heating | Absorbed power (2) | kW | 74 | 83 | 91 | 106 | 109 | 123 | 130 | 145 | 167 |
| | | 114/ | 3.09 | 3.04 | 3.08 | 2.87 | 3.08 | 2.94 | 3.08 | 3.05 | 3.07 |
| | Heating capacity (2) | KVV LVA/ | 229 | 252 | 280 | 305 | 330 | 303 | 402 | 443 | 513 |
| Heating (EN14E11) | Absorbed power (2) | KVV | 2.00 | 2 02 | 91.4 | 2.06 | 2.07 | 124 | 2.07 | 2.04 | 2.06 |
| nealing (EN14011) | | | 2.00 | 2.03 | 2.07 | 2.00 | 2.07 | 2.93 | 2.60 | 2 70 | 2 71 |
| | Energy Efficiency (3) | 0/2 | 1/15 | 1/6 | 1/15 | 125 | 1/17 | 130 | 1/15 | 1/15 | 1/15 |
| | Quantity | n° | 3+3 | 3+3 | 3+3 | 3+3 | 4+4 | 4+4 | 4+4 | 5+5 | 5+5 |
| Compressor | Befrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Comprocess | Capacity steps | n° | | - 6 | | | | | 8 | | |
| | Water flow | I/s | 9.44 | 10.58 | 11.71 | 12.75 | 14.26 | 15.49 | 17.33 | 19.08 | 21.01 |
| Evaporator | Pressure drops | kPa | 45 | 42 | 45 | 50 | 48 | 56 | 55 | 45 | 33 |
| I. | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 125 |
| | Power supply | V/Ph/Hz | | | | | 400/3/5 | 0 | | | |
| Electrical characteristics | Max. running current | A | 152 | 166 | 179 | 191 | 216 | 233 | 250 | 274 | 316 |
| | Max. starting current | A | 276 | 299 | 347 | 359 | 349 | 401 | 418 | 407 | 484 |
| Unit with numn | Pump available static pressure | kPa | 195 | 175 | 235 | 210 | 230 | 220 | 200 | 190 | 170 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 |
| a | STD version (4) | dB(A) | 66 | 66 | 67 | 69 | 67 | 69 | 70 | 68 | 69 |
| Sound pressure | With SL accessory (4) | dB(A) | 63 | 63 | 64 | 66 | 64 | 65 | 66 | 65 | 66 |
| | SSL Version (4) | dB(A) | 5/ | 5/ | 59 | 2002 | 58 | 60 | bZ | 2601 | 01 |
| Weights | Operating weight | Kg Ka | 1703 | 1723 | 1013 | 2003 | 2203 | 2002 | 2042 | 2091 | 2203 |
| | operating weight | I NU I | 17:10 | 1//0 | 1000 | 2115111 | | | ///// | 7700 | .).)()() |
| MODEL | | 1 5 1 | 10010 | 10010 | 1000 | 2000 | 2010 | 2000 | | 00040 | 00000 |
| MODEL | | | 16812 | 18012 | 2101 | 2 240 |)12 2 | 27012 | 30012 | 33012 | 36012 |
| MODEL | Cooling capacity (1) | kW | 16812 510 | 18012 551 | 2101: 614 | 2 240 | 12 2 | 27012 766 | 30012 862 | 33012 961 | 36012 1062 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) | kW kW | 16812 510 174 | 18012 551 186 | 2101: 614 214 | 2 240 68 | 012 2 14 | 27012 766 281 | 30012 862 307 | 33012 961 340 | 36012 1062 369 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) | kW kW | 16812 510 174 2.93 508 | 18012 551 186 2.96 | 21012 614 214 2.87 611 | 2 240 68 25 2.7 | 12 2 14 10 74 | 766 281 2.73 | 30012 862 307 2.81 959 | 33012 961 340 2.83 959 | 36012 1062 369 2.88 1059 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) | kW kW kW | 16812 510 174 2.93 508 176 | 18012 551 186 2.96 549 | 2101: 614 214 2.87 611 217 | 2 240 68 25 2.7 68 | 012 2 14 10 74 12 | 766 281 2.73 763 | 30012 862 307 2.81 858 211 | 33012 961 340 2.83 958 242 | 36012 1062 369 2.88 1058 272 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) | kW kW kW kW | 16812 510 174 2.93 508 176 2.89 | 18012 551 186 2.96 549 188 2.92 | 2101: 614 214 2.87 611 217 2.82 | 2 240 68 25 2.7 68 25 2.7 | 012 2 14 10 12 12 12 12 12 12 12 12 12 12 | 766 281 2.73 763 284 2.69 | 30012 862 307 2.81 858 311 2.76 | 33012 961 340 2.83 958 343 2.79 | 36012 1062 369 2.88 1058 373 2.84 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER | kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 | 18012 551 186 2.96 549 188 2.92 3.75 | 2101: 614 214 2.87 611 217 2.82 3.69 | 2 240 68 25 2.7 68 25 2.7 68 25 2.7 | 12 2 14 2 10 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 12 2 13 2 14 15 15 16 17 | 766 281 2.73 763 284 2.69 3.60 | 30012 862 307 2.81 858 311 2.76 3.67 | 33012 961 340 2.83 958 343 2.79 3.75 | 36012 1062 369 2.88 1058 373 2.84 3.80 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) | kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 | 18012 551 186 2.96 549 188 2.92 3.75 626 | 2101: 614 214 2.87 611 217 2.82 3.69 698 | 2 240 68 25 2.7 68 25 2.7 68 25 2.7 3.7 79 | 12 2 14 | 766 281 2.73 763 284 2.69 3.60 878 | 30012 862 307 2.81 858 311 2.76 3.67 981 | 33012 961 340 2.83 958 343 2.79 3.75 1100 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) | kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 | 12 2 14 | 766 281 2.73 763 2.84 2.69 3.60 878 2.88 288 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 3.0 | 12 2 14 10 10 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 12 13 12 14 12 15 12 16 12 17 11 17 108 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) | kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 3.0 79 | 112 2 14 0 10 1 12 1 12 1 17 1 17 1 18 2 12 1 13 1 14 1 15 1 16 1 17 1 18 1 19 1 | 27012 766 281 2.73 763 284 2.69 3.60 878 2.88 3.05 879 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) | kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 | 2 240 68 25 25 25 25 25 25 25 25 25 25 35 35 35 35 25 25 25 25 25 25 25 25 25 25 25 25 25 | 112 2 14 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 | 2 240 68 25 2.7 68 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 3.0 3.0 | 112 2 14 | 27012 766 281 2.73 763 2.84 2.69 3.60 878 288 3.05 879 289 3.04 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) | kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 | 2 240 68 25 2.7 68 68 25 2.7 3.7 79 25 3.0 79 79 25 3.0 3.0 | 112 2 14 0 174 2 172 2 173 1 174 1 175 1 176 1 177 1 188 1 177 1 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) | kW kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 | 2 240 68 25 25 25 25 25 25 25 25 3.0 79 25 3.0 79 25 3.0 79 | 112 2 14 0 174 2 174 2 177 1 177 1 177 1 18 2 17 1 17 1 18 1 177 1 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity | kW kW kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - - 6+6 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - - 6+6 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - - 60 6 6 - | 2 24C 68 25 2.7 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 79 79 79 79 79 79 79 79 | 112 2 14 0 174 2 12 2 12 2 17 1 17 1 17 1 18 2 17 6 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - - 6+6 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 1101 354 3.11 - - 6+6 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits | kW kW kW kW kW kW kW kW m° n° | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - - 6+6 2 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - - 6+6 2 | 2 24C 68 25 25 25 25 25 25 3.0 79 25 3.0 79 25 3.0 - - - - - - - - - - - - - | 112 2 14 0 174 2 172 2 173 1 177 1 177 1 178 2 188 1 177 1 188 1 177 1 188 1 177 1 188 1 177 1 18 1 19 1 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - - 6+6 2 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 160 - - 6+6 2 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps | kW kW kW kW kW kW kW kW n° n° n° n° n° n° | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.00 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - 6+6 2 2 | 2 240 68 25 2.7 2.7 68 25 2.5 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 | 112 2 14 0 17 1 17 1 17 1 17 1 18 2 17 1 18 0 17 1 18 0 19 0 10 0 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 - 50.15 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Proceute drape | kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - 646 2 2 28.99 227 2.08 226 2.09 2.09 2.00 2.00 2.00 2.00 2.00 2.00 | 2 240 68 25 2.7. 2.7. 2.5 2.5 2.5 2.5 2.5 2.5 3.7 79 2.5 3.6 - - - - - - 0 32.2 | 112 2 14 0 10 14 12 2 12 2 12 2 11 17 11 17 11 17 12 2 13 10 10 30 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 982 317 3.10 982 317 3.10 982 317 3.10 982 317 3.10 92 317 3.10 92 317 3.10 92 317 3.10 - 6+6 2 40.71 67 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 1.101 354 3.12 1.101 354 3.12 1.101 354 3.12 2 45.38 47 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 50.15 52 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Woter compositione | kW kW kW kW kW kW kW kW kW kW | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 | 2101: 614 214 217 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - - - - - - - - - - - | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.1 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 79 79 25 79 79 79 25 79 79 79 25 79 79 79 79 79 79 79 79 79 79 | 112 2 14 0 12 14 12 12 12 12 12 12 12 12 12 12 11 77 18 17 6 10 30 30 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 40.71 62 150 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - - 6+6 2 45.38 47 150 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 50.15 52 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply | kW b V(Pb/Hz | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 698 227 3.08 - - 6+6 2 28.99 59 125 | 2 240 68 25 2.7 68 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 64 - 22 3.1 79 25 3.0 79 25 3.0 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 79 79 25 79 79 79 25 79 79 79 25 79 79 79 79 25 79 79 79 79 79 79 79 79 79 79 | 112 2 14 0 0 74 12 2 14 1 17 1 17 1 18 2 19 2 10 30 10 30 10 30 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 - 6+6 2 40.71 62 150 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 - 50.15 52 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Flectrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max running current | kW k | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 350 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 698 227 3.08 - - 6+6 2 28.99 59 125 422 | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 64 22 3.1 79 25 3.0 79 79 25 79 79 25 79 79 25 79 79 25 79 79 79 25 79 79 25 79 79 79 79 25 79 79 79 79 79 79 79 79 79 79 | 112 2 14 0 0 74 12 2 12 1 17 1 17 1 18 2 12 1 130 1 14 1 15 10 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 - 6+6 2 40.71 62 150 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - - 6+6 2 - 50.15 52 150 - 746 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max starting current | kW kW kW kW kW kW kW kW kW kW kW kW kV kV kV kV kV kV kV kV kV kV kV kV | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 - 6+6 2 24.08 43 125 350 518 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 698 227 3.08 - - 6+6 4-6 2 28.99 59 125 422 600 | 2 240 68 25 2.7 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 64 64 25 3.1 79 25 3.1 8 79 25 3.1 8 79 25 3.1 8 79 25 3.1 8 79 25 3.1 8 79 25 3.1 8 8 8 8 8 8 8 8 8 8 8 8 8 | 112 2 14 0 174 2 174 2 12 2 17 1 177 1 18 2 12 2 130 3 6 10 30 3 30 3 30 3 2 2 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 - 6+6 2 40.71 62 150 598 812 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 6+6 2 50.15 52 150 - 746 1007 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 - 6+6 2 24.08 43 125 350 518 195 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - 646 646 2 28.99 59 125 422 600 165 | 2 240 68 25 2.7 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 - - - - - - - - - - - - - | 112 2 14 0 17 1 12 2 12 2 12 2 11 7 11 7 12 2 13 2 14 10 10 30 <td>27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195</td> <td>30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 - 6+6 2 40.71 62 150 598 812 170</td> <td>33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165</td> <td>36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14</td> | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 - 6+6 2 40.71 62 150 598 812 170 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 - 6+6 2 24.08 43 125 350 518 195 100 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 100 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 698 227 3.08 - 6+6 6+6 227 3.08 - 6+6 227 3.08 - 6+6 422 600 165 150 | 2 240 68 25 2.7 68 68 25 2.7 3.7 79 25 3.0 79 25 3.0 - - - - - - - - - - - - - | 12 2 14 0 0 74 12 2 12 2 12 1 77 1 10 2 11 7 12 6 10 30 30 5 10 30 5 2 5 0 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 150 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 40.71 62 150 598 812 170 150 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165 150 | 36012 1062 369 2.88 1058 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 50.15 52 150 746 1007 130 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Max. starting current Pump available static pressure Water connections STD version (4) | kW bN kPa DN dB(A) | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 350 518 195 100 68 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 100 70 | 2101: 614 214 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - 6+6 6+6 2 28.99 59 125 422 600 165 150 72 | 2 240 68 25 2.7 68 25 2.7 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 79 79 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 79 75 79 75 79 75 75 75 75 75 75 75 75 75 75 | 12 2 14 0 74 2 12 2 13 2 14 1 15 0 30 1 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 150 73 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 40.71 62 150 598 812 170 73 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165 150 73 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 50.15 52 150 746 1007 130 74 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) With SL accessory (4) | kW kPa DN dB(A) dB(A) | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 350 518 195 100 68 65 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 543 175 100 70 67 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - 646 2 2 8.99 59 125 59 125 59 125 59 125 600 165 150 072 69 | 2 240 68 25 2.7 68 25 2.7 3.7 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.0 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 3.1 79 79 25 79 79 79 25 79 79 79 79 79 79 79 79 79 79 | 12 2 12 2 14 0 17 1 17 1 17 1 17 1 17 1 17 1 17 1 18 1 2 - 8 1 10 30 6 - - - 10 30 5 - 2 - 5 - 3 - 0 3 | 27012 766 281 2.73 763 284 2.69 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 150 73 70 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 40.71 62 150 598 812 170 150 73 70 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 1101 354 3.12 1101 354 3.12 150 6+6 2 45.38 47 150 676 938 165 150 73 70 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 - 6+6 2 50.15 52 150 746 1007 130 150 74 71 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) With SL accessory (4) SSL version (4) | kW kPa DN V/Ph/Hz A kPa DN dB(A) dB(A) dB(A) | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 350 518 195 100 68 65 60 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 100 70 67 62 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - 646 2 28.99 125 - 422 600 165 150 72 9 64 | 2 240 68 25 25 25 25 25 25 3.0 79 79 25 3.0 79 79 25 3.0 79 79 25 3.0 79 79 25 3.0 79 79 25 79 79 25 3.0 79 79 25 79 79 25 79 79 79 25 70 79 79 79 79 79 79 79 79 79 79 | 12 2 12 2 14 0 14 12 12 2 12 12 17 11 17 11 17 11 17 12 18 12 2 13 10 30 30 10 30 10 5 10 10 30 5 12 15 12 10 3 10 10 | 27012 766 281 2.73 763 284 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 150 73 70 64 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 - 6+6 2 40.71 62 150 598 812 170 150 73 70 65 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165 150 73 70 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 6+6 2 50.15 52 150 746 1007 130 150 74 71 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure Weights | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) SCOP (3) Energy Efficiency (3) Quantity Refrigerant circuits Capacity steps Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (4) With SL accessory (4) SSL version (4) Transport weight | kW kPa DN dB(A) dB(A) kg | 16812 510 174 2.93 508 176 2.89 3.78 581 186 3.12 582 187 3.12 - 6+6 2 24.08 43 125 350 518 195 100 68 65 60 3383 | 18012 551 186 2.96 549 188 2.92 3.75 626 204 3.07 627 205 3.06 - 6+6 2 26.02 54 125 375 543 175 100 70 67 62 3565 | 2101: 614 214 2.87 611 217 2.82 3.69 698 226 3.09 699 227 3.08 - - - - 646 2 2 28.99 59 9 125 28.99 59 9 125 28.99 59 9 125 28.99 59 9 125 28.99 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 28.90 59 9 125 59 9 125 59 8 28.00 1 207 207 207 207 207 207 207 207 207 207 | 2 240 68 25 25 25 25 25 25 3.0 79 25 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 79 79 25 70 79 79 79 25 70 79 79 79 79 79 25 70 79 79 79 79 79 79 79 79 79 79 | 12 2 12 2 14 0 14 2 12 2 14 1 17 1 17 1 17 1 18 1 17 1 18 1 17 1 18 1 10 30 10 30 10 30 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 10 3 | 27012 766 281 2.73 763 284 3.60 878 288 3.05 879 289 3.04 - 6+6 2 36.17 55 150 0 545 759 195 150 73 70 64 | 30012 862 307 2.81 858 311 2.76 3.67 981 316 3.10 982 317 3.10 982 317 3.10 - 6+6 2 40.71 62 150 598 812 170 150 73 70 65 4705 | 33012 961 340 2.83 958 343 2.79 3.75 1100 353 3.12 1101 354 3.12 1101 354 3.11 - 6+6 2 45.38 47 150 676 938 165 150 73 70 5210 | 36012 1062 369 2.88 1058 373 2.84 3.80 1222 388 3.15 1223 389 3.14 6+6 2 50.15 52 150 746 1007 130 150 74 71 5330 |

DIMENSIONS 906 1048 1128 1208 13010 15010 16812 18012 21012 24012 30012 33012 36012 826 27012
 STD
 mm
 2800

 SSL
 mm
 2800
 2800 2800 2800 4000 7200 7200 L
 SSL
 mm
 2800
 2800
 2800
 2800
 4000
 4000
 4000
 5000
 5000
 5000
 6000
 6200
 7200
 7200

 STD/SSL
 mm
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2100 W 2200 2200 Η 2100 2100

CLEARANCE AREA

CHA/K 726÷36012





NOTES

2

Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013.

- 4 Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure.



FROM 49 KW TO 190 KW.



CHA/K/EP 182-P+693-P

AIRCOOLED 4-PIPE MULTIFUNCTIONAL UNITS WITH AXIAL FANS. SCROLL COMPRESSORS AND PLATE EXCHANGERS.



ENERGYPOWER is the range of multifunctional units for 4-Pipe systems with high efficiency. The units CHA/K/EP 182-P+693-P feature R410A refrigerant and Scroll compressors activated in series based on the requested thermal load, to reach high EER and ESEER/ IPLV energy values. Thanks to the advanced control system, the units can simultaneously fulfill the heating, cooling and domestic hot water request of the building. The unit can manage the opposed thermal loads at the same time and reach the highest possible efficiency. ENERGYPOWER units make the traditional layout of the technical plants easier because the production of thermal energy for the several users are joint in one unit only; the result is an advantage in terms of installation, maintenance and management and in the meantime of the comfort needs. As option also with EC Inverter axial fans.

ENERGY POWF

VERSION

CHA/K/EP

Multifunctional unit

CHA/K/EP/SSL

Super silenced Multifunctional unit

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Two copper tube and aluminum finned coils.
- Condenser AISI 316 stainless steel braze welded plates type, with one circuit on the refrigerant side and one on the water side. On the unit is always installed an antifreeze heater.
- Evaporator AISI 316 stainless steel braze welded plate type with one circuit on the refrigerant side and one on the water side, complete with water differential pressure switch. On the unit is always installed an antifreeze heater.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- 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 also allows the cooling
- functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | PDIH | Inverter |
|------|---|------|----------------------|
| SL | Unit silencement | | heating |
| RFM | Cooling circuit shut-off valve on discharge line | FG | Antifree and pipe |
| RFL | Cooling circuit shut-off valve on liquid line | FM | Antifree and pipe |
| ΒT | Low water temperature Kit | SS | Soft sta |
| EC | EC Inverter fans | TS | Touch s |
| ТΧ | Coil with pre-coated fins | WM | Web Me |
| PS | Single circulating pump | | monitor |
| PSI | Inverter single circulating pump | IS | Modbus |
| PD | Double circulating pump | | interfac |
| PDI | Inverter double circulating pump | ISB | BACnet |
| PSH | Single circulating pump heating | | serial in |
| | side | ISBT | BACnet |
| PSIH | Inverter single circulating pump heating side | ISL | port LonWor |
| PDH | Double circulating pump heating | IAV | interfac Remote |

| PDIH | Inverter double circulating pump |
|------|-----------------------------------|
| | heating side |
| G | Antifreeze heater for single pump |
| | and nines |

- eze heater for double pump es
- art
 - screen interface
- onitoring Wireless remote ring (GPRS/EDGE/3G/TCP-IP)
- s RTU protocol, RS485 serial e
- MSTP protocol, RS485 terface
- TCP/IP protocol, Ethernet
- rks protocol, FFT-10 serial e
- e set-point, 0-10 V signal
- IAA Remote set-point, 4-20 mA signal
- IAS Remote signal for second set-point activation
- IDL Demand limit from digital input

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards AG
- Rubber shock absorbers AM Spring shock absorbers

CHA/K/EP 182-P+693-P



| MODEL | | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 502-P | 603-P | 693-P |
|--------------------|-----------------------------------|---------|--------|--------|--------|--------|--------|----------|--------|--------|--------|-------|-------|
| | Cooling capacity (1) | kW | 48.6 | 55.9 | 63.2 | 72.2 | 81.8 | 92.7 | 105 | 118 | 134 | 159 | 190 |
| Cooling only | Absorbed power (1) | kW | 16.8 | 19.3 | 21.9 | 24.4 | 27.9 | 32.5 | 38.0 | 42.3 | 46.5 | 57.4 | 68.5 |
| U , | EER (1) | | 2.89 | 2.90 | 2.89 | 2.96 | 2.93 | 2.85 | 2.76 | 2.79 | 2.88 | 2.77 | 2.77 |
| | Heating capacity (2) | kW | 52.2 | 59.7 | 67.0 | 75.5 | 86.0 | 98.4 | 111 | 127 | 142 | 171 | 203 |
| Heating only | Absorbed power (2) | kW | 16.0 | 18.7 | 21.2 | 23.4 | 26.5 | 30.0 | 35.1 | 39.5 | 42.8 | 52.5 | 61.2 |
| | COP (2) | | 3.26 | 3.19 | 3.16 | 3.23 | 3.25 | 3.28 | 3.16 | 3.22 | 3.32 | 3.26 | 3.32 |
| | Cooling capacity (3) | kW | 49.6 | 56.5 | 62.9 | 71.8 | 83.3 | 94.0 | 110 | 126 | 140 | 168 | 203 |
| Cooling , Hosting | Heating capacity (3) | kW | 64.9 | 73.9 | 82.5 | 94.1 | 109 | 123 | 143 | 163 | 181 | 217 | 261 |
| Cooling + neating | Absorbed power (3) | kW | 15.3 | 17.4 | 19.6 | 22.3 | 25.2 | 29.4 | 32.6 | 37.2 | 40.7 | 49.0 | 58.4 |
| | TER (3) | | 7.48 | 7.49 | 7.42 | 7.44 | 7.63 | 7.38 | 7.76 | 7.77 | 7.89 | 7.86 | 7.95 |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 3 | 3 | 3 | 2 | 3 | 3 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Capacity steps | n° | | | 2 | | | | 3 | | 2 | | 3 |
| Evaporator cooling | Water flow | l/s | 2.32 | 2.67 | 3.02 | 3.45 | 3.91 | 4.43 | 5.02 | 5.64 | 6.40 | 7.60 | 9.08 |
| sido | Pressure drops | kPa | 35 | 41 | 53 | 50 | 49 | 51 | 38 | 46 | 50 | 52 | 52 |
| 3100 | Water connections | "G | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 3″ | 3″ |
| Condonaar booting | Water flow (3) | l/s | 2.49 | 2.85 | 3.20 | 3.61 | 4.11 | 4.70 | 5.30 | 6.07 | 6.78 | 8.17 | 9.70 |
| sido | Pressure drops (3) | kPa | 31 | 35 | 38 | 42 | 40 | 35 | 34 | 42 | 48 | 43 | 45 |
| | Water connections (3) | "G | 2 1⁄2″ | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½" | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 3″ | 3″ |
| Flootrical | Power supply | V/Ph/Hz | | | | | | 400/3/50 | | | | | |
| characteristics | Max. running current | A | 40 | 46 | 54 | 59 | 66 | 77 | 84 | 95 | 100 | 128 | 151 |
| | Max. starting current | A | 164 | 166 | 178 | 191 | 234 | 201 | 217 | 263 | 314 | 304 | 359 |
| Unit with pump | Pump available static pressure | kPa | 145 | 135 | 120 | 110 | 135 | 130 | 125 | 105 | 150 | 130 | 105 |
| cooling side | Water connections | "G | 2 ½" | 2 ½″ | 2 ½″ | 2 1⁄2″ | 2 ½" | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 2 1⁄2″ | 3″ | 3″ |
| Unit with pump | Pump available static pressure | kPa | 150 | 140 | 125 | 115 | 145 | 140 | 115 | 155 | 145 | 135 | 110 |
| neating side | Water connections | "G | 2 1⁄2″ | 2 ½″ | 2 1⁄2″ | 2 1⁄2″ | 2 ½" | 2 1⁄2″ | 2 ½" | 2 1⁄2″ | 2 ½″ | 3″ | 3″ |
| | STD version (4) | dB(A) | 60 | 62 | 62 | 63 | 63 | 63 | 65 | 65 | 69 | 70 | 70 |
| Sound pressure | With SL accessory (4) | dB(A) | 58 | 60 | 60 | 61 | 61 | 61 | 63 | 63 | 67 | 68 | 68 |
| | SSL version (4) | dB(A) | 55 | 57 | 57 | 58 | 58 | 58 | 60 | 60 | 64 | 65 | 65 |
| Woighte | Transport weight | Kg | 750 | 760 | 815 | 905 | 925 | 1030 | 1055 | 1085 | 1295 | 1500 | 1545 |
| vveigins | Operating weight | Kg | 765 | 775 | 830 | 925 | 950 | 1060 | 1085 | 1115 | 1335 | 1545 | 1595 |

| DIME | INSIONS | | 182-P | 202-P | 242-P | 262-P | 302-P | 363-P | 393-P | 453-P | 502-P | 603-P | 693-P |
|------|---------|----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| | STD | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 |
| L | SSL | mm | 2350 | 2350 | 2350 | 2350 | 2350 | 3550 | 3550 | 3550 | 3550 | 4700 | 4700 |
| W | STD/SSL | mm | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| H | STD/SSL | mm | 1920 | 1920 | 1920 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 | 2220 |

CLEARANCE AREA

CHA/K/EP 182-P÷693-P

300 800 800 1800



NOTES

- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Chilled water from 12 to 7 °C, heated water 1.
- 2. 3.
- from 40 to 45 °C. Sound pressure level measured in free field 4.
- conditions at 1 m from the unit. According to ISO 3744. N.B. Weights of SSL version are specified on
- technical brochure.





FROM 167 KW TO 643 KW.

CHA/K/EP 604-P÷2406-P

AIRCOOLED 4-PIPE MULTIFUNCTIONAL UNITS WITH AXIAL FANS, SCROLL COMPRESSORS AND PLATE EXCHANGERS.



6 54

ENERGYPOWER is the range of multifunctional units for 4-Pipe systems with high efficiency. The units CHA/K/EP 182-P+693-P feature R410A refrigerant and Scroll compressors activated in series based on the requested thermal load, to reach high EER and ESEER/ IPLV energy values. The units are characterized by double cooling circuit. Thanks to the advanced control system, ENERGYPOWER units can simultaneously fulfill the heating, cooling and domestic hot water request of the building. The unit can manage the opposed thermal loads at the same time and reach the highest possible efficiency. ENERGYPOWER units make the traditional layout of the technical plants easier because the production of thermal energy for the several users are joint in one unit only; the result is an advantage in terms of installation, maintenance and management and in the meantime of the comfort needs. As option also with EC Inverter axial fans.

ZENERGY **POWER**

VERSION

CHA/K/EP

Multifunctional unit

CHA/K/EP/SSL

Super silenced Multifunctional unit

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Scroll compressors with oil sight glass, internal overheat protection and crankcase heater.
- Axial fans directly coupled to an electric motor with external rotor.
- Two copper tube and aluminum finned coils.
- Condenser AISI 316 stainless steel braze welded plates type, with two independent circuits on the refrigerant side and one on the water side. On the unit is always installed an antifreeze heater.
- Evaporator AISI 316 stainless steel braze welded plates type with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch. On the unit is always installed an antifreeze heater.
- Electronic thermostatic valve.
- ٠ Digital high and low pressure gauges.
- 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | FG | Antifreeze heater for single pump |
|------|---|------|--|
| SL | Unit silencement | | and pipes |
| RFM | Cooling circuit shut-off valve on discharge line | FM | Antifreeze heater for double pump and pipes |
| RFL | Cooling circuit shut-off valve on | SS | Soft start |
| | liquid line | TS | Touch screen interface |
| ΒT | Low water temperature Kit | WM | Web Monitoring - Wireless remote |
| EC | EC Inverter fans | | monitoring (GPRS/EDGE/3G/TCP-IP) |
| ΤX | Coil with pre-coated fins | IS | Modbus RTU protocol, RS485 serial |
| PS | Single circulating pump | | interface |
| PSI | Inverter single circulating pump | ISB | BACnet MSTP protocol, RS485 |
| PD | Double circulating pump | | serial interface |
| PDI | Inverter double circulating pump | ISBT | BACnet TCP/IP protocol, Ethernet |
| PSH | Single circulating pump heating | | port |
| | side | ISL | LonWorks protocol, FFT-10 serial |
| PSIH | Inverter single circulating pump | | interface |
| | heating side | IAV | Remote set-point, 0-10 V signal |
| PDH | Double circulating pump heating | IAA | Remote set-point, 4-20 mA signal |
| | side | IAS | Remote signal for second set-point |
| PDIH | Inverter double circulating pump | | activation |

IDL Demand limit from digital input

LOOSE ACCESSORIES

- ΜN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers



heating side

CHA/K/EP 604-P÷2406-P



| MODEL | | 604-P | 724-P | 804-P | 904-P | 1004-P | 1104-P | 1206-P | 1506-P | 1806-P | 2006-P | 2206-P | 2406-P | |
|--------------------|-----------------------------------|---------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| | Cooling capacity (1) | kW | 167 | 190 | 216 | 241 | 264 | 301 | 339 | 395 | 459 | 522 | 583 | 643 |
| Cooling only | Absorbed power (1) | kW | 57 | 69 | 75 | 85 | 93 | 104 | 114 | 140 | 169 | 193 | 210 | 225 |
| o , | EER (1) | | 2.93 | 2.75 | 2.88 | 2.84 | 2.84 | 2.89 | 2.97 | 2.82 | 2.72 | 2.70 | 2.78 | 2.86 |
| | Heating capacity (2) | kW | 180 | 204 | 231 | 257 | 281 | 318 | 361 | 427 | 515 | 570 | 632 | 693 |
| Heating only | Absorbed power (2) | kW | 55 | 64 | 72 | 79 | 86 | 97 | 109 | 128 | 159 | 168 | 195 | 208 |
| | COP (2) | | 3.25 | 3.20 | 3.22 | 3.25 | 3.28 | 3.28 | 3.31 | 3.34 | 3.24 | 3.39 | 3.24 | 3.33 |
| | Cooling capacity (3) | kW | 170 | 195 | 214 | 243 | 270 | 303 | 334 | 405 | 465 | 543 | 594 | 652 |
| Cooling , Hosting | Heating capacity (3) | kW | 220 | 255 | 281 | 318 | 351 | 396 | 436 | 527 | 613 | 712 | 777 | 849 |
| Cooling + Heating | Absorbed power (3) | kW | 50 | 60 | 67 | 75 | 81 | 93 | 102 | 122 | 148 | 169 | 183 | 197 |
| | TER (3) | | 7.80 | 7.50 | 7.39 | 7.48 | 7.67 | 7.52 | 7.55 | 7.64 | 7.28 | 7.43 | 7.49 | 7.62 |
| | Quantity | n° | 4 | 4 | 4 | 4 | 4 | 4 | 6 | 6 | 6 | 6 | 6 | 6 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | | 2 | 1 | | | | | 6 | 3 | | |
| Evoporator cooling | Water flow | l/s | 7.98 | 9.08 | 10.32 | 11.51 | 12.61 | 14.38 | 16.20 | 18.87 | 21.93 | 24.94 | 27.85 | 30.72 |
| eido | Pressure drops | kPa | 34 | 33 | 36 | 35 | 42 | 36 | 45 | 44 | 53 | 43 | 34 | 40 |
| Side | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 150 | 150 | 150 |
| Condonaar booting | Water flow (3) | l/s | 8.60 | 9.75 | 11.04 | 12.28 | 13.43 | 15.19 | 17.25 | 20.40 | 24.61 | 27.23 | 30.20 | 33.11 |
| side | Pressure drops (3) | kPa | 35 | 36 | 39 | 30 | 37 | 33 | 43 | 43 | 42 | 49 | 48 | 54 |
| 3100 | Water connections (3) | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 150 | 150 | 150 |
| Electrical | Power supply | V/Ph/Hz | | | | | | 400/ | 3/50 | | | | | |
| characteristics | Max. running current | A | 133 | 151 | 171 | 186 | 201 | 227 | 255 | 301 | 386 | 416 | 453 | 483 |
| | Max. starting current | A | 301 | 328 | 347 | 400 | 415 | 488 | 432 | 515 | 647 | 755 | 792 | 822 |
| Unit with pump | Pump available static pressure | kPa | 175 | 170 | 145 | 140 | 125 | 145 | 145 | 140 | 100 | 160 | 160 | 140 |
| cooling side | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 150 | 150 | 150 |
| Unit with pump | Pump available static pressure | kPa | 165 | 160 | 145 | 145 | 125 | 140 | 140 | 135 | 105 | 150 | 140 | 120 |
| neating side | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 150 | 150 | 150 |
| | STD version (4) | dB(A) | 70 | 70 | 71 | 71 | 71 | 72 | 74 | 74 | 76 | 77 | 78 | 79 |
| Sound pressure | With SL accessory (4) | dB(A) | 68 | 68 | 69 | 69 | 69 | 70 | 72 | 72 | 74 | 75 | 76 | 77 |
| | SSL version (4) | dB(A) | 64 | 64 | 65 | 65 | 65 | 66 | 66 | 66 | 70 | 70 | 71 | 72 |
| Woighte | Transport weight | Kg | 2200 | 2230 | 2350 | 2390 | 2420 | 3180 | 3420 | 3530 | 4530 | 4600 | 5320 | 5350 |
| vveigiits | Operating weight | Kg | 2300 | 2330 | 2450 | 2500 | 2530 | 3310 | 3560 | 3680 | 4730 | 4840 | 5630 | 5670 |

| DIME | INSIONS | | 604-P | 724-P | 804-P | 904-P | 1004-P | 1104-P | 1206-P | 1506-P | 1806-P | 2006-P | 2206-P | 2406-P |
|------|---------|----|-------|-------|-------|-------|--------|--------|--------|--------|--------|--------|--------|--------|
| | STD | mm | 3350 | 3350 | 3350 | 3350 | 3350 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 | 7200 |
| L | SSL | mm | 3350 | 3350 | 3350 | 5000 | 5000 | 5000 | 6200 | 6200 | 7200 | 7200 | 7200 | 7200 |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H | STD/SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 |

CLEARANCE AREA

CHA/K/EP 604-P÷2406-P

500 1800 1000 1800



NOTES

- 1. Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.
 Chilled water from 12 to 7 °C, heated water
- from 40 to 45 °C.
 Sound pressure level measured in free field
- Sound pressure level measured in tree field conditions at 1 m from the unit. According to ISO 3744.
 N.B. Weights of SSL version are specified on
- N.B. Weights of SSL version are specified on technical brochure.





FROM 278 KW TO 1133 KW.



CHA/IY/EP 1352÷4402

AIRCOOLED 4-PIPE MULTIFUNCTIONAL UNITS WITH AXIAL FANS, INVERTER SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGERS.



ENERGYPOWER is the range of multifunctional units for 4-Pipe systems with high efficiency. The units CHA/IY/EP 1352÷4402 ENERGYPOWER, with R134a refrigerant, are provided with the new technological Inverter mono-Screw compressors with satellite, the units reach high EER and ESEER/IPLV energy values. Thanks to the advanced control system, the units can simultaneously fulfill the heating, cooling and domestic hot water request of the building. The unit can manage the opposed thermal loads at the same time and reach the highest possible efficiency. ENERGYPOWER units make the traditional layout of the technical plants easier because the production of thermal energy for the several users are joint in one unit only; the result is an advantage in terms of installation, maintenance and management and in the meantime of the comfort needs. As option also with EC Inverter axial fans.



INVERTER SCREW

VERSION

CHA/IY/EP

Multifunctional unit

CHA/IY/EP/SSL

Super silenced Multifunctional unit

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- INVERTER and ON/OFF Screw compressors, with built-in oil separator, suction filter, cranckcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Two copper tube and aluminum finned coils.
- Shell and tube type condenser, with two independent circuits on the refrigerant side and one on the water side.
- Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a 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 also allows the cooling functioning of the unit by external temperature till 0°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IIVI | Automatic circuit breakers |
|------|-----------------------------------|
| SL | Unit silencement |
| CC | Condensing control down to -20 °C |
| ΒT | Low water temperature Kit |
| EC | EC Inverter fans |
| ΤX | Coil with pre-coated fins |
| PUI | Inverter single circulating pump |
| PDI | Inverter double circulating pump |
| FI | Antifreeze heater for evaporator |
| | and condenser |
| FG | Antifreeze heater for single pump |
| | and pipes |
| FM | Antifreeze heater for double pump |
| | and pipes |



SS Soft start

- TS Touch screen interface
- WM Web Monitoring Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)
- IS Modbus RTU protocol, RS485 serial
- interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal
- IAA Remote set-point, 4-20 mA signal
- IAS Remote signal for second set-point activation
- IDL Demand limit from digital input
- CP Potential free contacts

- MNHigh and low pressure gaugesCRRemote control panelRPCoil protection metallic guardsAGRubber shock absorbers
- AM Spring shock absorbers
- FL Flow switch

CHA/IY/EP 1352÷4402



| MODEL | | | 1352 | 1402 | 1602 | 1802 | 1952 | 2302 | 2702 | 3302 | 3902 | 4402 | |
|----------------------|-----------------------------------|---------|----------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | Cooling capacity (1) | kW | 278 | 312 | 366 | 423 | 484 | 564 | 676 | 822 | 978 | 1133 | |
| Cooling only | Absorbed power (1) | kW | 89 | 100 | 116 | 133 | 153 | 177 | 210 | 258 | 315 | 365 | |
| <u> </u> | EER (1) | | 3.12 | 3.12 | 3.16 | 3.18 | 3.16 | 3.19 | 3.22 | 3.19 | 3.10 | 3.10 | |
| | Heating capacity (2) | kW | 283 | 320 | 375 | 431 | 490 | 572 | 672 | 838 | 990 | 1156 | |
| Heating only | Absorbed power (2) | kW | 86 | 91 | 107 | 122 | 139 | 159 | 190 | 231 | 271 | 313 | |
| | COP (2) | | 3.29 | 3.52 | 3.50 | 3.53 | 3.53 | 3.60 | 3.54 | 3.63 | 3.65 | 3.69 | |
| | Cooling capacity (3) | kW | 276 | 318 | 370 | 429 | 492 | 575 | 686 | 834 | 996 | 1181 | |
| Cooling , Hooting | Heating capacity (3) | kW | 359 | 404 | 469 | 544 | 621 | 726 | 865 | 1054 | 1261 | 1495 | |
| Cooling + Heating | Absorbed power (3) | kW | 83 | 87 | 99 | 115 | 130 | 152 | 179 | 220 | 265 | 314 | |
| | TER (3) | | 7.65 | 8.30 | 8.47 | 8.46 | 8.56 | 8.56 | 8.66 | 8.58 | 8.52 | 8.52 | |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | Capacity steps | n° | Stepless | | | | | | | | | | |
| Evenerator eveling | Water flow | l/s | 13.28 | 14.91 | 17.49 | 20.21 | 23.12 | 26.95 | 32.30 | 39.27 | 46.73 | 54.13 | |
| evaporator - cooring | Pressure drops | kPa | 33 | 43 | 51 | 48 | 48 | 46 | 48 | 47 | 52 | 64 | |
| Side | Water connections | DN | 100 | 100 | 125 | 125 | 125 | 150 | 150 | 150 | 150 | 200 | |
| Condensor besting | Water flow (3) | l/s | 17.15 | 19.30 | 22.41 | 25.99 | 29.67 | 34.69 | 41.33 | 50.36 | 60.25 | 71.43 | |
| condenser - neating | Pressure drops (3) | kPa | 34 | 37 | 31 | 29 | 28 | 32 | 29 | 32 | 32 | 34 | |
| Side | Water connections (3) | DN | 100 | 100 | 125 | 125 | 125 | 150 | 150 | 150 | 150 | 200 | |
| Electrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | | |
| characteristics | Max. running current | A | 237 | 237 | 269 | 301 | 309 | 393 | 445 | 580 | 664 | 720 | |
| CIIdIdClef1Stics | Max. starting current | A | 281 | 281 | 345 | 361 | 369 | 504 | 534 | 785 | 827 | 855 | |
| Unit with pump | Pump available static pressure | kPa | 180 | 165 | 190 | 160 | 180 | 160 | 150 | 170 | 140 | 150 | |
| | Water connections | DN | 100 | 100 | 125 | 125 | 125 | 150 | 150 | 150 | 150 | 200 | |
| | STD version (4) | dB(A) | 77 | 77 | 77 | 78 | 78 | 78 | 79 | 80 | 80 | 81 | |
| Sound pressure | With SL accessory (4) | dB(A) | 73 | 73 | 74 | 75 | 74 | 75 | 76 | 76 | 76 | 77 | |
| | SSL version (4) | dB(A) | 67 | 67 | 68 | 69 | 69 | 70 | 70 | 72 | 72 | 72 | |
| Woighte | Transport weight | Kg | 4090 | 4110 | 4820 | 5460 | 5970 | 6950 | 8100 | 9340 | 9760 | 10430 | |
| vveigins | Operating weight | Kg | 4330 | 4460 | 5280 | 5980 | 6480 | 7570 | 8880 | 10200 | 10740 | 11800 | |

| DIME | INSIONS | | 1352 | 1402 | 1602 | 1802 | 1952 | 2302 | 2702 | 3302 | 3902 | 4402 |
|------|---------|----|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | STD | mm | 5550 | 5550 | 6700 | 7750 | 8900 | 8900 | 10050 | 11100 | 11100 | 11100 |
| L | SSL | mm | 6700 | 6700 | 7750 | 7750 | 8900 | 10050 | 11100 | 12250 | 12250 | 12250 |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| ц | STD | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 | 2500 |
| п | SSL | mm | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 | 2500 | 2500 |

CLEARANCE AREA

CHA/IY/EP 1352÷4402

500 1800 1000 1800



NOTES

- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. 1.
- Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Chilled water from 12 to 7 °C, heated water 2. 3.
- from 40 to 45 °C. 4.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744. N.B. Weights of SSL version are specified on

CLINT 105

technical brochure.



FROM 282 KW TO 1148 KW.



CHA/IY/WP 1352+4402

A CLASS ENERGY EFFICIENCY REVERSIBLE HEAT PUMPS WITH AXIAL FANS, INVERTER SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The aircooled reversibile Heat Pump units of the line CHA/IY/WP 1352÷4402, in A CLASS and with R134a refrigerant, are suitable for big sizes installations, such as commercial or industrial buildings. The units are provided with the new technological Inverter mono-Screw compressors with satellite, axial fans and shell and tube evaporator and are available also with super low noise version; as option also with EC Inverter axial fans and with Inverter regulated circulating pumps. The designed large condensing coils, the high efficiency fans, the optimisation of the water and cooling circuits, the Inverter Screw compressors, allow the units to reach the A CLASS energy efficiency, if combined with a proper sizing of the end-user plant.



INVERTER SCREW

VERSION

CHA/IY/WP

Reversible Heat Pump

CHA/IY/WP/SSL

Super silenced reversible Heat Pump

FEATURES

• Self-supporting galvanized steel frame protected with polyester powder painting.

SS

IS

ISB

ISBT

ISL

IAV

IAA

IAS

WM

- INVERTER Screw compressors, with built-in oil separator, suction filter, cranckcase heater, oil sight glass, thermal protection 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 independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges. ٠
- ٠ R134a 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 also allows the cooling functioning of the unit by external temperature till 0°C.

Web Monitoring - Wireless remote monitoring (GPRS/EDGE/3G/TCP-IP)

Modbus RTU protocol, RS485 serial

BACnet MSTP protocol, RS485

BACnet TCP/IP protocol, Ethernet

LonWorks protocol, FFT-10 serial

Remote set-point, 0-10 V signal

Remote set-point, 4-20 mA signal

Remote signal for second set-point

Soft start

interface

port

interface

activation

serial interface

Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-------|-----------------------------------|
| SL | Unit silencement |
| CC | Condensing control down to -20 °C |
| ΒT | Low water temperature Kit |
| EC | EC Inverter fans |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| ΤX | Coil with pre-coated fins |
| PUI | Inverter single circulating pump |
| PDI | Inverter double circulating pump |

- FF Antifreeze heater for evaporator
- F7 Antifreeze heater for evaporator, single pump and pipes
- FH Antifreeze heater for evaporator, double pump and pipes
- IDL Demand limit from digital input
- CP Potential free contacts

- MN High and low pressure gauges CR Remote control panel RP Coil protection metallic guards AG Rubber shock absorbers
- Spring shock absorbers AM
- FL Flow switch



CHA/IY/WP 1352÷4402





| MODEL | | | 1352 | 1402 | 1602 | 1802 | 1952 | 2302 | 2702 | 3302 | 3902 | 4402 |
|---|-----------------------------------|---------|-------|-------|-------|--|-------|-------|-------|-------|-------|-------|
| | Heating capacity (1) | kW | 282 | 323 | 375 | 428 | 514 | 570 | 671 | 837 | 1000 | 1148 |
| Heating | Absorbed power (1) | kW | 88 | 94 | 111 | 126 | 150 | 164 | 196 | 237 | 277 | 320 |
| | COP (1) | | 3.20 | 3.44 | 3.38 | 3.40 | 3.43 | 3.48 | 3.42 | 3.53 | 3.61 | 3.59 |
| | Heating capacity (1) | kW | 283 | 324 | 377 | 430 | 516 | 572 | 673 | 840 | 1004 | 1153 |
| | Absorbed power (1) | kW | 90 | 96 | 114 | 129 | 154 | 168 | 201 | 244 | 286 | 332 |
| Heating (EN1/E11) | COP (1) | | 3.16 | 3.36 | 3.30 | 3.32 | 3.34 | 3.40 | 3.35 | 3.45 | 3.51 | 3.47 |
| Treating (LIN14511) | EUROVENT Class | | А | A | A | A | A | A | A | A | A | A |
| | SCOP (2) | | 3.34 | 3.53 | 3.22 | 3.16 | 3.30 | 3.71 | - | - | - | - |
| | Energy Efficiency (2) | % | 131 | 138 | 126 | 123 | 129 | 145 | - | - | - | - |
| | Cooling capacity (3) | kW | 278 | 312 | 366 | 12 1802 1952 2302 2702 3302 33 5 428 514 570 671 837 1 1 126 150 164 196 237 2 18 3.40 3.43 3.48 3.42 3.53 3 7 430 516 572 673 840 1 4 129 154 168 201 244 2 300 3.32 3.34 3.40 3.35 3.45 3 4 A A A A A A A 4 129 145 - - - 6 6 133 153 177 210 258 3 3 5 6 3.18 3.16 3.19 3.22 3.19 3 5 421 482 562 674 819 5 133 155 179 | 978 | 1133 | | | | |
| Cooling | Absorbed power (3) | kW | 89 | 100 | 116 | 133 | 153 | 177 | 210 | 258 | 315 | 365 |
| | EER (3) | | 3.12 | 3.12 | 3.16 | 3.18 | 3.16 | 3.19 | 3.22 | 3.19 | 3.10 | 3.10 |
| Cooling (EN14511) | Cooling capacity (3) | kW | 277 | 311 | 365 | 421 | 482 | 562 | 674 | 819 | 974 | 1128 |
| | Absorbed power (3) | kW | 90 | 101 | 118 | 135 | 155 | 179 | 212 | 261 | 319 | 370 |
| Cooling (EN14511) | EER (3) | | 3.08 | 3.07 | 3.10 | 3.13 | 3.11 | 3.14 | 3.17 | 3.14 | 3.06 | 3.05 |
| | ESEER | | 3.77 | 3.79 | 3.75 | 3.76 | 3.79 | 3.90 | 4.02 | 3.92 | 3.95 | 4.02 |
| | EUROVENT Class | | В | В | В | A | A | A | A | A | В | В |
| Compressor | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | | | | | | | | | |
| Compressor | Water flow | l/s | 13.28 | 14.91 | 17.49 | 20.21 | 23.12 | 26.95 | 32.30 | 39.27 | 46.73 | 54.13 |
| Evaporator | Pressure drops | kPa | 33 | 43 | 51 | 48 | 48 | 46 | 48 | 47 | 52 | 64 |
| | Water connections | DN | 125 | 125 | 150 | 150 | 150 | 200 | 200 | 200 | 200 | 200 |
| Electrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| Compressor Evaporator Electrical characteristics | Max. running current | A | 237 | 237 | 269 | 301 | 309 | 393 | 445 | 580 | 664 | 720 |
| | Max. starting current | A | 281 | 281 | 345 | 361 | 369 | 504 | 534 | 785 | 827 | 855 |
| Unit with pump | Pump available static pressure | kPa | 180 | 165 | 190 | 160 | 180 | 160 | 150 | 170 | 140 | 150 |
| Unit with pump | Water connections | DN | 100 | 100 | 125 | 125 | 125 | 150 | 150 | 150 | 150 | 200 |
| | STD version (4) | dB(A) | 77 | 77 | 77 | 78 | 78 | 78 | 79 | 80 | 80 | 81 |
| Sound pressure | With SL accessory (4) | dB(A) | 73 | 73 | 74 | 75 | 74 | 75 | 76 | 76 | 76 | 77 |
| | SSL version (4) | dB(A) | 67 | 67 | 68 | 69 | 69 | 70 | 70 | 72 | 72 | 72 |
| Woights | Transport weight | Kg | 3780 | 3800 | 4360 | 4910 | 5380 | 6340 | 7260 | 8420 | 8675 | 9230 |
| vvergints | Operating weight | Kg | 3950 | 3970 | 4690 | 5270 | 5720 | 6760 | 7780 | 8990 | 9330 | 10150 |

| DIME | INSIONS | | 1352 | 1402 | 1602 | 1802 | 1952 | 2302 | 2702 | 3302 | 3902 | 4402 |
|------|---------|----|------|------|------|------|------|-------|-------|-------|-------|-------|
| 1 | STD | mm | 5550 | 5550 | 6700 | 7750 | 8900 | 8900 | 10050 | 11100 | 11100 | 11100 |
| L | SSL | mm | 6700 | 6700 | 7750 | 7750 | 8900 | 10050 | 11100 | 12250 | 12250 | 12250 |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| | STD | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 | 2500 |
| п | SSL | mm | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 | 2500 | 2500 |

CLEARANCE AREA

CHA/IY/WP 1352÷4402

500 1800 1000 1800



1. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b.

 Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation a, 941 (2012)

- Regulation n. 811/2013. 3. Chilled water from 12 to 7 °C, ambient air
- temperature 35 °C.
 Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.

CLINT 107

N.B. Weights of SSL version are specified on technical brochure.

Electrical board side



CHA/Y/A 1302÷4802

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, (INVERTER) SCREW COMPRESSORS, MICROCHANNEL CONDENSING COILS AND SHELL AND TUBE EXCHANGER.



The CHA/Y/A 1302÷4802 units in A CLASS energy efficiency have EER values higher than 3.1 due to reduced electrical absorption and a high efficiency of the compressor-exchanger combination.

The Microchannel condensing coils, the mono-Screw compressors with satellite and the new design optimized in every detail ensure the reach of the highest efficiency. Furthermore, accessories as the Inverter control on Screw compressors, on circulating pumps and EC Inverter on fans are also available for getting the highest efficiency at part load. The super silenced version, obtained through acoustic insulation on compressors and wider exchangers, is particularly suitable for installations where extremely quiet operation are essential for the ideal execution of the system. The Inverter accessory is equipped with SYNCHRONIZER that allows you to extend the useful life of the compressor, ensuring the rotation at every boot, and significantly reduce the inrush current of the unit.



INVERTER SCREW MICROCHANNEL

VERSION

CHA/Y/A

Cooling only

CHA/Y/A/SSL

Super silenced cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, cranckcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of aluminium MICROCHANNEL condensing coils.
- Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges. ٠
- R134a 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 also allows the cooling ٠ functioning of the unit by external temperature till 0°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | SPDI | Inertial tank and Inverter double |
|-------|--------------------------------------|------|-----------------------------------|
| SL | Unit silencement | | circulating pump |
| CC | Condensing control down to -20 °C | FE | Antifreeze heater for evaporator |
| ΒT | Low water temperature Kit | FB | Antifreeze heater for evaporator |
| EC | EC Inverter fans | | and tank |
| HR | Desuperheater | FZ | Antifreeze heater for evaporator, |
| HRT/S | Total heat recovery in series | | single pump and pipes |
| HRT/P | Total heat recovery in parallel | FH | Antifreeze heater for evaporator, |
| TXB | Coil with epoxy treatment | | double pump and pipes |
| SP | Inertial tank | FU | Antifreeze heater for evaporator, |
| PU | Single circulating pump | | tank, single pump and pipes |
| PUI | Inverter single circulating pump | FD | Antifreeze heater for evaporator, |
| PD | Double circulating pump | | tank, double pump and pipes |
| PDI | Inverter double circulating pump | II | Inverter on one compressor and |
| SPU | Inertial tank and single circulating | | Synchronizer |
| | gump | SS | Soft start |
| SPUI | Inertial tank and Inverter single | WM | Web Monitoring - Wireless remote |
| | circulating pump | | monitoring (GPRS/EDGE/3G/TCP-IP) |
| SPD | Inertial tank and double circulating | IS | Modbus RTU protocol, RS485 serial |
| | gump | | interface |

| culating pump | | serial interface |
|---------------------------------|------|------------------------------------|
| tifreeze heater for evaporator | ISBT | BACnet TCP/IP protocol, Ethernet |
| tifreeze heater for evaporator | | port |
| d tank | ISL | LonWorks protocol, FFT-10 serial |
| tifreeze heater for evaporator, | | interface |
| igle pump and pipes | IAV | Remote set-point, 0-10 V signal |
| tifreeze heater for evaporator, | IAA | Remote set-point, 4-20 mA signal |
| uble pump and pipes | IAS | Remote signal for second set-point |
| tifreeze heater for evaporator, | | activation |
| nk, single pump and pipes | IDL | Demand limit from digital input |

ISB

IDI Demand limit from digital input

BACnet MSTP protocol, RS485

CP Potential free contacts

| MN | High and low pressure gauges |
|----|---------------------------------|
| CR | Remote control panel |
| PD | Coil protection motallia quarde |

- RP Coil protection metallic guards
- AG Rubber shock absorbers AM Spring shock absorbers
- FL Flow switch



CHA/Y/A 1302÷4802





| MODEL | | | 1302 | 1502 | 1702 | 1902 | 2002 | 2602 | 3002 | 3602 | 4202 | 4802 | |
|--------------------|-----------------------------------|---------|-------|----------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| | Cooling capacity (1) | kW | 263 | 313 | 359 | 413 | 464 | 574 | 696 | 839 | 959 | 1136 | |
| Cooling | Absorbed power (1) | kW | 80 | 94 | 112 | 128 | 143 | 175 | 215 | 251 | 299 | 345 | |
| - | EER (1) | | 3.29 | 3.33 | 3.21 | 3.23 | 3.24 | 3.28 | 3.24 | 3.34 | 3.21 | 3.29 | |
| | Cooling capacity (1) | kW | 262 | 312 | 358 | 412 | 463 | 573 | 694 | 837 | 956 | 1132 | |
| | Absorbed power (1) | kW | 81 | 95 | 113 | 129 | 144 | 176 | 217 | 253 | 302 | 349 | |
| Cooling (EN14511) | EER (1) | | 3.23 | 3.28 | 3.17 | 3.19 | 3.22 | 3.26 | 3.20 | 3.31 | 3.17 | 3.24 | |
| | ESEER | | 3.93 | 4.05 | 3.97 | 4.05 | 4.07 | 4.02 | 3.95 | 4.07 | 4.05 | 4.04 | |
| | EUROVENT Class | | А | A | A | А | A | А | A | A | A | A | |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| | Capacity steps | n° | | | | | Step | less | | | | | |
| | Water flow | l/s | 12.57 | 14.95 | 17.15 | 19.73 | 22.17 | 27.42 | 33.25 | 40.09 | 45.82 | 54.28 | |
| Evaporator | Pressure drops | kPa | 30 | 26 | 49 | 44 | 34 | 28 | 42 | 34 | 39 | 48 | |
| | Water connections | DN | 125 | 125 | 150 | 150 | 150 | 150 | 150 | 200 | 200 | 200 | |
| Flootrical | Power supply | V/Ph/Hz | | 400/3/50 | | | | | | | | | |
| characteristics | Max. running current | A | 201 | 237 | 261 | 301 | 337 | 393 | 485 | 580 | 664 | 720 | |
| | Max. starting current | A | 263 | 281 | 337 | 361 | 405 | 504 | 596 | 785 | 827 | 855 | |
| Unit with tank and | Pump available static pressure | kPa | 145 | 184 | 200 | 165 | 205 | 185 | 205 | 185 | 150 | 160 | |
| pump | Tank water volume | | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 | 3000 | 3000 | | | |
| | Water connections | DN | 100 | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 200 | 200 | |
| | STD version (2) | dB(A) | 76 | 76 | 76 | 76 | 77 | 76 | 77 | 77 | 77 | 78 | |
| Sound pressure | With SL accessory (2) | dB(A) | 73 | 73 | 73 | 73 | 74 | 73 | 74 | 74 | 74 | 75 | |
| | SSL version (2) | dB(A) | 66 | 66 | 66 | 65 | 66 | 66 | 67 | 68 | 68 | | |
| Woights | Transport weight (3) | Kg | 3825 | 3289 | 3348 | 3707 | 4402 | 4802 | 5826 | 6750 | 6774 | 7513 | |
| vveignis | Operating weight (3) | Kg | 5825 | 3420 | 3490 | 3890 | 4690 | 5140 | 6120 | 7390 | 7320 | 7970 | |

| DIMI | ENSIONS | | 1302 | 1502 | 1702 | 1902 | 2002 | 2602 | 3002 | 3602 | 4202 | 4802 |
|------|---------|----|------|------|------|------|------|------|-------|-------|-------|-------|
| | STD | mm | 4400 | 4400 | 5000 | 5550 | 6200 | 6700 | 8900 | 11100 | 11100 | 11100 |
| L | SSL | mm | 5550 | 5550 | 5550 | 6700 | 8900 | 8900 | 11100 | 11100 | 11100 | |
| W | STD/SSL | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| | STD | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 |
| п | SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | |
| | | | | | | | | | | | | |

CLEARANCE AREA

CHA/Y/A 1302÷4802

500 1800 1000 1800



- NOTES
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
 Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
 Unit without tank and pump.
 N.B. Weights of SSL version are specified on technical prochure
- technical brochure.



FROM 221 KW TO 1597 KW.



CHA/Y 1202-B÷6802-B

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.



CHA/Y 1202-B÷6802-B series liquid Chillers and Heat Pumps, with R134a refrigerant, are designed for large service sector or industrial-type ambients.

They are used, together with terminal units, for air conditioning of rooms, or to remove the heat created during industrial processes. Equipped with axial fans, Screw compressors and shell and tube exchanger, even in the super silent version, they can be completed with a hydraulic circuit with tank, pump, or tank and pump. The use of large condensing coils and high unit efficiency fans, as well as optimisation of the hydraulic and refrigerant circuit and the use of latest-generation Screw compressors, combined with a adequate sizing of the user system, ensure high operating efficiency with a considerably reduction in energy consumption.

A wide range of accessories, factory fitted or supplied separately, complete the outstanding versatility and functionality of the series.



VERSION

CHA/Y

Cooling only

CHA/Y/WP

Reversible Heat Pump

Super silenced cooling only CHA/Y/WP/SSL

CHA/Y/SSL

Super silenced 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, oil sight glass, thermal protection 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 independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- · Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a 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 step regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till 0°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | SPD | Inertial tank and double circulating | ISB | BACnet N |
|-------|--------------------------------------|------|--------------------------------------|------------|-------------|
| SL | Unit silencement | | pump | | serial inte |
| CC | Condensing control down to -20 °C | SPDI | Inertial tank and Inverter double | ISBT | BACnetT |
| BT | Low water temperature Kit | | circulating pump | | port |
| EC | EC Inverter fans | FE | Antifreeze heater for evaporator | ISL | LonWork |
| HR | Desuperheater | FB | Antifreeze heater for evaporator | | interface |
| HRT/S | Total heat recovery in series | | and tank | IAV | Remote s |
| HRT/P | Total heat recovery in parallel | FZ | Antifreeze heater for evaporator, | IAA | Remote s |
| ΤX | Coil with pre-coated fins | | single pump and pipes | IAS | Remote s |
| SP | Inertial tank | FH | Antifreeze heater for evaporator. | | activation |
| PU | Single circulating pump | | double pump and pipes | IDL | Demand |
| PUI | Inverter single circulating pump | FU | Antifreeze heater for evaporator. | CP | Potential |
| PD | Double circulating pump | | tank, single pump and pipes | | |
| PDI | Inverter double circulating pump | FD | Antifreeze heater for evaporator. | LOOS | E ACCESSO |
| SPU | Inertial tank and single circulating | | tank, double pump and pipes | MN | High and |
| | pump | SS | Soft start | CB | Remote d |
| SPUI | Inertial tank and Inverter single | WM | Web Monitoring - Wireless remote | DD D | Coil prote |
| | circulating pump | | monitoring (GPBS/EDGE/3G/TCP-IP) | | Dubbas |
| | | 15 | Modbus BTU protocol BS/85 serial | AG | Rubber s |
| | | 10 | interface | AM | Spring sh |
| | | | | E 1 | · |

| | BACnet MSTP protocol, RS485 |
|---|------------------------------------|
| | serial interface |
| - | BACnet TCP/IP protocol, Ethernet |
| | port |
| | LonWorks protocol, FFT-10 serial |
| | interface |
| | Remote set-point, 0-10 V signal |
| | Remote set-point, 4-20 mA signal |
| | Remote signal for second set-point |
| | activation |
| | Demand limit from digital input |
| | Potential free contacts |

RIES

- low pressure gauges
- control panel
- ection metallic guards
- hock absorbers
- ock absorbers
- FL Flow switch

110 **CLINT**

CHA/Y 1202-B+6802-B





| MODEL | | | 1202-B | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 3002-B | | |
|----------------------------|--------------------------------|---------|------------------|--------|--------|--------|--------|--------|--------|--------|--|--|
| | Cooling capacity (1) | kW | 221 | 262 | 302 | 348 | 393 | 453 | 549 | 684 | | |
| Cooling | Absorbed power (1) | kW | 80 | 88 | 112 | 137 | 156 | 167 | 197 | 231 | | |
| 5 | EER (1) | | 2.76 | 2.98 | 2.70 | 2.54 | 2.52 | 2.71 | 2.79 | 2.96 | | |
| | Cooling capacity (1) | kW | 220 | 261 | 301 | 347 | 391 | 451 | 547 | 681 | | |
| Cooling (EN14E11) | Absorbed power (1) | kW | 81 | 89 | 113 | 139 | 158 | 168 | 199 | 234 | | |
| COUTING (EN 14511) | EER (1) | | 2.71 | 2.93 | 2.67 | 2.50 | 2.48 | 2.68 | 2.75 | 2.91 | | |
| | ESEER | | 3.44 | 3.62 | 3.54 | 3.38 | 3.37 | 3.69 | 3.58 | 3.60 | | |
| | Heating capacity (2) | kW | 225 | 255 | 289 | 338 | 390 | 457 | 536 | 662 | | |
| Heating | Absorbed power (2) | kW | 75 | 78 | 91 | 105 | 120 | 138 | 160 | 191 | | |
| | COP (2) | | 3.00 | 3.27 | 3.18 | 3.22 | 3.25 | 3.31 | 3.35 | 3.47 | | |
| | Heating capacity (2) | kW | 225 | 255 | 289 | 338 | 390 | 457 | 536 | 665 | | |
| | Absorbed power (2) | kW | 75 | 78 | 91 | 106 | 121 | 143 | 161 | 197 | | |
| Heating (EN14511) | COP (2) | | 3.00 | 3.27 | 3.18 | 3.19 | 3.22 | 3.20 | 3.33 | 3.38 | | |
| | SCOP (3) | | 3.07 | 3.23 | 3.25 | 3.18 | 3.30 | 2.99 | 3.12 | 3.39 | | |
| | Energy Efficiency (3) | % | 120 | 126 | 127 | 124 | 129 | 117 | 122 | 133 | | |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | Capacity steps | n° | | | | Step | less | | | | | |
| | Water flow | l/s | 10.56 | 12.52 | 14.43 | 16.63 | 18.78 | 21.64 | 26.23 | 32.68 | | |
| Evaporator | Pressure drops | kPa | 50 | 49 | 38 | 50 | 53 | 43 | 54 | 57 | | |
| | Water connections | DN | 100 | 100 | 125 | 125 | 125 | 125 | 150 | 150 | | |
| | Power supply | V/Ph/Hz | V/Ph/Hz 400/3/50 | | | | | | | | | |
| Electrical characteristics | Max. running current | A | 194 | 194 | 230 | 254 | 286 | 321 | 377 | 421 | | |
| | Max. starting current | A | 256 | 256 | 274 | 330 | 346 | 389 | 488 | 510 | | |
| | Pump available static pressure | kPa | 150 | 170 | 230 | 195 | 165 | 195 | 165 | 130 | | |
| Unit with tank and pump | Tank water volume | | 1100 | 1100 | 1100 | 1100 | 1100 | 2000 | 2000 | 2000 | | |
| | Water connections | DN | 100 | 100 | 100 | 100 | 125 | 125 | 150 | 150 | | |
| | STD version (4) | dB(A) | 77 | 77 | 77 | 77 | 76 | 76 | 77 | 77 | | |
| Sound pressure | With SL accessory (4) | dB(A) | 74 | 74 | 74 | 74 | 73 | 73 | 74 | 74 | | |
| | SSL version (4) | dB(A) | 67 | 67 | 67 | 66 | 67 | 67 | 67 | 68 | | |
| Waights | Transport weight | Kg | 2640 | 2730 | 2780 | 2920 | 3120 | 3800 | 4070 | 5270 | | |
| worgitto | Operating weight | Kg | 2740 | 2820 | 2920 | 3060 | 3250 | 3930 | 4330 | 5500 | | |

| MODEL | | 3602-B | 4202-B | 4802-B | 5402-B | 6002-B | 6302-B | 6802-B | | | |
|----------------------------|--------------------------------|-------------|----------|--------|--------|--------|--------|--------|-------|--|--|
| | Cooling capacity (1) | kW | 806 | 954 | 1089 | 1218 | 1347 | 1475 | 1597 | | |
| Cooling | Absorbed power (1) | kW | 284 | 334 | 402 | 443 | 494 | 531 | 554 | | |
| 5 | EER (1) | | 2.84 | 2.86 | 2.71 | 2.75 | 2.73 | 2.78 | 2.88 | | |
| | Cooling capacity (1) | kW | 803 | 950 | 1084 | 1213 | 1342 | 1469 | 1589 | | |
| Cooling (EN14E11) | Absorbed power (1) | kW | 287 | 338 | 407 | 448 | 499 | 537 | 562 | | |
| | EER (1) | | 2.80 | 2.82 | 2.67 | 2.71 | 2.69 | 2.74 | 2.83 | | |
| | ESEER | | 3.66 | 3.61 | 3.49 | 3.59 | 3.57 | 3.68 | 3.63 | | |
| | Heating capacity (2) | kW | 767 | 850 | 1044 | 1172 | 1306 | 1438 | | | |
| Heating | Absorbed power (2) | kW | 225 | 260 | 318 | 350 | 395 | 418 | | | |
| | COP (2) | | 3.41 | 3.27 | 3.28 | 3.35 | 3.31 | 3.44 | | | |
| | Heating capacity (2) | kW | 770 | 853 | 1048 | 1176 | 1311 | 1443 | | | |
| | Absorbed power (2) | kW | 231 | 266 | 328 | 360 | 406 | 431 | | | |
| Heating (EN14511) | COP (2) | | 3.33 | 3.21 | 3.20 | 3.27 | 3.23 | 3.35 | | | |
| | SCOP (3) | | - | - | - | - | - | - | | | |
| | Energy Efficiency (3) | % | - | - | - | - | - | - | | | |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | | |
| | Capacity steps | n° Stepless | | | | | | | | | |
| Evaporator | Water flow | l/s | 38.51 | 45.58 | 52.03 | 58.19 | 64.36 | 70.47 | 76.30 | | |
| | Pressure drops | kPa | 55 | 53 | 62 | 55 | 55 | 60 | 82 | | |
| | Water connections | DN | 200 | 200 | 200 | 200 | 200 | 200 | 250 | | |
| Electrical characteristics | Power supply | V/Ph/Hz | 400/3/50 | | | | | | | | |
| | Max. running current | A | 549 | 641 | 705 | 705 | 873 | 896 | 912 | | |
| | Max. starting current | A | 754 | 804 | 840 | 840 | 1665 | 1541 | 1557 | | |
| | Pump available static pressure | kPa | 165 | 130 | 170 | 150 | 200 | 180 | 150 | | |
| Unit with tank and pump | Tank water volume | | 2000 | 2000 | | | | | | | |
| | Water connections | DN | 150 | 200 | 200 | 200 | 200 | 200 | 200 | | |
| Sound pressure | STD version (4) | dB(A) | 77 | 78 | 78 | 79 | 79 | 80 | 80 | | |
| | With SL accessory (4) dB(| | 74 | 75 | 75 | 76 | 76 | 77 | 77 | | |
| | SSL version (4) | dB(A) | 69 | 69 | 70 | 70 | 70 | 70 | | | |
| Woights | Transport weight | Kg | 5480 | 6250 | 7255 | 7715 | 8160 | 8840 | 10100 | | |
| worginta | Operating weight | Kg | 5770 | 6600 | 7710 | 8150 | 8700 | 9380 | 10620 | | |

| DIME | INSIONS | | 1202-B | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 3002-B | 3602-B | 4202-B | 4802-B | 5402-B | 6002-B | 6302-B | 6802-B |
|------|---------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | STD | mm | 3350 | 3350 | 3350 | 3350 | 4400 | 5550 | 5550 | 6700 | 6700 | 7750 | 10050 | 10050 | 10050 | 11100 | 13400 |
| | SSL | mm | 3350 | 3350 | 3350 | 4400 | 4400 | 5550 | 6700 | 7750 | 7750 | 10050 | 10050 | 11100 | 13400 | 13400 | |
| | WP | mm | 4400 | 4400 | 4400 | 4400 | 5550 | 6700 | 6700 | 7750 | 7750 | 8900 | 12250 | 12250 | 13400 | 13400 | |
| | WP/SSL | mm | 4400 | 4400 | 4400 | 5550 | 5550 | 6700 | 6700 | 7750 | 8900 | 11100 | 13400 | 13400 | | | |
| W | * | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD/WP | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 |
| | SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2500 | |
| | WP/SSL | mm | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | | | |

CLEARANCE AREA

CHA/Y 1202-B÷6802-B

500 1800 1000 1800



NOTES

- 1.
- 2. 3.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Heated water from 40 to 45 °C, ambient air temperature 7 °C d.b./6 °C w.b. Seasonal energy efficiency of ambient heating at low temperature with average climatic conditions. According to EU Regulation n. 811/2013. Sound pressure level measured in free field conditions at 1 m from the unit. According 4.
- to ISO 3744.
- N.B. Weights of SSL and WP versions are specified on technical brochure. STD-SSL-WP-WP/SSL



FROM 217 KW TO 1460 KW.



CHA/Y/FC 1202-B+6002-B

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The liquid Chillers of the CHA/Y/FC 1202-B÷6002-B series, with R134a refrigerant, 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 FREE-COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensing coil, thus saving energy by not operating the unit's Screw compressors. A 3-way valve system is controlled by the electronic microprocessor controller, allowing functioning in CHILLER, FREE-COOLING or MIXED (simultaneously CHILLER and FREE-COOLING) modes.



FREE COOLING

VERSION

CHA/Y/FC

Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors with built-in oil separator, suction filter, cranckcase heater, oil sight glass, thermal protection and stepless capacity steps.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- · Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on discharge and liquid line.
- Electronic thermostatic valve.
- ٠ Digital high and low pressure gauges.
- R134a 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 also allows the cooling ٠
- functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers | SPDI | Inertial tank and Inverter double | |
|-------|--------------------------------------|------|------------------------------------|---|
| SL | Unit silencement | | circulating pump | (|
| ΒT | Low water temperature Kit | SS | Soft start | |
| EC | EC Inverter fans | WM | Web Monitoring - Wireless remote | 1 |
| HRT/P | Total heat recovery in parallel | | monitoring (GPRS/EDGE/3G/TCP-IP) | |
| ΤX | Coil with pre-coated fins | IS | Modbus RTU protocol, RS485 serial | (|
| SP | Inertial tank | | interface | |
| PU | Single circulating pump | ISB | BACnet MSTP protocol, RS485 | / |
| PUI | Inverter single circulating pump | | serial interface | / |
| PD | Double circulating pump | ISBT | BACnet TCP/IP protocol, Ethernet | 1 |
| PDI | Inverter double circulating pump | | port | |
| SPU | Inertial tank and single circulating | ISL | LonWorks protocol, FFT-10 serial | |
| | pump | | interface | |
| SPUI | Inertial tank and Inverter single | IAV | Remote set-point, 0-10 V signal | |
| | circulating pump | IAA | Remote set-point, 4-20 mA signal | |
| SPD | Inertial tank and double circulating | IAS | Remote signal for second set-point | |
| | numn | | activation | |

IDL Demand limit from digital input СΡ Potential free contacts

LOOSE ACCESSORIES

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- ΔG Rubber shock absorbers
- AM Spring shock absorbers
- FΙ Flow switch

pump
CHA/Y/FC 1202-B+6002-B



| MODEL 1202-B 1302-B 1502-B 1702-B 1902-B 2002-B 2602-B Cooling Absorded power (1) KW 217 258 315 375 418 473 569 Free-Cooling cycle Absorded power (1) KW 83 97 114 148 157 184 210 Free-Cooling cycle Air temperature [2] °C 2.5 2.0 2.0 2.4 5.3.7 -4.0 -3.5 Compressor Quantity n° 2< | | | | | | | | | | | |
|--|--------------------|-----------------------------------|---------|--------|--------|--------|---------|------------|----------|---------------------------------------|--|
| Cooling Absorbed power (1) kW 217 258 315 315 315 114 148 147 148 147 148 116 118 116 118 116 118 116 <th>MODEL</th> <th></th> <th></th> <th>1202-B</th> <th>1302-B</th> <th>1502-B</th> <th>1702-</th> <th>B 1902-l</th> <th>В 2002-В</th> <th>2602-B</th> | MODEL | | | 1202-B | 1302-B | 1502-B | 1702- | B 1902-l | В 2002-В | 2602-B | |
| Cooling EER (1) Auserbed power (1) KW 83 97 114 148 157 184 210 EER (1) 261 2.66 2.76 2.53 2.66 2.77 4.0 3.5 Absorbed power (2) "C 2.5 -2.0 -4.5 -3.7 4.0 3.5 Compressor Testing power (2) "N" 8 12 | | Cooling capacity (1) | kW | 217 | 258 | 315 | 375 | 418 | 473 | 569 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Cooling | Absorbed power (1) | kW | 83 | 97 | 114 | 148 | 157 | 184 | 210 | |
| Free-Cooling cycle Aris transportature (2) °C -2.5 -2.0 -4.5 -3.7 -4.0 -3.5 Absorbed power (2) KW 8 12 12 12 12 12 12 12 12 12 12 12 12 12 | 5 | EER (1) | | 2.61 | 2.66 | 2.76 | 2.53 | 2.66 | 2.57 | 2.71 | |
| Prec-cooling cycle Absorbed power (2) kW 8 12 12 12 12 16 20 Compressor Duarity n° 2 | | Air temperature (2) | °C | -2.5 | -2.0 | -2.0 | -4.5 | -3.7 | -4.0 | -3.5 | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | Free-Cooling cycle | Absorbed power (2) | kW | 8 | 12 | 12 | 12 | 12 | 16 | 20 | |
| Compressor Befrigerant circuits n° 2 <th2< th=""> 2</th2<> | | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| Capacity steps n° Stepless Water flow V/s 11.22 13.34 16.29 19.38 21.61 24.45 29.42 Water circuit Pressure drops kPa 125 170 180 168 191 130 115 Power supply V/PN/Hz 400.3/50 405 504 504 504 Max. running current A 194 201 237 261 293 337 393 Unit with tank and pump Pump available static pressure kPa 165 120 125 115 110 145 185 Sound pressure STD version (3) dB(A) 72 75 76 76 76 77 77 Weights Transport (3) dB(A) 72 72 73 73 74 74 74 Weights Transport (3) dB(A) 72 72 73 73 74 74 Weights Transport (3) dB(A) | Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | • | Capacity steps | n° | | | | Steples | SS | | · · · · · · · · · · · · · · · · · · · | |
| Water circuit Pressure drops kPa 125 170 180 168 191 130 115 Heat registrian Water connections DN 100 100 125 125 125 150 Electrical characteristics Max. running current A 194 201 237 261 293 337 393 Unit with tank and pump Max. string current A 256 263 281 337 353 4005 504 Unit with tank and pump Interval A 194 201 125 115 110 145 185 Sound pressure Virit SL accessory (3) dB(A) 72 72 73 76 76 77 77 Weights Transport weight (4) Kg 4950 3520 3870 4060 4530 4850 5700 MODEL 2002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling capacity (1) kW 709 | | Water flow | l/s | 11.22 | 13.34 | 16.29 | 19.38 | 21.61 | 24.45 | 29.42 | |
| $\begin{tabular}{ c c c c c c c c c c c c c c c c c c c$ | Water circuit | Pressure drops | kPa | 125 | 170 | 180 | 168 | 191 | 130 | 115 | |
| Electrical characteristics Power supply Max. running current V/Ph/Hz 400/3/50 Unit with tank and pump Max. starting current A 194 201 237 261 293 337 393 Unit with tank and pump Max. starting current A 256 263 281 337 353 405 504 Sound pressure Irank water volume I 1100 1100 1100 1100 1100 1000 2000 Sound pressure STD version (3) dB(A) 72 73 73 74 74 Weights Transport weight (4) Kg 3650 3320 3620 3805 4180 4510 5700 MODEL Cooling capacity (1) KW 709 847 994 1139 1288 1460 Absorbed power (1) kW 203 3602-B 4202-B 4802-B 5402-B 6002-B Cooling capacity (1) kW 709 847 944 434 440 < | | Water connections | DN | 100 | 100 | 100 | 125 | 125 | 125 | 150 | |
| Electrical characteristics Max. running current Max. starting current A 194 201 237 261 293 337 393 Characteristics Max. starting current pump available static pump A 256 263 281 337 353 405 504 Unit with tank and pump Pump available static Tark water volume I 165 120 125 115 110 145 185 Sound pressure SID version(3) dB(A) 75 76 76 77 77 77 Weights Transport weight (4) Kg 3650 3320 36620 3805 4180 4510 5310 Model To ansport weight (4) Kg 3650 3520 3870 4060 4530 4850 5700 MODEL Cooling capacity (1) KW 709 847 994 1139 1288 1460 Cooling capacity (1) KW 709 847 994 1139 1288 1460 | Flashing | Power supply | V/Ph/Hz | | | | 400/3/5 | 50 | | <u>.</u> | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Electrical | Max. running current | A | 194 | 201 | 237 | 261 | 293 | 337 | 393 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | CIIdIdCleristics | Max. starting current | A | 256 | 263 | 281 | 337 | 353 | 405 | 504 | |
| pump Tank water volume I 1100 1100 1100 1100 1100 1100 2000 Sound pressure STD version (3) dB(A) 75 76 76 77 77 Weights Transport weight (4) Kg 3650 3320 3620 3805 4180 4510 5310 Molights Transport weight (4) Kg 3650 3320 3602-B 4202-B 4802-B 5402-B 6002-B MODEL Cooling capacity (1) kW 709 847 994 1139 1288 1480 Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling capacity (1) kW 263 316 370 434 490 541 Free-Cooling cycle Absorbed power (2) kW 20 22 2 2 2 2 | Unit with tank and | Pump available static pressure | kPa | 165 | 120 | 125 | 115 | 110 | 145 | 185 | |
| Water connections DN 100 100 100 125 125 125 125 150 Sound pressure STD version (3) dB(A) 75 75 76 76 76 77 77 77 Weights Transport weight (4) Kg 3650 3320 3620 3805 4180 4510 5310 MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling Absorbed power (1) kW 709 847 994 1139 1288 1460 Cooling Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling EER (1) 2.70 2.68 2.62 2.63 2.70 Free-Cooling cycle Air troperature (2) °C 4.3 -4.6 -4.7 -4.1 -3.9 Absorbed power (2) kW 20 22 2 2 2 2 2 2 2< | pump | Tank water volume | 1 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 2000 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | Water connections | DN | 100 | 100 | 100 | 125 | 125 | 125 | 150 | |
| Sound pressure With SL accessory (3) dB(A) 72 72 73 73 73 74 74 Weights Transport weight (4) Kg 3650 3320 3620 3805 4180 4510 5310 MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Model Absorbed power (1) kW 709 847 994 1139 1288 1460 Absorbed power (1) kW 270 2.68 2.69 2.62 2.63 2.70 Free-Cooling cycle Ar temperature (2) °C -4.3 -4.6 -4.7 -4.1 -3.9 Ompressor Refrigerant circuits n° 2 | 0 1 | STD version (3) | dB(A) | 75 | 75 | 76 | 76 | 76 | 77 | 77 | |
| Weights Transport weight (4) Operating weight (4) Kg 3650 (4950) 3320 (3520) 3805 (3870) 4180 (4060) 4510 (4530) 5310 (4850) MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling capacity (1) kW 709 847 994 1139 1288 1460 Cooling cycle Absorbed power (1) kW 263 316 370 434 490 541 Free-Cooling cycle Air temperature (2) °C -4.3 -4.3 -4.6 -4.7 -4.1 -3.9 Absorbed power (2) kW 20 22 | Sound pressure | With SL accessory (3) | dB(A) | 72 | 72 | 73 | 73 | 73 | 74 | 74 | |
| Weights Operating weight (4) Kg 4950 3520 3870 4060 4530 4850 5700 MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling Absorbed power (1) kW 709 847 994 1139 1288 1460 Absorbed power (1) kW 263 316 370 434 490 541 EFR (1) 2.70 2.68 2.69 2.62 2.63 2.70 Air temperature (2) °C -4.3 -4.3 -4.6 -4.7 -4.1 -3.9 Absorbed power (2) kW 20 22 | 14/ 1 / | Transport weight (4) | Kg | 3650 | 3320 | 3620 | 3805 | 4180 | 4510 | 5310 | |
| MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling Absorbed power (1) kW 709 847 994 1139 1288 1460 Cooling Absorbed power (1) kW 263 316 370 434 490 541 EER (1) 2.70 2.68 2.69 2.62 2.63 2.70 Absorbed power (2) KW 20 22 22 25 29 36 Compressor Capacity steps n° 2 | vveignts | Operating weight (4) | Kg | 4950 | 3520 | 3870 | 4060 | 4530 | 4850 | 5700 | |
| MODEL 3002-B 3602-B 4202-B 4802-B 5402-B 6002-B Cooling Absorbed power (1) kW 709 847 994 1139 1288 1460 Absorbed power (1) kW 263 316 370 434 490 541 EER (1) 2.70 2.68 2.69 2.62 2.63 2.70 Absorbed power (2) kW 20 22 22 | | | , , , | | | | | | | | |
| Cooling capacity (1) kW 709 847 994 1139 1288 1460 Absorbed power (1) kW 263 316 370 434 490 541 EER (1) 2.70 2.68 2.69 2.62 2.63 2.70 Free-Cooling cycle Air temperature (2) °C -4.3 -4.3 -4.6 -4.7 -4.1 -3.9 Absorbed power (2) kW 20 22 22 25 29 36 Compressor Refrigerant circuits n° 2 3 </td <td>MODEL</td> <td></td> <td></td> <td>3002-B</td> <td>3602-B</td> <td>4202</td> <td>2-B</td> <td>4802-B</td> <td>5402-B</td> <td>6002-B</td> | MODEL | | | 3002-B | 3602-B | 4202 | 2-B | 4802-B | 5402-B | 6002-B | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | | Cooling capacity (1) | kW | 709 | 847 | 994 | 1 | 1139 | 1288 | 1460 | |
| Booling Bool of porter (r) RR Bool of porter RR Bool of porter Ref < | Cooling | Absorbed power (1) | kW | 263 | 316 | 370 | 1 | 434 | 490 | 541 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | oooning | FEB (1) | KII I | 2 70 | 2 68 | 2.6 | 9 | 2.62 | 2.63 | 2 70 | |
| Pree-Cooling cycle Alsonable grower (2) KW 20 22 22 25 29 36 Compressor Quantity n° 2 | | Air temperature (2) | 0° | -4.3 | -4.3 | -4 6 | 3 | -47 | -4 1 | -3.9 | |
| Compressor Refrigerant circuits n° 2 <t< td=""><td>Free-Cooling cycle</td><td>Absorbed power (2)</td><td>kW</td><td>20</td><td>22</td><td>22</td><td>5</td><td>25</td><td>29</td><td>36</td></t<> | Free-Cooling cycle | Absorbed power (2) | kW | 20 | 22 | 22 | 5 | 25 | 29 | 36 | |
| $\begin{array}{c c c c c c c c c c c c c c c c c c c $ | | Quantity | n° | 20 | 22 | 22 | | 20 | 20 | 2 | |
| $ \begin{array}{c c c c c c c c c c c c c c c c c c c $ | Compressor | Befrigerant circuits | n° | 2 | 2 | 2 | | 2 | 2 | 2 | |
| Water circuit Water flow 1/s 36.65 43.79 51.38 56.88 66.58 75.47 Water circuit Pressure drops kPa 160 164 160 200 225 300 Water connections DN 150 150 200 200 200 200 Electrical characteristics Power supply V/Ph/Hz 400/3/50 400/5 400/5 400/5 | Compresser | Capacity steps | n° | - | - | | Steples | ss – – – – | - | - | |
| Water circuit Pressure drops kPa 160 164 160 200 225 300 Water connections DN 150 150 200 200 200 200 Electrical characteristics Power supply V/Ph/Hz 400/3/50 400/3/50 400/3/50 Unit with tank and pump Max. starting current A 526 770 812 848 855 1688 Unit with tank and pump Pump available static pressure kPa 100 120 140 160 125 130 Sound pressure STD version (3) dB(A) 77 79 79 79 79 80 With SL accessory (3) dB(A) 74 76 76 76 77 | | Water flow | 1/s | 36.65 | 43.79 | 51.3 | 8 | 58.88 | 66.58 | 75.47 | |
| Note of our of the strength No. No.< | Water circuit | Pressure drops | kPa | 160 | 164 | 160 |) | 200 | 225 | 300 | |
| Power supply V/Ph/Hz 400/3/50 Electrical characteristics Max. running current A 437 565 649 713 720 896 Max. running current A 437 565 649 713 720 896 Unit with tank and pump Pump available static rank water volume kPa 100 120 140 160 125 130 Vater connections DN 150 150 200 2000 200 | | Water connections | DN | 150 | 150 | 200 |) | 200 | 200 | 200 | |
| Electrical characteristics Max. running current A 437 565 649 713 720 896 Max. running current A 526 770 812 848 855 1688 Unit with tank and pump Pump available static pressure kPa 100 120 140 160 125 130 Vater connections DN 150 150 2000 Sound pressure STD version (3) dB(A) 74 76 76 76 77 | | Power supply | V/Ph/Hz | | | | 400/3/5 | 50 | | | |
| Characteristics Max. starting current A 526 770 812 848 855 1688 Unit with tank and pump Pump available static pressure kPa 100 120 140 160 125 130 Vith stark and pump Tank water volume I 2000 2000 Water connections DN 150 150 2000 200 <t< td=""><td>Electrical</td><td>Max running current</td><td>Α</td><td>437</td><td>565</td><td>649</td><td></td><td>713</td><td>720</td><td>896</td></t<> | Electrical | Max running current | Α | 437 | 565 | 649 | | 713 | 720 | 896 | |
| Pump available static pump Pump available static pressure kPa 100 120 140 160 125 130 Unit with tank and pump Tank water volume I 2000 2000 Water connections DN 150 150 200 200 200 200 Sound pressure STD version (3) dB(A) 74 76 76 76 76 77 | characteristics | Max starting current | A | 526 | 770 | 812 | 2 | 848 | 855 | 1688 | |
| Unit with tank and pump Instruction of the source pressure kPa 100 120 140 160 125 130 Tank water volume I 2000 2000 2000 Water connections DN 150 150 200 200 200 200 Sound pressure STD version (3) dB(A) 77 79 79 79 79 80 With SL accessory (3) dB(A) 74 76 76 76 77 | | Pump available static | | 100 | 110 | 012 | - | 100 | 105 | 1000 | |
| Tank water volume I 2000 2000 2000 Water connections DN 150 150 200 200 200 200 Sound pressure STD version (3) dB(A) 77 79 79 79 79 80 With SL accessory (3) dB(A) 74 76 76 76 77 | Unit with tank and | pressure | kPa | 100 | 120 | 140 | J | 160 | 125 | 130 | |
| Water connections DN 150 150 200 200 200 200 Sound pressure STD version (3) dB(A) 77 79 79 79 79 80 With SL accessory (3) dB(A) 74 76 76 76 77 | pump | Tank water volume | | 2000 | 2000 | 200 | 0 | | | | |
| Sound pressure STD version (3) dB(A) 77 79 79 79 79 80 With SL accessory (3) dB(A) 74 76 76 76 77 | r: F | Water connections | DN | 150 | 150 | 200 |) | 200 | 200 | 200 | |
| Sound pressure With SL accessory (3) dB(A) 74 76 76 76 77 | 0 1 | STD version (3) | dB(A) | 77 | 79 | 79 | | 79 | 79 | 80 | |
| | Sound pressure | With SL accessory (3) | dB(A) | 74 | 76 | 76 | | 76 | 76 | 77 | |

| DIME | INSIONS | | 1202-B | 1302-B | 1502-B | 1702-B | 1902-B | 2002-B | 2602-B | 3002-B | 3602-B | 4202-B | 4802-B | 5402-B | 6002-B |
|------|---------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | STD | mm | 4400 | 4400 | 4400 | 4400 | 5550 | 5550 | 6700 | 10050 | 10050 | 10050 | 10050 | 11100 | 13400 |
| W | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H | STD | mm | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2750 | 2750 | 2750 | 2750 |

7710 8350

8605

9410

Kg Kg

Transport weight (4)

Operating weight (4)

6820 7420

CLEARANCE AREA

CHA/Y/FC 1202-B÷6002-B

Weights

500 1800 1000 1800



NOTES

9590

10550

Chilled water (with ethylene glycol at 30%) from 15 to 10 °C, ambient air temperature 35 °C. Ambient air temperature at which the cooling capacity indicated in point (1) is reached. 1.

11750 12970

10070

- 2.
- 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.





CHA 702-V÷5602-V

AIRCOOLED LIQUID CHILLERS AND HEAT PUMPS WITH AXIAL FANS, SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The liquid Chillers and Heat Pumps of the CHA 702-V÷5602-V series are designed to satisfy the needs of large-sized service sector or industrial areas.

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 shell and tube exchanger, 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 coils 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 fitted or supplied separately, complete the outstanding versatility and functionality of the series.



VERSION

| СНА | CHA/SSL |
|----------------------|-------------------------------------|
| Cooling only | Super silenced cooling only |
| CHA/WP | CHA/WP/SSL |
| Reversible Heat Pump | Super silenced 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, oil sight glass and thermal protection.
- 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 independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- 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.
- Digital high and low pressure gauges.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-------|--------------------------------------|
| SL | Unit silencement |
| RZ | Compressors stepless control |
| CT | Condensing control down to 0 °C |
| CC | Condensing control down to -20 °C |
| BT | Low water temperature Kit |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| HRT/P | Total heat recovery in parallel |
| ΤX | Coil with pre-coated fins |
| 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 |
| | |

| FB | Antifreeze h | eater for | evaporator |
|----|--------------|-----------|------------|
| | and tank | | |
| | | | |

- F7 Antifreeze heater for evaporator, single pump and pipes
- FH Antifreeze heater for evaporator, double pump and pipes
- FU Antifreeze heater for evaporator, tank, single pump and pipes
- FD Antifreeze heater for evaporator, tank, double pump and pipes
- SS Soft start
- Modbus RTU protocol, RS485 serial 15 interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal

- ΙΑΑ Remote set-point, 4-20 mA signal IAS Remote signal for second set-point activation
- IDL Demand limit from digital input
- CP Potential free contacts

- ΜN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers Spring shock absorbers
- AM FL Flow switch



CHA 702-V÷5602-V





| MODEL | | | 702-V | 802-V | 902-V | 1102-V | 1202-V | 1502-V | 1602-V | 1802-V | 2002-V | 2202-V |
|---|---|--|---|--|--|--|--|---|--|---|---|--|
| | Cooling capacity (1) | kW | 170 | 198 | 227 | 259 | 290 | 338 | 386 | 433 | 480 | 541 |
| Cooling | Absorbed power (1) | kW | 67 | 77 | 87 | 97 | 107 | 125 | 141 | 161 | 171 | 189 |
| | EER (1) | | 2.54 | 2.57 | 2.61 | 2.67 | 2.71 | 2.70 | 2.74 | 2.69 | 2.81 | 2.86 |
| | Cooling capacity (1) | kW | 169 | 197 | 226 | 258 | 289 | 337 | 385 | 432 | 479 | 539 |
| Cooling (EN14E11) | Absorbed power (1) | kW | 68 | 78 | 88 | 98 | 108 | 126 | 142 | 163 | 172 | 191 |
| C00111g (EN 14511) | EER (1) | | 2.51 | 2.54 | 2.57 | 2.63 | 2.67 | 2.68 | 2.71 | 2.66 | 2.78 | 2.83 |
| | ESEER | | 3.26 | 3.52 | 3.48 | 3.66 | 3.48 | 3.68 | 3.60 | 3.56 | 02-V 2002-V 2202-V 433 480 541 161 171 189 2.69 2.81 2.86 32 479 539 163 172 191 2.66 2.78 2.83 3.56 3.84 3.74 478 514 585 172 179 201 2.78 2.87 2.91 480 516 587 176 182 206 2.73 2.83 2.86 2 2 2 2 2 2 2.0 200 200 307 339 378 494 568 591 175 170 160 0000 2000 2000 125 125 150 77 77 77 74 74 74 68 69 | |
| | Heating capacity (2) | kW | 190 | 215 | 253 | 280 | 314 | 372 | 417 | 478 | 514 | 585 |
| Heating | Absorbed power (2) | kW | 72 | 82 | 92 | 102 | 114 | 132 | 149 | 172 | 179 | 201 |
| | COP (2) | | 2.64 | 2.62 | 2.75 | 2.75 | 2.75 | 2.82 | 2.80 | 2.78 | 2.87 | 2.91 |
| | Heating capacity (2) | kW | 190 | 216 | 254 | 281 | 316 | 373 | 418 | 480 | 516 | 587 |
| Heating (EN14511) | Absorbed power (2) | kW | 73 | 83 | 94 | 105 | 117 | 134 | 152 | 176 | 182 | 206 |
| | COP (2) | | 2.61 | 2.59 | 2.70 | 2.69 | 2.69 | 2.79 | 2.76 | 2.73 | 2.83 | 2.86 |
| _ | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | 1 | | | 6 | 5 | | 1 | 1 | |
| _ | Water flow | l/s | 8.12 | 9.46 | 10.85 | 12.37 | 13.86 | 16.15 | 18.44 | 20.69 | 22.93 | 25.85 |
| Evaporator | Pressure drops | kPa | 30 | 34 | 45 | 50 | 55 | 25 | 36 | 42 | 35 | 42 |
| | Water connections | DN | 125 | 125 | 125 | 125 | 125 | 150 | 200 | 200 | 200 | 200 |
| | Power supply | V/Ph/Hz | | 455 | 15: | a · · · | 400/ | 3/50 | 0.5-5 | 0 | 0.5-5 | |
| Electrical characteristics | Max. running current | A | 128 | 164 | 164 | 211 | 207 | 231 | 283 | 307 | 339 | 378 |
| | Max. starting current | A | 190 | 252 | 252 | 338 | 340 | 352 | 422 | 494 | 568 | 591 |
| | Pump available static pressure | kPa | 180 | 160 | 140 | 155 | 165 | 195 | 165 | 175 | 170 | 160 |
| Unit with tank and pump | lank water volume | | 1100 | 1100 | 1100 | 1100 | 2000 | 2000 | 2000 | 2000 | 2000 | 2000 |
| | Water connections | DN | 100 | 100 | 100 | 100 | 100 | 100 | 125 | 125 | 125 | 150 |
| | STD version (3) | dB(A) | /4 | /4 | /4 | /4 | /6 | /6 | // | // | // | // |
| Sound pressure | With SL accessory (3) | dB(A) | /1 | /1 | /1 | /1 | /3 | /3 | /4 | /4 | /4 | /4 |
| | SSL version (3) | dB(A) | 66 | 66 | 6/ | 6/ | 6/ | 68 | 68 | 68 | 68 | 69 |
| Weights | Iransport weight | Kg | 2120 | 2250 | 2270 | 2380 | 2/30 | 3250 | 3870 | 3930 | 4105 | 4465 |
| | Uperating weight | Kg | 2190 | 2320 | 2340 | 2450 | 2820 | 3380 | 4100 | 4160 | 4320 | 4680 |
| | | | | | | | | | | | | |
| MODEL | | | 2402-V | 3202-V | 3302-V | 3402-V | 3602-V | 4002-V | 4202-V | 4602-V | 5002-V | 5602-V |
| MODEL | Cooling capacity (1) | kW | 2402-V 608 | 3202-V 687 | 3302-V 758 | 3402-V 828 | 3602-V 910 | 4002-V 992 | 4202-V | 4602-V 1235 | 5002-V 1397 | 5602-V 1500 |
| Cooling | Cooling capacity (1) Absorbed power (1) | kW kW | 2402-V 608 212 | 3202-V 687 235 | 3302-V 758 259 | 3402-V 828 281 | 3602-V 910 306 | 4002-V 992 336 | 4202-V 1077 368 | 4602-V 1235 410 | 5002-V 1397 473 | 5602-V 1500 504 |
| Cooling | Cooling capacity (1) Absorbed power (1) EER (1) | kW kW | 2402-V 608 212 2.87 | 3202-V 687 235 2.92 | 3302-V 758 259 2.93 | 3402-V 828 281 2.95 | 3602-V 910 306 2.97 | 4002-V 992 336 2.95 | 4202-V 1077 368 2.93 | 4602-V 1235 410 3.01 | 5002-V 1397 473 2.95 | 5602-V 1500 504 2.98 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) | kW kW kW | 2402-V 608 212 2.87 606 | 3202-V 687 235 2.92 685 | 3302-V 758 259 2.93 756 | 3402-V 828 281 2.95 826 | 3602-V 910 306 2.97 907 | 4002-V 992 336 2.95 989 | 4202-V 1077 368 2.93 1074 | 4602-V 1235 410 3.01 1232 | 5002-V 1397 473 2.95 1393 | 5602-V 1500 504 2.98 1496 |
| MODEL Cooling Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) | kW kW kW kW | 2402-V 608 212 2.87 606 214 | 3202-V 687 235 2.92 685 238 | 3302-V 758 259 2.93 756 261 | 3402-V 828 281 2.95 826 283 | 3602-V 910 306 2.97 907 309 | 4002-V 992 336 2.95 989 339 | 4202-V 1077 368 2.93 1074 371 | 4602-V 1235 410 3.01 1232 413 | 5002-V 1397 473 2.95 1393 477 | 5602-V 1500 504 2.98 1496 508 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) | kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 | 3202-V 687 235 2.92 685 238 2.88 | 3302-V 758 259 2.93 756 261 2.90 | 3402-V 828 281 2.95 826 283 2.91 | 3602-V 910 306 2.97 907 309 2.94 | 4002-V 992 336 2.95 989 339 2.92 | 4202-V 1077 368 2.93 1074 371 2.90 | 4602-V 1235 410 3.01 1232 413 2.98 | 5002-V 1397 473 2.95 1393 477 2.92 | 5602-V 1500 504 2.98 1496 508 2.94 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER | kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 | 3202-V 687 235 2.92 685 238 2.88 3.94 | 3302-V 758 259 2.93 756 261 2.90 3.93 | 3402-V 828 281 2.95 826 283 2.91 3.91 | 3602-V 910 306 2.97 907 309 2.94 3.90 | 4002-V 992 336 2.95 989 339 2.92 4.00 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) | kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) | kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) | kW kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) | kW kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) | kW kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity | kW kW kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 227 2.83 2 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 245 723 251 2.88 2 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2.90 2.90 2 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 939 939 9319 2.94 2 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits | kW kW kW kW kW kW kW n° n° | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.83 227 2.83 22 2 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 251 2.88 2 2 2 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2.90 2.90 2.2 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 306 2.93 2 2 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 939 319 2.94 2.94 2 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 22 2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)UantityRefrigerant circuitsCapacity steps | kW kW kW kW kW kW kW n° n° n° | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 227 2.83 2 2 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 51 2.88 2 2 2 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2.90 2 2 2 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 2 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2.94 2.94 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2.94 2 2 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2.9 2.2 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow | kW kW kW kW kW kW kW n° n° n° n° | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2.83 2 2 2 2.83 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 720 245 2.94 723 251 2.88 2 2 2 32.82 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 2 (43.48 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 2 3 47.40 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 51.46 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 66.75 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 2 71.67 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure drops | kW kW kW kW kW kW kW n° n° n° n° n° 1/s kPa | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 .83 2 2 2.83 2 2 2.83 46 43 227 2.83 2 2 2 .83 2 2 2 .83 2 2 .83 2 2 .83 2 2 .83 2 .83 2 .83 2 .83 2 .83 .83 .85 .84 .85 .84 .84 .85 .85 .84 .85 .85 .85 .85 .85 .85 .85 .85 .85 .85 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 2 32.82 48 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 2 36.22 33 | 3402-V 828 281 2.95 826 283 2.91 3.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 2 43.48 40 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 2 35 47.40 35 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 2 51.46 35 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 66.75 43 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 711.67 42 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)UantityRefrigerant circuitsCapacity stepsWater flowPressure dropsWater connections | kW kW kW kW kW kW kW kW kW kW kW | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 227 2.83 2 2 2 .83 2 2 2 .83 2 2 2 .83 2 2 2 .83 2 2 2 .83 2 2 2 .83 2 2 .83 2 2 .83 2 .85 2 .83 2 .85 2 .83 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .85 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 .83 2 .83 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 2 .83 .83 2 .83 .83 .83 .83 .83 .83 .83 .83 .83 .83 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 51 2.88 2 2 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 | 3402-V 828 281 2.95 826 283 2.91 3.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 200 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 43.48 40 200 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 35 47.40 35 200 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 51.46 35 200 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 66.75 43 200 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 711.67 42 200 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure dropsWater connectionsPower supply | kW kW kW kW kW kW kW n° n° n° 1/s kPa DN V/Ph/Hz | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.83 2 2 2 2.83 2 2 2 9.05 46 200 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 | 3402-V 828 281 2.95 826 283 2.91 3.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 200 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 313 2.99 939 319 2.94 2 2 2 43.48 40 200 400/ | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 35 35 47.40 35 200 3/50 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 51.46 35 200 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 66.75 43 200 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure dropsWater connectionsPower supplyMax. running current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.83 2 2 2 9.05 46 200 434 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 25 2.88 2 2 2 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 36.22 33 36.22 33 200 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 39.56 36 200 544 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 43.48 40 200 400/ 638 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 35 47.40 35 200 3/50 674 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.83 2 2 2 2 51.46 35 200 707 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 819 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 666.75 43 200 902 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure dropsWater connectionsPower supplyMax. running currentMax. starting current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.83 2 2 2 2 9.05 46 200 200 434 729 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.84 2 251 2.82 2 2 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2.90 2 2 2 36.22 33 200 544 1037 | 3402-V 828 281 2.95 826 283 2.91 893 300 2.98 896 306 2.93 896 306 2.93 2 2 2 39.56 36 200 2 9 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 938 319 2.94 938 319 2.94 2.92 2 2 43.48 40 200 638 1149 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2.92 47.40 35 200 3/50 674 1167 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 51.46 35 200 707 1293 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 819 1645 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 66.75 43 200 902 1835 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure dropsWater connectionsPower supplyMax. running currentMax. starting currentPump available static pressure | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2 9.05 46 200 29.05 46 200 29.05 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 544 1037 165 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 200 544 1037 140 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 2 2 4.3.48 40 200 400/ 638 1149 135 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 2 2 2 3 5 47.40 35 200 3/50 674 1167 205 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 51.46 35 200 707 1293 200 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 819 1645 180 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 66.75 43 200 902 1835 160 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 150 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2.83 2 2 2 9.05 46 200 434 729 155 2000 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 32.82 48 200 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 36.22 33 200 544 1037 165 2000 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 200 544 1037 140 2000 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 2 43.48 40 200 400/ 638 1149 135 2000 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 3 5 47.40 35 200 3/50 674 1167 205 2000 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 51.46 35 200 707 1293 200 3000 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 59.01 38 200 819 1645 180 3000 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 66.75 43 200 902 1835 160 3000 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 150 3000 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2.83 2 2 2 9.05 46 200 434 729 155 2000 150 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 468 729 130 2000 150 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 544 1037 165 2000 150 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 39.56 36 200 544 1037 140 2000 150 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 2 43.48 40 200 43.48 40 200 400/ 638 1149 135 2000 150 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 35 47.40 35 200 3/50 674 47.40 35 200 3/50 674 1167 205 2000 200 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 51.46 35 200 707 1293 200 3000 200 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 59.01 38 200 819 1645 180 3000 200 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2 66.75 43 200 902 1835 160 3000 200 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 711.67 42 200 955 1949 150 3000 200 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) | kW kW kW kW kW kW kW kW kW kW kW kV kPa DN V/Ph/Hz A kPa I DN kPa I DN dB(A) | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2.83 2 2 2 2.83 2 2 2 2.83 2 2 2 2 9.05 46 200 434 729 5 2000 150 77 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 468 729 130 2000 150 77 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 36.22 33 200 544 1035 2000 150 78 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 39.56 36 200 544 1037 140 2000 150 78 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 43.48 40 200 400/ 638 1149 135 2000 150 78 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 3 5 47.40 35 200 3/50 674 1167 205 2000 200 78 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 51.46 35 200 707 1293 200 200 78 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 59.01 38 200 819 1645 180 3000 200 78 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2. 2. 66.75 43 200 902 1835 160 3000 200 78 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 711.67 42 200 955 1949 150 3000 200 78 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Park starting current Water connections STD version (3) With SL accessory (3) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.83 2 2 2 2.83 2 2 2 2 9.05 46 200 434 729 155 2000 150 77 74 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 32.82 48 200 468 729 130 2000 150 77 74 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 544 1037 165 2000 150 78 75 | 3402-V 828 281 2.95 826 283 2.91 3.91 3.91 893 300 2.98 896 306 2.93 2 2 2 39.56 36 200 544 1037 140 2000 150 78 75 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2 2 2 43.48 40 200 400/ 638 1149 135 2000 400/ 638 1149 135 2000 78 75 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 3 357 2.94 2 2 3 3 5 47.40 35 200 3/50 674 1167 205 2000 200 78 75 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 51.46 35 200 707 1293 200 707 1293 200 3000 3000 200 78 75 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 59.01 38 200 819 1645 180 3000 3000 200 78 75 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2. 2 2. 2. 66.75 43 200 902 1835 160 3000 200 78 75 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 711.67 42 200 955 1949 150 3000 200 78 75 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) With SL accessory (3) SSL version (3) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.88 643 227 2.88 643 227 2.80 00 460 200 155 2000 155 2000 155 2000 177 74 69 | 3202-V 687 235 2.92 685 2.38 2.88 3.94 720 245 2.94 723 251 2.82 48 2 2 32.82 48 729 130 2000 150 77 74 69 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 36.22 33 200 544 1037 165 2000 544 1037 165 2000 150 78 75 69 | 3402-V 828 281 2.95 826 283 2.91 893 300 2.98 896 306 2.93 2 2 2 2 39.56 36 2.93 2 2 2 39.56 36 200 2 9 544 1037 140 2000 544 1037 140 2000 | 3602-V 910 306 2.97 907 309 2.94 313 2.99 938 313 2.99 938 313 2.99 939 319 2.94 2 2 2 43.48 40 20 20 43.00 (638 1149 135 2000 150 78 75 69 | 4002-V 992 336 2.95 989 339 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 2 47.40 35 200 3/50 674 1167 205 2000 3/50 674 1167 205 2000 78 75 69 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.93 1116 387 2.83 2 2 2 2 2 707 1293 200 3000 200 3000 200 78 75 69 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 59.01 38 200 819 1645 180 3000 200 78 75 69 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 666.75 43 200 902 1835 160 3000 200 78 75 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 150 3000 200 78 75 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump Sound pressure Weights | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER Heating capacity (2) Absorbed power (2) COP (2) Heating capacity (2) Absorbed power (2) COP (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) With SL accessory (3) SSL version (3) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.88 643 227 2.88 643 227 2.89 05 46 200 200 55 2000 155 155 2000 155 155 155 155 155 155 155 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 2 32.82 48 200 32.82 48 200 130 2000 150 77 74 69 5045 505 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 2 36.22 33 200 544 1037 165 2000 150 75 69 569 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 2 39.56 36 200 544 1037 140 2000 150 75 69 5890 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2.94 2 2 2 2 2 2 43.48 40 200 638 1149 135 2000 150 75 69 6240 | 4002-V 992 336 2.95 989 333 2.92 4.00 1046 350 2.99 1049 357 2.94 2 2 35 2000 3/50 674 1167 205 2000 2000 75 69 6940 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 2 2 2 2 707 1293 200 3000 200 707 1293 200 3000 200 707 1293 200 3000 200 2 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 2 2 59.01 38 200 819 1645 180 3000 200 78 8 75 69 8350 200 200 200 200 200 200 200 2 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 666.75 43 200 902 1835 160 3000 200 78 875 9240 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 150 3000 200 75 975 9750 |
| MODEL Cooling Cooling (EN14511) Heating Heating (EN14511) Compressor Evaporator Electrical characteristics Unit with tank and pump Sound pressure Weights | Cooling capacity (1)Absorbed power (1)EER (1)Cooling capacity (1)Absorbed power (1)EER (1)ESEERHeating capacity (2)Absorbed power (2)COP (2)Heating capacity (2)Absorbed power (2)COP (2)QuantityRefrigerant circuitsCapacity stepsWater flowPressure dropsPower supplyMax. running currentMax. starting currentMax. starting currentPump available static pressureTank water volumeWater connectionsSTD version (3)With SL accessory (3)SSL version (3)Transport weightOperating weight | kW b n° n° N° V/Ph/Hz A A A B(A) dB(A) dB(A) Kg | 2402-V 608 212 2.87 606 214 2.83 3.85 640 222 2.88 643 227 2.88 643 227 2.88 643 227 2.83 2 2 2 2 9.05 46 200 200 434 729 155 2000 150 77 74 69 4505 4720 | 3202-V 687 235 2.92 685 238 2.88 3.94 720 245 2.94 723 251 2.88 2 2 2 32.82 48 200 32.82 48 200 130 2000 150 77 74 69 5045 5240 | 3302-V 758 259 2.93 756 261 2.90 3.93 809 275 2.94 811 280 2.90 2 2 2 2 36.22 33 200 544 1037 165 2000 150 75 69 5690 5900 | 3402-V 828 281 2.95 826 283 2.91 3.91 893 300 2.98 896 306 2.93 2 2 2 2 39.56 36 200 544 1037 140 2000 150 75 69 5890 6100 | 3602-V 910 306 2.97 907 309 2.94 3.90 936 313 2.99 939 319 2.94 2.94 2 2 2 2 2 2 2 43.48 40 200 638 1149 135 2000 150 75 69 6240 6450 | 4002-V 992 336 2.95 989 333 2.92 4.00 1046 350 2.99 1049 357 2.92 4.00 357 2.99 1049 357 2.92 2 35 2000 3/50 674 1167 205 2000 200 78 75 69 6940 7240 | 4202-V 1077 368 2.93 1074 371 2.90 4.11 1113 380 2.93 1116 387 2.89 2 2 2 2 2 51.46 35 200 51.46 35 200 707 1293 200 3000 200 707 1293 200 3000 200 78 55 69 7365 7650 | 4602-V 1235 410 3.01 1232 413 2.98 3.99 1342 430 3.12 1346 440 3.06 2 2 2 2 59.01 38 200 819 1645 180 3000 200 78 69 8360 8780 | 5002-V 1397 473 2.95 1393 477 2.92 4.00 2 2 2 2 666.75 43 200 902 1835 160 3000 200 78 9240 9660 | 5602-V 1500 504 2.98 1496 508 2.94 4.11 2 2 71.67 42 200 955 1949 150 3000 200 75 9750 10230 |

DIMENSIONS 902-V 1102-V 1202-V 1502-V 1602-V 1802-V 2002-V 2202-V 2402-V 3202-V 3302-/ 3402-\/ 3602-\/ 4002-\/ 4202-\/ 4602-\/ 5002-\/ 5602-\/ STD mm <u>3</u>350 SSI 3350 4400 4400 5550 6700 6700 6700 8900 8900 8900 10050 10050 12250 12250 13400 --------1 mm 4400 4400 4400 4400 5550 5550 6700 6700 6700 7750 7750 10050 10050 10050 12250 13400 WP
 WP
 Min
 4400
 4400
 4400
 4400
 550
 550
 550
 5700
 7750
 7750
 7750
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 10050
 W Н

Electrical board side

CLEARANCE AREA

CHA 702-V÷5602-V

500 1800 1000 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.
- Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.
- Length with inertial tank accessory.
 N.B. Weights of SSL and WP versions and units with tank and pump are specified on technical brochure.

STD-SSL-WP-WP/SSL



FROM 177 KW TO 1163 KW.



CHA/FC 702-V+4602-V

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, SCREW COMPRESSORS AND SHELL AND TUBE EXCHANGER.



The liquid Chillers of the CHA/FC 702-V÷4602-V series offer innovative technology to meet the needs of large systems for industrial applications requiring the production of cooled water continuously year-round.

During the cold months, in FREE-COOLING operation mode, the return liquid of the system is cooled directly by forced convection of outdoor air through the condensing coil, thus saving energy by not operating the unit's Screw compressors. A 3-way valve system is controlled by the electronic microprocessor controller, allowing functioning in CHILLER, FREE-COOLING or MIXED (simultaneously CHILLER and FREE-COOLING) modes.



FREE COOLING

VERSION

CHA/FC

Cooling only

FEATURES

- · Self-supporting galvanized steel frame protected with polyester powder painting.
- Screw compressors, with built-in oil separator, suction filter, cranckcase heater, oil sight glass and thermal protection.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- Shell and tube type evaporator, with two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- · Digital high and low pressure gauges.
- R407C 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 also allows the cooling functioning of the unit by external temperature till -20°C.
- Microprocessor control and regulation system.

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- SL Unit silencement BT Low water temperature Kit RZ Compressors stepless control HRT/P Total heat recovery in parallel TΧ Coil with pre-coated fins 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 SS Soft start
- IS
 - Modbus RTU protocol, RS485 serial interface
- ISB BACnet MSTP protocol, RS485 serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal
- IAA Remote set-point, 4-20 mA signal
- IAS Remote signal for second set-point activation
- IDL Demand limit from digital input
- CP Potential free contacts

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers FL
 - Flow switch

CHA/FC 702-V÷4602-V



| MODEL | | | 702-V | 802-V | 902-V | 1102-V | 1202-V | 1502-V | 1602-V | 1802-V | 2002-V |
|--|---|--|--|--|--|--|--|---|--|--|--|
| | Cooling capacity (1) | kW | 177 | 199 | 226 | 255 | 286 | 329 | 377 | 423 | 478 |
| Cooling | Absorbed power (1) | kW | 65 | 79 | 87 | 101 | 111 | 121 | 145 | 167 | 173 |
| MODEL Cooling Cooling Free-Cooling cycle Air Compressor Ref Compressor Ref Carrier Carrier Water circuit Pre Water circuit Pre Unit with tank and pump Pur Sound pressure Wit Weights Tra Cooling Abs Cooling Abs Cooling Cool Cooling Abs Cooling Cool Bere-Cooling cycle Air Free-Cooling cycle Air Compressor Ref Compressor Ref Electrical Poo Compressor Ref Unit with tank and pre Poo Unit with tank and pre Pur Unit with tank and pre Pur Unit with tank and pre Pur | EER (1) | | 2.72 | 2.52 | 2.60 | 2.52 | 2.58 | 2.72 | 2.60 | 2.53 | 2.76 |
| MODEL Cooling Cooling Free-Cooling cycle Air te Abso Quan Compressor Refriji Capa Wate Water circuit Press Water circuit Powe Electrical Max. characteristics Max. Unit with tank and press pump Wate Sound pressure STD · With Trans Operation Operation MODEL Cooling Cooling Cooling Free-Cooling cycle Air te Abso Compressor Refrij Cooling Cooling Abso Compressor Refrij Capa Quan Compressor Refrij Capa Wate Compressor Refrij Capa Wate Couling Air te Abso Quan Compressor Refrij Capa Wate Characteristics | Air temperature (2) | °C | 0.0 | -1.5 | -2.5 | -3.3 | -3.2 | -1.0 | -2.5 | -3.2 | -2.3 |
| | Absorbed power (2) | kŴ | 8 | 8 | 8 | 8 | 12 | 16 | 16 | 16 | 16 |
| | Quantity | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Compressor | Refrigerant circuits | n° | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | _ | _ | | | 6 | _ | . – | _ | |
| | Water flow | I/s | 9.15 | 10.29 | 11.68 | 13.18 | 14.79 | 17.01 | 19.49 | 21.87 | 24.71 |
| Water circuit | Pressure drops | kPa | 77 | 95 | 110 | 122 | 112 | 45 | 55 | 62 | 83 |
| | Water connections | "G | 4 | 4 | 4 | 4 | 4 | 4 | 5 | 5 | 5 |
| | Power supply | V/Ph/Hz | | | | 1 | 400/3/50 | | | | |
| Electrical Pc characteristics M Pu Pu | Max, running current | Α | 128 | 164 | 164 | 211 | 207 | 238 | 283 | 307 | 339 |
| characteristics | Max. starting current | A | 190 | 252 | 252 | 338 | 340 | 360 | 422 | 494 | 568 |
| | Pump available static | | 100 | 105 | 05 | 140 | 170 | 005 | 475 | 140 | 150 |
| Unit with tank and | pressure | kPa | 163 | 125 | 95 | 148 | 1/3 | 205 | 1/5 | 148 | 152 |
| pump | Tank water volume | | 1100 | 1100 | 1100 | 1100 | 2000 | 2000 | 2000 | 2000 | 2000 |
| pump | Water connections | "G | 4″ | 4″ | 4″ | 4″ | 4″ | 4″ | 5″ | 5″ | 5″ |
| Sound pressure | STD version (3) | dB(A) | 74 | 74 | 74 | 74 | 76 | 77 | 77 | 77 | 77 |
| Sound pressure | With SL accessory (3) | dB(A) | 71 | 71 | 71 | 71 | 72 | 74 | 74 | 74 | 74 |
| \A/=: | Transport weight (4) | Kg | 2620 | 2750 | 2770 | 2800 | 2950 | 3920 | 4070 | 4140 | 4810 |
| vveignts | Operating weight (4) | Kg | 2800 | 2930 | 2950 | 2980 | 3180 | 4280 | 4430 | 4500 | 5230 |
| | | | | | | | | | | | |
| | | | | | | | | | | | |
| MODEL | | | 2202-V | 2402-V | 3202-V | 3302-V | 3402-V | 3602-V | 4002-V | 4202-V | 4602-V |
| MODEL | Cooling capacity (1) | kW | 2202-V 534 | 2402-V 583 | 3202-V | 3302-V 726 | 3402-V 795 | 3602-V 863 | 4002-V 945 | 4202-V 1036 | 4602-V 1163 |
| MODEL | Cooling capacity (1) Absorbed power (1) | kW kW | 2202-V 534 199 | 2402-V 583 215 | 3202-V 656 248 | 3302-V 726 283 | 3402-V 795 300 | 3602-V 863 312 | 4002-V 945 334 | 4202-V 1036 367 | 4602-V 1163 441 |
| MODEL | Cooling capacity (1) Absorbed power (1) EER (1) | kW kW | 2202-V 534 199 2.68 | 2402-V 583 215 2.71 | 3202-V 656 248 2.65 | 3302-V 726 283 2.57 | 3402-V 795 300 2.65 | 3602-V 863 312 2.77 | 4002-V 945 334 2.83 | 4202-V 1036 367 2.82 | 4602-V 1163 441 2.64 |
| MODEL Cooling | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) | kW kW | 2202-V 534 199 2.68 -3.0 | 2402-V 583 215 2.71 -3.0 | 3202-V 656 248 2.65 -2.5 | 3302-V 726 283 2.57 -3.8 | 3402-V 795 300 2.65 -3.2 | 3602-V 863 312 2.77 -4.0 | 4002-V 945 334 2.83 -3.3 | 4202-V 1036 367 2.82 -4.3 | 4602-V 1163 441 2.64 -4.2 |
| MODEL Cooling Free-Cooling cycle | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) | kW kW °C kW | 2202-V 534 199 2.68 -3.0 20 | 2402-V 583 215 2.71 -3.0 20 | 3202-V 656 248 2.65 -2.5 24 | 3302-V 726 283 2.57 -3.8 24 | 3402-V 795 300 2.65 -3.2 28 | 3602-V 863 312 2.77 -4.0 28 | 4002-V 945 334 2.83 -3.3 28 | 4202-V 1036 367 2.82 -4.3 28 | 4602-V 1163 441 2.64 -4.2 36 |
| MODEL Cooling Free-Cooling cycle | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity | kW kW °C kW n° | 2202-V 534 199 2.68 -3.0 20 2 | 2402-V 583 215 2.71 -3.0 20 2 | 3202-V 656 248 2.65 -2.5 24 2 | 3302-V 726 283 2.57 -3.8 24 2 | 3402-V 795 300 2.65 -3.2 28 2 | 3602-V 863 312 2.77 -4.0 28 2 | 4002-V 945 334 2.83 -3.3 28 2 | 4202-V 1036 367 2.82 -4.3 28 2 | 4602-V 1163 441 2.64 -4.2 36 2 |
| MODEL Cooling Free-Cooling cycle Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits | kW kW °C kW n° n° | 2202-V 534 199 2.68 -3.0 20 2 2 2 | 2402-V 583 215 2.71 -3.0 20 2 2 2 | 3202-V 656 248 2.65 -2.5 24 2 2 | 3302-V 726 283 2.57 -3.8 24 2 2 | 3402-V 795 300 2.65 -3.2 28 2 2 2 2 2 2 | 3602-V 863 312 2.77 -4.0 28 2 2 | 4002-V 945 334 2.83 -3.3 28 2 2 2 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 | 4602-V 1163 441 2.64 -4.2 36 2 2 |
| MODEL Cooling Free-Cooling cycle Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps | kW kW °C kW n° n° n° | 2202-V 534 199 2.68 -3.0 20 2 2 2 | 2402-V 583 215 2.71 -3.0 20 2 2 2 | 3202-V 656 248 2.65 -2.5 24 2 2 2 | 3302-V 726 283 2.57 -3.8 24 2 2 2 | 3402-V 795 300 2.65 -3.2 28 2 2 2 6 | 3602-V 863 312 2.77 -4.0 28 2 2 2 | 4002-V 945 334 2.83 -3.3 28 2 2 2 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 | 4602-V 1163 441 2.64 -4.2 36 2 2 2 |
| MODEL Cooling Free-Cooling cycle Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow | kW kW °C kW n° n° n° l/s | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 27.61 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 | 3402-V 795 300 2.65 -3.2 28 2 2 2 6 41.10 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 | 4002-V 945 334 2.83 -3.3 -3.3 28 2 2 2 2 48.85 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops | kW kW °C kW n° n° n° 1/s kPa | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 2 7.61 83 | 2402-V 583 215 2.71 -3.0 20 2 2 30.14 84 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 | 3602-V <u>863</u> <u>312</u> <u>2.77</u> <u>-4.0</u> <u>28</u> <u>2</u> <u>2</u> <u>44.61</u> <u>176</u> | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections | kW kW °C kW n° n° n° 1/s kPa "G | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 7.61 83 5 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 37.53 6 | 3402-V 795 300 2.65 -3.2 28 2 2 2 6 41.10 165 6 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 145 8 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply | kW kW °C kW n° n° l/s kPa "G V/Ph/Hz | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 2 2 2 5 5 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 | 3402-V 795 300 2.65 -3.2 28 2 2 2 6 41.10 165 6 400/3/50 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 145 8 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max, running current | kW kW °C kW n° n° 1/s kPa "G V/Ph/Hz A | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 7.61 83 5 5 378 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 - 434 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 476 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 | 3402-V 795 300 2.65 -3.2 2 8 2 2 2 6 41.10 165 6 400/3/50 552 | 3602-V 863 312 2.77 -4.0 28 2 2 2 2 44.61 176 6 38 | 4002-V 945 334 2.83 -3.3 28 2 2 2 2 48.85 152 8 8 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 145 8 707 | 4602-V 1163 441 2.64 -4.2 36 2 2 2 60.12 203 8 8 819 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current | kW kW °C kW n° n° I/s kPa "G V/Ph/Hz A | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 27.61 83 5 - 378 591 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 - 434 729 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 6 476 736 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 1037 | 3402-V 795 300 2.65 -3.2 2 8 2 2 2 6 41.10 165 6 400/3/50 552 1045 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 6 6 38 1149 | 4002-V 945 334 2.83 -3.3 28 2 2 2 2 48.85 152 8 8 674 1167 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 145 8 707 1293 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 8 819 1645 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static | kW kW °C kW n° n° 1/s kPa "G V/Ph/Hz A A | 2202-V 534 199 2.68 -3.0 20 2 2 2 27.61 83 5 378 591 145 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 434 729 141 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 476 736 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 1037 | 3402-V 795 300 2.65 -3.2 28 2 2 2 6 41.10 165 6 400/3/50 552 1045 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 6 6 638 1149 04 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 674 1167 112 | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 8 707 1293 105 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 8 819 1645 77 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure | kW kW °C kW n° n° 1/s kPa "G V/Ph/Hz A A kPa | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 3 7.61 83 5 5 378 591 145 | 2402-V 583 215 2.71 -3.0 20 2 2 2 30.14 84 6 434 729 141 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 476 736 125 | 3302-V 726 283 2.57 -3.8 24 2 2 37.53 135 6 544 1037 110 | 3402-V 795 300 2.65 -3.2 28 2 2 2 2 2 6 41.10 165 6 400/3/50 552 1045 65 | 3602-V 863 312 2.77 -4.0 28 2 2 44.61 176 6 638 1149 94 | 4002-V 945 334 2.83 -3.3 28 2 2 2 2 48.85 152 8 8 674 1167 113 | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 8 707 1293 105 | 4602-V 1163 441 2.64 -4.2 36 2 60.12 203 8 819 1645 77 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and pump | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume | kW kW n° n° N° N° kPa "G V/Ph/Hz A A kPa I | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 3 78 5 91 145 2000 | 2402-V 583 215 2.71 -3.0 20 2 2 30.14 84 6 434 729 141 2000 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 6 476 736 125 2000 | 3302-V 726 283 2.57 -3.8 24 2 2 37.53 37.53 6 544 1037 110 2000 | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 6 400/3/50 552 1045 65 2000 | 3602-V 863 312 2.77 -4.0 28 2 2 44.61 176 6 6 6 8 1149 94 2000 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 8 674 1167 113 2000 | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 8 707 1293 105 3000 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 8 1645 77 3000 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and pump | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections | kW kW °C kW n° n° 1/s kPa "G V/Ph/Hz A A kPa I I | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 3 7 5 5 - 3 78 5 91 145 2000 6″ | 2402-V 583 215 2.71 -3.0 20 2 2 30.14 84 6 - 434 729 141 2000 6" | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 6 476 736 125 2000 6" | 3302-V 726 283 2.57 -3.8 24 2 2 37.53 135 6 6 544 1037 110 2000 6″ | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 6 400/3/50 552 1045 65 2000 6″ | 3602-V 863 312 2.77 -4.0 28 2 2 44.61 176 6 6 6 8 1149 94 2000 6'' | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 8 674 1167 113 2000 8″ | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 8 707 1293 105 3000 8" | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 8 819 1645 77 3000 8" |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) | kW kW °C kW n° n° I/s kPa "G V/Ph/Hz A A kPa I "G dB(A) | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 2 3 7 3 78 5 91 145 2000 6″ 77 | 2402-V 583 215 2.71 -3.0 20 2 2 30.14 84 6 - 434 729 141 2000 6″ 77 | 3202-V 656 248 2.65 -2.5 24 2 2 2 33.91 130 6 476 736 125 2000 6″ 78 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 1037 110 2000 6″ 79 | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 6 400/3/50 552 1045 65 2000 6″ 80 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 - 6 - 6 - 6 - 94 2000 6'' 79 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 8 674 1167 113 2000 8″ 79 | 4202-V 1036 367 2.82 -4.3 28 2 2 53.56 145 8 707 1293 105 3000 8″ 80 | 4602-V 1163 441 2.64 -4.2 36 2 2 60.12 203 8 8 8 1645 77 3000 8" 79 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) With SL accessory (3) | kW kW n° n° 1/s kPa "G V/Ph/Hz A A kPa kPa i G dB(A) dB(A) | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 3 78 5 9 3 78 5 91 145 2000 6 ^{°°} 77 74 | 2402-V 583 215 2.71 -3.0 2 2 2 30.14 84 6 - 434 729 141 2000 6 ^{°°} 77 74 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 6 476 736 125 2000 6" 78 75 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 1037 110 2000 6″ 79 76 | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 6 400/3/50 552 1045 65 2000 6" 80 77 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 6 6 38 1149 94 2000 6″ 79 76 | 4002-V 945 334 2.83 -3.3 2 2 2 2 48.85 152 8 674 1167 113 2000 8″ 79 76 | 4202-V 1036 367 2.82 -4.3 28 2 2 2 53.56 145 8 707 1293 105 3000 8" 80 77 | 4602-V 1163 441 2.64 -4.2 36 2 2 2 60.12 203 8 8 819 1645 77 3000 8" 79 76 |
| MODEL Cooling Free-Cooling cycle Compressor Water circuit Electrical characteristics Unit with tank and pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Air temperature (2) Absorbed power (2) Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Tank water volume Water connections STD version (3) With SL accessory (3) Transport weight (4) | kW kW n° n° l/s kPa "G V/Ph/Hz A A kPa kPa l "G dB(A) dB(A) Kg | 2202-V 534 199 2.68 -3.0 20 2 2 2 2 2 2 2 7.61 83 5 5 378 591 145 2000 6″ 77 77 74 5080 | 2402-V 583 215 2.71 -3.0 20 2 2 30.14 84 6 - 434 729 141 2000 6″ 77 74 5110 | 3202-V 656 248 2.65 -2.5 24 2 2 33.91 130 6 476 736 125 2000 6″ 78 75 6350 | 3302-V 726 283 2.57 -3.8 24 2 2 2 37.53 135 6 544 1037 110 2000 6″ 79 76 6440 | 3402-V 795 300 2.65 -3.2 28 2 2 6 41.10 165 6 400/3/50 552 1045 65 2000 6 80 77 7190 | 3602-V 863 312 2.77 -4.0 28 2 2 2 44.61 176 6 6 6 6 8 38 1149 94 2000 6 ^{°°} 79 76 7240 | 4002-V 945 334 2.83 -3.3 28 2 2 2 48.85 152 8 674 1167 113 2000 8″ 79 76 8250 | 4202-V 1036 367 2.82 -4.3 2 2 2 2 53.56 145 8 707 1293 105 3000 8" 80 77 8600 | 4602-V 1163 441 2.64 -4.2 36 2 2 2 60.12 203 8 8 8 1645 77 3000 8" 79 76 9940 |

| DIN | 1EN | ISIONS | 3 | 702-V | 802-V | 902-V | 1102-V | 1202-V | 1502-\ | ′ 1602-V | 1802-\ | <mark>2002-</mark> | ^{2202-V} | 2402-V | 3202-V | 3302-V | 3402-V | 3602-V | 4002-V | 4202-V | 4602-V |
|-----|-----|--------|----|-------|-------|-------|--------|--------|--------|----------|--------|--------------------|-------------------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | | STD | mm | 4400 | 4400 | 4400 | 4400 | 4400 | 5550 | 5550 | 5550 | 6700 | 6700 | 6700 | 8900 | 8900 | 10050 | 10050 | 10050 | 10050 | 12250 |
| W | | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | | STD | mm | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2750 | 2750 | 2750 |

| | NOTES |
|---|--|
| | NOTES |
| CHA/FC 702-V÷4602-V 500 1800 1000 1800 | Chilled water (with ethylene glycol at 30%) from 15 to 10 °C, ambient air temperature 35 °C. |
| | Ambient air temperature at which the cooling capacity indicated in point (1) is reached. |
| | Sound pressure level measured in free field conditions at 1 m from the unit. According |

to ISO 3744. Unit without tank and pump. 4.



FROM 262 KW TO 1340 KW.



CHA/TTH 1301-1+4904-2

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGER.



The innovative CHA/TTH 1301-1 ÷4904-2 TURBOLINE units, with HFO-R1234ze refrigerant, are designed to provide an effective solution to highly selective system needs. The latest generation refrigerant HFO-R1234ze, with GWP<1 (Global Warming Potential), is the most environmentally sustainable refrigerant on the market, and meets the strictest international environmental regulations. Furthermore, thanks to Turbocor compressors, the units perform with top efficiency at partial loads, low inrush currents, an excellent silent functioning and reduced weight.

The use of TURBOCOR dynamic partial-load oil-free magnetic levitation compressors managed by the TURBOSOFT self-adaptive electronic control, of shell tube evaporator and innovative heat exchangers, traditional or Microchannel, results in a high energy efficiency with unequalled ESEER/IPLV values, in the elimination of accumulation tanks and in an excellent silent functioning. Compared to traditional units, equipped with Screw compressors, TURBOLINE units have low operational costs during their entire operating period, even lower than 50%. Besides, the units are equipped with a WEB MONITORING system for the monitoring and remote management of the units through the GPRS/ EDGE/3G/TCP-IP communication protocol. Users enabled to the use of this service can, by using a specific webpage, have access to the Monitoring, Managing and Statistics activities.



MICROCHANNEL

HFO R1234ze

VERSION

CHA/TTH

Cooling only

CHA/TTH/MC

Cooling only with MICROCHANNEL coils

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils or aluminium MICROCHANNEL coils.
- High efficiency flooded shell and tube type evaporator, with one or two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- HFO-R1234ze refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors and thermocontacts for the fans, interface relay and terminals for external connections.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/ EDGE/3G/TCP-IP network.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-------|----------------------------------|
| EC | EC Inverter fans |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| HRT/P | Total heat recovery in parallel |
| ΤX | Coil with pre-coated fins |
| TXB | Coil with epoxy treatment |
| PU | Single circulating pump |
| PD | Double circulating pump |
| FE | Antifreeze heater for evaporator |

- F7 Antifreeze heater for evaporator, single pump and pipes
- Antifreeze heater for evaporator, FH double pump and pipes
- ΤS Touch screen interface
- BACnet MSTP protocol, RS485 ISB serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal
- IAA Remote set-point, 4-20 mA signal

- IAS Remote signal for second set-point
- activation IDI Demand limit from digital input
- CP Potential free contacts

| 10001/ | | | |
|--------|--------------|----------|--------|
| MN | High and low | pressure | gauges |

- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers AM
 - Spring shock absorbers Flow switch
- FL

CHA/TTH 1301-1÷4904-2





| MODEL | | | 1301-1 | 1701-1 | 2802-1 | 3502-1 | 4103-1 | 4403-1 | 4904-1 | 2802-2 | 3502-2 | 4904-2 |
|---------------------------------|-----------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Cooling capacity (1) | kW | 262 | 335 | 524 | 670 | 777 | 1000 | 1340 | 524 | 670 | 1340 |
| Cooling STD version | Absorbed power (1) | kW | 76 | 94 | 154 | 191 | 228 | 280 | 377 | 154 | 193 | 381 |
| | EER (1) | | 3.45 | 3.56 | 3.40 | 3.51 | 3.41 | 3.57 | 3.55 | 3.40 | 3.51 | 3.55 |
| | Cooling capacity (1) | kW | 261 | 334 | 522 | 668 | 774 | 997 | 1336 | 523 | 668 | 1335 |
| Cooling STD version | Absorbed power (1) | kW | 77 | 95 | 156 | 193 | 231 | 283 | 381 | 155 | 195 | 386 |
| | EER (1) | | 3.39 | 3.52 | 3.35 | 3.46 | 3.35 | 3.52 | 3.51 | 3.37 | 3.46 | 3.51 |
| (EN14311) | ESEER | | 4.70 | 4.82 | 4.87 | 5.17 | 5.02 | 5.17 | 5.19 | 4.70 | 4.93 | 4.99 |
| | EUROVENT Class | | А | A | A | А | A | A | A | A | А | А |
| | Cooling capacity (1) | kW | 262 | 335 | 524 | 670 | 777 | 1000 | 1340 | 524 | 670 | 1340 |
| Cooling MC version | Absorbed power (1) | kW | 72 | 89 | 145 | 181 | 216 | 264 | 356 | 145 | 183 | 360 |
| Cooling IVIC version / | EER | | 3.64 | 3.76 | 3.59 | 3.70 | 3.60 | 3.79 | 3.76 | 3.59 | 3.70 | 3.76 |
| Cooling MC version (EN14511) | Cooling capacity (1) | kW | 259 | 334 | 518 | 668 | 774 | 997 | 1336 | 519 | 668 | 1335 |
| | Absorbed power (1) | kW | 73 | 90 | 147 | 183 | 219 | 267 | 360 | 146 | 185 | 365 |
| | EER (1) | | 3.55 | 3.71 | 3.52 | 3.65 | 3.53 | 3.73 | 3.71 | 3.55 | 3.65 | 3.71 |
| | ESEER | | 4.92 | 5.06 | 5.12 | 5.42 | 5.26 | 5.43 | 5.44 | 4.93 | 5.17 | 4.99 |
| | EUROVENT Class | | А | A | A | Α | A | A | A | A | А | A |
| | Quantity | n° | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | Capacity steps | n° | | | | | Step | less | | | | |
| | Water flow | l/s | 12.52 | 16.01 | 25.04 | 32.01 | 37.12 | 47.78 | 64.02 | 25.04 | 32.01 | 64.02 |
| Evaporator | Pressure drops | kPa | 40 | 47 | 47 | 50 | 40 | 43 | 32 | 47 | 50 | 32 |
| | Water connections | DN | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 125 | 125 | 150 |
| Electrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| characteristics | Max. running current | A | 173 | 173 | 339 | 347 | 505 | 520 | 678 | 339 | 347 | 678 |
| characteristics | Max. starting current | A | 25 | 25 | 191 | 199 | 357 | 372 | 530 | 191 | 199 | 530 |
| Unit with pump | Pump available static pressure | kPa | 140 | 120 | 110 | 125 | 105 | 120 | 145 | 110 | 125 | 145 |
| | Water connections | DN | 100 | 100 | 150 | 150 | 150 | 150 | 200 | 150 | 150 | 200 |
| Cound process | STD version (2) | dB(A) | 70 | 70 | 71 | 71 | 71 | 71 | 72 | 71 | 71 | 72 |
| Sound pressure | MC version (2) | dB(A) | 69 | 69 | 70 | 70 | 70 | 70 | 71 | 70 | 70 | 71 |
| \ \ /_: | Transport weight | Kg | 2610 | 3000 | 4050 | 4460 | 6050 | 6820 | 8100 | 4290 | 4700 | 8400 |
| vveignts | Operating weight | Kg | 2670 | 3070 | 4150 | 4580 | 6210 | 7010 | 8400 | 4390 | 4820 | 8700 |

| DIM | ENSIONS | | 1301-1 | 1701-1 | 2802-1 | 3502-1 | 4103-1 | 4403-1 | 4904-1 | 2802-2 | 3502-2 | 4904-2 |
|-----|---------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | STD/MC | mm | 4000 | 5000 | 6200 | 7200 | 8400 | 10050 | 11700 | 6200 | 7200 | 11700 |
| W | STD/MC | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD/MC | mm | 2100 | 2100 | 2100 | 2100 | 2500 | 2500 | 2500 | 2100 | 2100 | 2500 |

CLEARANCE AREA

CHA/TTH 1301-1÷4904-2

500 1800 1000 1800



NOTES

- 1.
- Chilled water from 12 to 7 °C, ambient air temperature 35 °C. Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744. 2.
- N.B. Data of MC version are specified on technical brochure.



FROM 279 KW TO 1386 KW.



CHA/TTH/FC 1301-1+4904-2

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGER.



The innovative CHA/TTH/FC 1301-1 ÷4904-2 TURBOLINE units, with HFO-R1234ze refrigerant and FREE-COOLING technology, are designed to provide an effective solution to installation requirements of large areas, both commercial and industrial, where the production of chilled water is required in continuous service throughout the year. The latest generation refrigerant HFO-R1234ze, with GWP<1 (Global Warming Potential), is the most environmentally sustainable refrigerant on the market, and meets the strictest international environmental regulations. Furthermore, thanks to Turbocor compressors, the units perform with top efficiency at partial loads, low inrush currents, an excellent silent functioning and reduced weight. The unit, designed with specific attention to every aspect of construction and combined with the use of TURBOCOR dynamic partialization oil-free magnetic levitation compressors - managed by the TURBOSOFT self-adaptive electronic control - and with the use of flooded shell & tube evaporator, achieves a high rate of energy efficiency, with unequalled ESEER/IPLV values, without using accumulation tank and has an excellent silent functioning. Depending on outside air temperature, the microprocessor controller manages the functioning in CHILLER, FREE-COOLING or MIXED (both CHILLER and FREE-COOLING) mode. The units are also equipped with a WEB MONITORING system for the monitoring and remote management of the units through the communication protocol GPRS/EDGE/3G/TCP-IP. Users enabled to the use of this service can, by using a specific webpage, have access to the Monitoring, Managing and Statistics activities.



FREE COOLING

HFO R1234ze 🖾

VERSION

CHA/TTH/FC

Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Axial fans directly coupled to an electric motor with external rotor.
- · Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- High efficiency flooded shell and tube type evaporator, with one or two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- HFO-R1234ze refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors and thermocontacts for the fans, interface relay and terminals for external connections.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/ EDGE/3G/TCP-IP network.

BACnet TCP/IP protocol, Ethernet

LonWorks protocol, FFT-10 serial

Remote set-point, 0-10 V signal

Remote set-point, 4-20 mA signal

Remote signal for second set-point

ACCESSORIES

FACTORY FITTED ACCESSORIES

- IM Automatic circuit breakers
- EC EC Inverter fans
- HRT/P Total heat recovery in parallel
- TX Coil with pre-coated fins
- PUSingle circulating pumpPDDouble circulating pump
- TS Touch screen interface
- ISB BACnet MSTP protocol, RS485 serial interface
- activation IDL Demand limit from digital input
- CP Potential free contacts

port

interface

ISBT

ISL

IAV

IAA

IAS

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers
- FL Flow switch



CHA/TTH/FC 1301-1÷4904-2



| MODEL | | | 1301-1 | 1701-1 | 2802-1 | 3502-1 | 4103-1 | 4403-1 | 4904-1 | 2802-2 | 3502-2 | 4904-2 |
|--------------------|-----------------------------------|---------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| | Cooling capacity (1) | kW | 279 | 348 | 554 | 698 | 837 | 1040 | 1386 | 554 | 698 | 1386 |
| Cooling | Absorbed power (1) | kW | 75 | 95 | 160 | 193 | 242 | 283 | 387 | 160 | 193 | 387 |
| | EER (1) | | 3.72 | 3.66 | 3.46 | 3.62 | 3.46 | 3.67 | 3.58 | 3.46 | 3.62 | 3.58 |
| Free Cooling avela | Air temperature (2) | °C | 3.0 | 2.5 | 1.5 | -1.0 | 0.0 | 0.5 | -1.0 | 1.5 | -1.0 | -1.0 |
| Free-cooling cycle | Absorbed power (2) | kW | 10.8 | 14.4 | 21.6 | 21.6 | 25.2 | 32.4 | 36.0 | 21.6 | 21.6 | 36.0 |
| | Quantity | n° | 1 | 1 | 2 | 2 | 3 | 3 | 4 | 2 | 2 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 |
| | Capacity steps | n° | | | | | Step | less | | | | |
| | Water flow | l/s | 14.42 | 17.98 | 28.63 | 36.07 | 43.26 | 53.75 | 71.63 | 28.63 | 36.07 | 71.63 |
| Water circuit | Pressure drops | kPa | 88 | 103 | 78 | 94 | 101 | 142 | 253 | 78 | 94 | 253 |
| | Water connections | DN | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 125 | 125 | 150 |
| Floctrical | Power supply | V/Ph/Hz | | | | | 400/ | 3/50 | | | | |
| charactoristics | Max. running current | A | 173 | 181 | 347 | 347 | 505 | 520 | 678 | 347 | 347 | 678 |
| | Max. starting current | A | 25 | 33 | 199 | 199 | 357 | 372 | 530 | 199 | 199 | 530 |
| Unit with pump | Pump available static pressure | kPa | 140 | 125 | 110 | 180 | 150 | 150 | 160 | 110 | 180 | 160 |
| | Water connections | DN | 100 | 100 | 150 | 150 | 150 | 150 | 200 | 150 | 150 | 200 |
| Sound pressure | STD version (3) | dB(A) | 69 | 70 | 71 | 71 | 71 | 71 | 72 | 71 | 71 | 72 |
| Woighte | Transport weight | Kg | 3620 | 3730 | 5560 | 5640 | 7890 | 8910 | 10800 | 5740 | 5820 | 11000 |
| vveignita | Operating weight | Kg | 3900 | 4030 | 6040 | 6160 | 8610 | 9810 | 11840 | 6220 | 6340 | 12040 |

| DIME | NSIONS | | 1301-1 | 1701-1 | 2802-1 | 3502-1 | 4103-1 | 4403-1 | 4904-1 | 2802-2 | 3502-2 | 4904-2 |
|------|--------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | STD | mm | 5000 | 5000 | 7200 | 7200 | 8400 | 10050 | 11700 | 7200 | 7200 | 11700 |
| W | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| H | STD | mm | 2360 | 2360 | 2360 | 2360 | 2750 | 2750 | 2750 | 2360 | 2360 | 2750 |

CLEARANCE AREA

CHA/TTH/FC 1301-1÷4904-2

500 1800 1000 1800



NOTES

- 1.
- Chilled water (with ethylene glycol at 30%) from 15 to 10 °C, ambient air temperature 35 °C. Ambient air temperature at wich the cooling capacity indicated in point (1) is reached. Sound pressure level measured in free field 2. 3.
- conditions at 1 m from the unit. According to ISO 3744.



FROM 248 KW TO 1456 KW.



CHA/TTY 1301-1÷5004-2

A CLASS ENERGY EFFICIENCY AIRCOOLED LIQUID CHILLERS WITH AXIAL FANS, TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGER.



The innovative CHA/TTY 1301-1 ÷ 5004-2 TURBOLINE units, with R134a refrigerant, are designed to provide an effective solution to highly selective system needs. Efficiency at partial loads, low inrush currents, an excellent silent functioning, reduced weight and the specific design and handling of every manufacturing aspect make the TURBOLINE series the top unit of the range.

The use of TURBOCOR dynamic partial-load oil-free magnetic levitation compressors managed by the TURBOSOFT self-adaptive electronic control, of shell tube evaporator and innovative heat exchangers, traditional or Microchannel, results in a high energy efficiency with unequalled ESEER/IPLV values, in the elimination of accumulation tanks and in an excellent silent functioning. Compared to traditional units, equipped with Screw compressors, TURBOLINE units have low operational costs during their entire operating period, even lower than 50%. Besides, the units are equipped with a WEB MONITORING system for the monitoring and remote management of the units through the GPRS/ EDGE/3G/TCP-IP communication protocol. Users enabled to the use of this service can, by using a specific webpage, have access to the Monitoring, Managing and Statistics activities.



MICROCHANNEL B

VERSION

CHA/TTY

Cooling only

CHA/TTY/MC

Cooling only with MICROCHANNEL coils

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of two copper tube and aluminum finned coils or aluminium MICROCHANNEL coils.
- High efficiency flooded shell and tube type evaporator, with one or two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- · Electronic thermostatic valve.
- Digital high and low pressure gauges. ٠
- R134a refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors and thermocontacts for the fans, interface relay and terminals for external connections.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/ EDGE/3G/TCP-IP network.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| IM | Automatic circuit breakers |
|-------|---------------------------------|
| EC | EC Inverter fans |
| HR | Desuperheater |
| HRT/S | Total heat recovery in series |
| HRT/P | Total heat recovery in parallel |
| TX | Coil with pre-coated fins |
| TXB | Coil with epoxy treatment |
| PU | Single circulating pump |
| PD | Double circulating pump |



- FE Antifreeze heater for evaporator FΖ Antifreeze heater for evaporator,
- single pump and pipes
- FH Antifreeze heater for evaporator, double pump and pipes
- Touch screen interface ΤS
- BACnet MSTP protocol, RS485 ISB serial interface
- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal

- IAA Remote set-point, 4-20 mA signal
- IAS Remote signal for second set-point activation
- IDI Demand limit from digital input
- СΡ Potential free contacts

- MN High and low pressure gauges
- CR Remote control panel
- RP Coil protection metallic guards
- AG Rubber shock absorbers
- AM Spring shock absorbers FL
 - Flow switch

CHA/TTY 1301-1÷5004-2





| MODEL | | | 1301-1 | 1401-1 | 1701-1 | 2201-1 | 2601-1 | 3302-1 | 4002-1 | 4302-1 | 4603-1 |
|---|---|--|--|---|---|--|---|--|--|---|--|
| | Cooling capacity (1) | kW | 248 | 282 | 335 | 403 | 509 | 627 | 770 | 929 | 1075 |
| Cooling STD version | Absorbed power (1) | kW | 73 | 81 | 97 | 116 | 150 | 185 | 221 | 274 | 311 |
| cooling or b version | FER (1) | | 3 40 | 3 48 | 3 45 | 3 47 | 3 39 | 3 39 | 3 48 | 3 39 | 3 46 |
| | Cooling capacity (1) | kW | 247 | 281 | 334 | 402 | 507 | 624 | 767 | 925 | 1072 |
| | Absorbed power (1) | kW | 74 | 82 | 98 | 117 | 152 | 188 | 224 | 278 | 315 |
| Cooling STD version | FEB (1) | | 3.32 | 3.43 | 3 40 | 3 42 | 3.34 | 3.33 | 3 43 | 3.32 | 3 41 |
| (EN14511) | ESEEB | | 4 74 | 4 47 | 4 57 | 4.69 | 4 69 | 4 50 | 4 72 | 4 51 | 4.81 |
| | EUBOVENT Class | | Δ | Δ | Δ | 4.00 | 4.00 | 4.00 | Δ | Δ | Δ |
| | Cooling capacity (1) | <i>k</i> \// | 2/18 | 282 | 335 | ///3 | 509 | 627 | 770 | 929 | 1075 |
| Cooling MC version | Absorbed power (1) | kW | 6/ | 73 | 86 | 106 | 133 | 163 | 198 | 2/13 | 281 |
| | FER | K V V | 3.88 | 3.86 | 3 90 | 3.80 | 3.83 | 3.85 | 3.89 | 3.82 | 3.83 |
| | Cooling capacity (1) | kW | 248 | 282 | 335 | 403 | 509 | 627 | 770 | 929 | 1075 |
| | Absorbed power (1) | kW | 6/ | 73 | 86 | 106 | 133 | 163 | 198 | 2/13 | 281 |
| Cooling MC version | FEB (1) | K V V | 2.09 | 3.86 | 3 00 | 3.80 | 3.83 | 3.85 | 3.80 | 2,92 | 201 |
| (EN14511) | ESEEB | | / 79 | 1.96 | 5.30 | 5 20 | 5.00 | 5.03 | 5.05 | 5.02 | 5 33 |
| | | | Δ | 4.30 | Δ | Δ | Δ | Δ | Δ | Δ | Δ |
| | Quantity | n° | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 |
| Compressor | Befrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| Compressor | Canacity stops | n° | I | | 1 | | Stoplace | | | | |
| | Water flow | 1/e | 11.95 | 13/17 | 16.01 | 10.25 | 2/ 32 | 20.06 | 36.70 | 1/1 20 | 51.36 |
| Evaporator | Prossure drops | 1/3 kPo | 64 | /0 | 10.01 | 25 | 11 | 56 | 16 | 60 | 16 |
| Evaporator | Water connections | | 100 | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 150 |
| | Power supply | V/Ph/Hz | 100 | 100 | 100 | 120 | 120 | 100 | 100 | 100 | 100 |
| Electrical characteristics | Max rupping current | Λ | 160 | 160 | 160 | 262 | 270 | 227 | 500 | 517 | 762 |
| | Max starting current | A | 25 | 25 | 25 | 202 | /1 | 10/ | 280 | 288 | 53/ |
| | Pump available static prossure | kPo | 121 | 105 | 20 | 200 | 106 | 154 | 200 | 1/2 | 210 |
| Unit with pump | Water connections | | 100 | 100 | 100 | 125 | 125 | 150 | 150 | 142 | 150 |
| | STD version (2) | | 60 | 60 | 60 | 60 | 70 | 70 | 70 | 60 | 70 |
| Sound pressure | MC version (2) | | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 | 60 |
| | Transport weight | UD(A) Ka | 2440 | 2440 | 2770 | 2700 | 3500 | 4020 | 4055 | 5710 | 6460 |
| Weights | Operating weight | Kg | 2510 | 2440 | 2000 | 2020 | 2720 | 4020 | 4000 | 5010 | 00+00 |
| | | ку | 2010 | 2010 | 2300 | 2520 | 3730 | 4170 | 4220 | 1 3310 | 0000 |
| | | | | | | | | | | | |
| MODEL | | | 4004.4 | 5004.4 | 0000 0 | 0000 0 | 40.00.0 | 4000.0 | 4004.0 | 4004.0 | 5004.0 |
| MODEL | | | 4804-1 | 5004-1 | 2602-2 | 3302-2 | 4002-2 | 4302-2 | 4604-2 | 4804-2 | 5004-2 |
| MODEL | Cooling capacity (1) | kW | 4804-1 1260 | 5004-1 1456 | 2602-2 509 | 3302-2 627 | 4002-2 770 | 4302-2 929 | 4604-2 1075 | 4804-2 1260 | 5004-2 1456 |
| MODEL Cooling STD version | Cooling capacity (1) Absorbed power (1) | kW kW | 4804-1 1260 362 | 5004-1 1456 433 | 2602-2 509 145 | 3302-2 627 185 | 4002-2 770 221 | 4302-2 929 274 | 4604-2 1075 309 | 4804-2 1260 362 | 5004-2 1456 433 |
| MODEL Cooling STD version | Cooling capacity (1) Absorbed power (1) EER (1) | kW kW | 4804-1 1260 362 3.48 | 5004-1 1456 433 3.36 | 2602-2 509 145 3.51 | 3302-2 627 185 3.39 | 4002-2 770 221 3.48 | 4302-2 929 274 3.39 | 4604-2 1075 309 3.48 | 4804-2 1260 362 3.48 | 5004-2 1456 433 3.36 |
| MODEL Cooling STD version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) | kW kW kW | 4804-1 1260 362 3.48 1256 | 5004-1 1456 433 3.36 1450 | 2602-2 509 145 3.51 507 | 3302-2 627 185 3.39 624 | 4002-2 770 221 3.48 767 | 4302-2 929 274 3.39 925 | 4604-2 1075 309 3.48 1072 | 4804-2 1260 362 3.48 1256 | 5004-2 1456 433 3.36 1450 |
| MODEL Cooling STD version Cooling STD version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 | 5004-1 1456 433 3.36 1450 439 | 2602-2 509 145 3.51 507 147 | 3302-2 627 185 3.39 624 188 | 4002-2 770 221 3.48 767 224 | 4302-2 929 274 3.39 925 278 | 4604-2 1075 309 3.48 1072 312 | 4804-2 1260 362 3.48 1256 366 | 5004-2 1456 433 3.36 1450 439 |
| Cooling STD version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 | 5004-1 1456 433 3.36 1450 439 3.31 | 2602-2 509 145 3.51 507 147 3.46 | 3302-2 627 185 3.39 624 188 3.33 | 4002-2 770 221 3.48 767 224 3.43 | 4302-2 929 274 3.39 925 278 3.32 | 4604-2 1075 309 3.48 1072 312 3.43 | 4804-2 1260 362 3.48 1256 366 3.43 | 5004-2 1456 433 3.36 1450 439 3.31 |
| MODEL Cooling STD version Cooling STD version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 | 2602-2 509 145 3.51 507 147 3.46 4.35 | 3302-2 627 185 3.39 624 188 3.33 4.33 | 4002-2 770 221 3.48 767 224 3.43 4.43 | 4302-2 929 274 3.39 925 278 3.32 4.61 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 |
| MODEL Cooling STD version Cooling STD version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A | 2602-2 509 145 3.51 507 147 3.46 4.35 A | 3302-2 627 185 3.39 624 188 3.33 4.33 A | 4002-2 770 221 3.48 767 224 3.43 4.43 A | 4302-2 929 274 3.39 925 278 3.32 4.61 A | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A |
| MODEL Cooling STD version Cooling STD version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) | kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A A 1456 381 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 4.35 A 509 132 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER | kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 4.35 A 509 132 3.86 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Cooling capacity (1) | kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 770 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) | kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 163 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 770 198 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) EVER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER (1) | kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 163 3.85 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 |
| MODEL Cooling STD version (EN14511) Cooling MC version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) EUROVENT Class Cooling capacity (1) Absorbed power (1) EER EER EER EER | kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 | 2602-2 509 145 3.51 507 3.46 4.35 A 4.35 A 509 132 3.86 509 132 3.86 509 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 770 198 3.89 770 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 |
| MODEL Cooling STD version (EN14511) Cooling MC version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) ESEER EUROVENT Class | kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 3.63 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 4.79 A | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 4.93 A | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER EVROVENT Class Ouentity | kW kW kW kW kW kW kW | 4804-1 1260 362 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A A | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.41 A 4 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 4.79 A 2 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A A 2 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 2 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 A 4 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER EUROVENT Class Quantity Refrigerant circuits | kW kW kW kW kW kW kW | 4804-1 1260 362 3.43 1256 3.66 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4.90 A 1 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 3.82 1456 14 14 14 14 14 14 14 14 14 14 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 4.79 A 2 2 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A A 2 2 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A A 2 2 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 2 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 4 2 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 A 4 2 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Coopressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cuantity Refrigerant circuits Capacity steps | kW kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4 1 1 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 1 1 1 1 1 1 1 1 1 1 1 1 1 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 4.87 A 2 2 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A A 2 2 2 Stepless | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 4 2 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 2 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 A 4 2 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Counity Refrigerant circuits Capacity steps Water flow | kW kW kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4 1 1 60.20 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 2 4.32 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 9.96 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 2 5 8 9 4.93 A 2 2 5 5 tepless 36.79 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 5 1.36 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 9 60.20 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 5.30 A 6 9.56 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Coundity EVEROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops | kW kW kW kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 50 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.41 A 4 1 69.56 59 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 2 4 4 | 3302-2 627 185 3.39 624 188 3.33 4.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 9.96 56 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 2 8 3.89 770 2 5 8 9 4.93 A 4 9 4 6 7 9 46 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 51.36 41 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 9 60.20 50 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 5.30 A 5.30 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections | kW kW kW kW kW kW kW kW kW kW kW | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 3.28 3.84 190 5.28 3.84 100 3.28 3.84 100 3.28 3.84 100 3.80 100 100 100 100 100 100 100 1 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 59 200 | 2602-2 509 145 3.51 507 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 2 4 4 125 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 2 9.96 56 150 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A 2 2 Stepless 36.79 46 150 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 | 4604-2 1075 309 3.48 1072 3.12 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 51.36 41 150 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 A 4.92 A 4.92 A 60.20 50 200 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 A 4 4 2 69.56 59 200 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER UROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply | kW kW kW kW kW kW kW kW kW kW kW kW kW | 4804-1 1260 362 3.43 1256 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A A 4 1 60.20 50 200 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 59 200 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 4.79 A 2 2 2 4 4 125 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 4.87 A 2 29.96 56 150 | 4002-2 770 221 3.48 767 224 3.43 4.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A 2 2 Stepless 36.79 46 150 400/3/50 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 4 2 51.36 41 150 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 A 4 2 60.20 50 200 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version (EN14511) Compressor Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Uounity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 3.66 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A 4 1 60.20 50 200 658 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.41 A 4 1 69.56 59 200 1002 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 4.79 A 2 2 4 4 2 2 4 4 125 329 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 627 163 150 337 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 4.93 A 2 2 2 Stepless 36.79 46 150 400/3/50 509 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 2 2 44.39 68 150 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 2 51.36 41 150 650 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 A 4 2 60.20 50 200 658 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 1002 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Cooling MC version Cooling MC version Evaporator Electrical characteristics | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER Cuantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current | kW kW kW kW kW kW kW kW kW kW kW kV kV kV kV kV kV kV kV kV kV kV | 4804-1 1260 362 3.48 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4.90 A 4 1 60.20 50 200 658 515 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 1 69.56 59 200 1002 773 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 4 4 125 329 186 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 4.87 A 2 29.96 56 150 337 194 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 3.89 70 198 70 198 70 198 70 198 70 20 20 20 20 20 20 20 20 20 20 20 20 20 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 517 288 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 2 51.36 41 150 650 507 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 4.92 A 4.92 A 4.92 60.20 50 200 658 515 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 A 4 4 2 69.56 59 200 1002 773 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator Electrical characteristics Unit with ave | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Couling capacity (1) Absorbed power (1) EER Uantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4 1 60.20 50 200 658 515 255 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 59 200 1002 773 220 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 4 4 125 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 2 9.96 56 150 337 194 159 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 70 198 3.89 70 2 2 2 3 3 6.79 46 150 2 2 2 3 3 6.79 46 150 2 2 2 3 3 80 2 2 2 3 3 2 2 2 3 3 2 2 2 3 3 2 2 2 2 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 517 288 142 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 2 51.36 41 150 650 507 210 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 4 2 60.20 50 200 658 515 255 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 1002 773 220 |
| MODEL Cooling STD version Cooling STD version Cooling MC version Cooling MC version Cooling MC version Compressor Evaporator Electrical characteristics Unit with pump | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Colling capacity (1) Absorbed power (1) EER Colling capacity (1) Absorbed power (1) EER Uantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 4.90 A 4 4 1 60.20 50 200 658 515 255 200 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 59 200 1002 773 220 200 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 4 4 125 329 186 196 125 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 2 9.96 56 150 337 194 159 150 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 7.0 198 3.89 7.0 198 3.89 4.93 A 2 2 Stepless 36.79 46 150 400/3/50 509 280 204 150 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 517 288 142 150 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 4 2 51.36 41 150 | 4804-2 1260 362 3.48 1256 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4.92 A 4 9 60.20 50 200 658 515 255 200 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 1002 773 220 200 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound person | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Uantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Max. starting current Pump available static pressure Water connections STD version (2) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 366 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A 4 1 60.20 50 200 658 515 255 200 71 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.41 A 4 4 1 69.56 59 200 71 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 4.79 A 2 2 3.86 4.79 A 2 2 4 4 125 329 186 125 70 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 2 9.96 56 150 337 194 159 150 70 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 280 46 150 400/3/50 509 280 204 150 70 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 2 3.82 5.16 A 2 2 44.39 68 150 517 288 142 150 69 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 51.36 41 150 507 210 150 70 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4 4 2 60.20 50 200 71 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 71 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Cooling MC version Cooling MC version Evaporator Electrical characteristics Unit with pump Sound pressure | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) ESER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER UROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Pump available static pressure Water connections STD version (2) MC version (2) | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 328 3.84 1260 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 328 3.84 1250 3.85 50 200 200 200 200 200 200 200 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 1 69.56 59 200 1002 773 220 200 200 71 70 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 4.79 A 2 3.86 4.79 A 2 2 44 125 329 186 196 196 125 70 69 | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 9.96 56 150 337 194 159 150 70 69 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A 2 2 Stepless 36.79 46 150 400/3/50 509 280 204 150 70 69 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 517 288 150 517 288 142 150 69 68 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 1075 279 3.85 4.57 A 4 51.36 41 150 507 210 150 70 69 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4.92 A 4 2 60.20 50 200 658 515 255 200 71 70 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 5.30 A 4 4 2 69.56 59 200 773 220 200 71 70 |
| MODEL Cooling STD version Cooling STD version (EN14511) Cooling MC version Cooling MC version (EN14511) Compressor Evaporator Electrical characteristics Unit with pump Sound pressure Mainbac | Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) EER (1) Cooling capacity (1) Absorbed power (1) ESEER EUROVENT Class Cooling capacity (1) Absorbed power (1) EER Cooling capacity (1) Absorbed power (1) EER EUROVENT Class Quantity Refrigerant circuits Capacity steps Water flow Pressure drops Water connections Power supply Max. running current Max. starting current Max. starting current Pump available static pressure Water connections STD version (2) Transport weight | kW kW kW kW kW kW kW kW kW kW kW kW kW k | 4804-1 1260 362 3.43 1256 3.66 3.43 4.44 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.90 A 4 1 60.20 50 200 50 200 50 205 205 205 | 5004-1 1456 433 3.36 1450 439 3.31 4.78 A 1456 381 3.82 1456 381 3.82 5.41 A 4 1 69.56 59 200 1002 773 220 200 71 70 7640 | 2602-2 509 145 3.51 507 147 3.46 4.35 A 509 132 3.86 509 132 3.86 509 132 3.86 509 132 2.4.32 4.79 A 2 2 4.4 125 - - - - - - - - - - - - - | 3302-2 627 185 3.39 624 188 3.33 4.33 A 627 163 3.85 627 163 3.85 627 163 3.85 4.87 A 2 2 29.96 56 150 337 194 159 150 70 69 4250 | 4002-2 770 221 3.48 767 224 3.43 4.43 A 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 770 198 3.89 4.93 A 2 2 Stepless 36.79 46 150 400/3/50 509 280 204 150 70 69 4270 | 4302-2 929 274 3.39 925 278 3.32 4.61 A 929 243 3.82 929 243 3.82 929 243 3.82 5.16 A 2 2 44.39 68 150 517 288 142 150 69 68 5820 | 4604-2 1075 309 3.48 1072 312 3.43 4.15 A 1075 279 3.85 1075 279 3.85 4.57 A 4 2 51.36 41 150 650 507 210 150 70 69 6690 | 4804-2 1260 362 3.48 1256 366 3.43 4.46 A 1260 328 3.84 1260 328 3.84 1260 328 3.84 4.92 A 4.92 A 4.92 60.20 50 200 658 515 255 200 71 70 7570 | 5004-2 1456 433 3.36 1450 439 3.31 4.70 A 1456 381 3.82 1456 381 3.82 1456 381 3.82 5.30 A 4 2 69.56 59 200 773 220 200 71 70 7850 |

 DIMENSIONS
 1301-1
 1401-1
 1701-1
 2201-1
 2601-1
 3302-1
 4603-1
 4804-1
 5004-1
 2602-2
 3302-2
 4603-2
 4804-2
 5004-2

 L
 STD/MC
 mm
 4000
 4000
 5000
 6200
 7200
 7200
 8400
 10050
 11100
 11100
 6200
 7200
 8400
 10050
 11100

 W
 STD/MC
 mm
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200
 2200

CLEARANCE AREA

CHA/TTY 1301-1÷5004-2

500 1800 1000 1800



NOTES

Chilled water from 12 to 7 °C, ambient air temperature 35 °C.
 Sound pressure level measured in free field conditions at 1 m from the unit According

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

N.B. Data of MC version are specified on technical brochure.



FROM 246 KW TO 1443 KW.



CHA/TTY/FC 1301-1+5004-2

AIRCOOLED LIQUID CHILLERS FREE-COOLING WITH AXIAL FANS, TURBOCOR (MAGNETIC LEVITATION) COMPRESSORS AND FLOODED SHELL AND TUBE EXCHANGER.



The innovative CHA/TTY/FC 1301-1÷5004-2 **TURBOLINE** units, with R134a refrigerant and **FREE-COOLING** technology, are designed to provide an effective solution to installation requirements of large areas, both commercial and industrial, where the production of chilled water is required in continuous service throughout the year. The unit, designed with specific attention to every aspect of construction and combined with the use of TURBOCOR dynamic partialization oil-free magnetic levitation compressors - managed by the TURBOSOFT self-adaptive electronic control - and with the use of flooded shell & tube evaporator, achieves a high rate of energy efficiency, with unequalled ESEER/IPLV values, without using accumulation tank and has an excellent silent functioning. Depending on outside air temperature, the microprocessor controller manages the functioning in CHILLER, FREE-COOLING or MIXED (both CHILLER and FREE-COOLING) mode. The units are also equipped with a WEB MONITORING system for the monitoring and remote management of the units through the communication protocol GPRS/EDGE/3G/TCP-IP. Users enabled to the use of this service can, by using a specific webpage, have access to the Monitoring, Managing and Statistics activities.



FREE COOLING

VERSION

CHA/TTY/FC

Cooling only

FEATURES

- Self-supporting galvanized steel frame protected with polyester powder painting.
- Semi-hermetic centrifugal compressors with dual Turbocor turbine, oil free, magnetic rising rotor, thermal protection, flow and delivery tap, continuous capacity adjustment system thanks to built-in INVERTER, automatic anti-cavitation system. The power circuit of the compressor is fitted with a set of electrolytic condensers to control the rising in the event of a power failure, reactor for the power factor correction, EMI filter for electromagnetic compatibility.
- Axial fans directly coupled to an electric motor with external rotor.
- Condenser made of FREE-COOLING copper tube and aluminium finned coil.
- High efficiency flooded shell and tube type evaporator, with one or two independent circuits on the refrigerant side and one on the water side, complete with water differential pressure switch.
- Cooling circuit shut-off valves on suction, discharge and liquid line.
- Electronic thermostatic valve.
- Digital high and low pressure gauges.
- R134a refrigerant.
- Electrical board includes: main on-off switch with door lock, fuses, electronic/digital overload device to protect the compressors and thermocontacts for the fans, interface relay and terminals for external connections.
- Electronic proportional device to decrease the sound level, with a continuous regulation of the fan speed. This device also allows the cooling functioning of the unit by external temperature till -20°C.
- TURBOSOFT control and regulation system is fitted with RS485 serial interface and Web Monitoring device for remote monitoring via GPRS/ EDGE/3G/TCP-IP network.

ACCESSORIES

FACTORY FITTED ACCESSORIES

| FACTOR | f FITTED ACCESSURIES |
|--------|---------------------------------|
| IM | Automatic circuit breakers |
| EC | EC Inverter fans |
| HRT/P | Total heat recovery in parallel |
| TX | Coil with pre-coated fins |
| PU | Single circulating pump |
| PD | Double circulating pump |
| TS | Touch screen interface |
| ISB | BACnet MSTP protocol, RS485 |
| | serial interface |

- ISBT BACnet TCP/IP protocol, Ethernet port
- ISL LonWorks protocol, FFT-10 serial interface
- IAV Remote set-point, 0-10 V signal IAA Remote set-point, 4-20 mA signal
- IAA Remote set-point, 4-20 mA signal IAS Remote signal for second set-point
- activation IDL Demand limit from digital input
- CP Potential free contacts

- MN High and low pressure gauges
- CR Remote control panel
 - RP Coil protection metallic guards
- AG Rubber shock absorbers AM Spring shock absorbers
- FL Flow switch
 - Flow switch



CHA/TTY/FC 1301-1+5004-2



| MODEL | | | 1301-1 | 1401-1 | 1701-1 | 2201-1 | 2601-1 | 3302-1 | 4002-1 | 4302-1 | 4603-1 |
|--------------------|-----------------------------------|---------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
| | Cooling capacity (1) | kW | 246 | 281 | 333 | 400 | 495 | 588 | 696 | 869 | 1046 |
| Cooling | Absorbed power (1) | kW | 71 | 80 | 94 | 116 | 146 | 171 | 204 | 257 | 307 |
| | EER (1) | | 3.46 | 3.51 | 3.54 | 3.45 | 3.39 | 3.44 | 3.41 | 3.38 | 3.41 |
| Free Cooling avale | Air temperature (2) | 0° | -2.5 | 0.5 | -2.9 | 0.0 | -2.8 | -2.3 | -0.5 | -0.2 | 1.0 |
| Free-Cooling cycle | Absorbed power (2) | kW | 10.8 | 10.8 | 10.8 | 14.4 | 18.0 | 21.6 | 21.6 | 25.2 | 32.4 |
| | Quantity | n° | 1 | 1 | 1 | 1 | 1 | 2 | 2 | 2 | 3 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Capacity steps | n° | | | | | Stepless | | | | |
| | Water flow | l/s | 12.69 | 14.50 | 17.18 | 20.64 | 25.54 | 30.34 | 35.91 | 44.84 | 53.97 |
| Water circuit | Pressure drops | kPa | 92 | 97 | 88 | 105 | 115 | 155 | 125 | 144 | 220 |
| | Water connections | DN | 100 | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 150 |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/3/50 | | | | |
| characteristics | Max. running current | A | 168 | 168 | 168 | 262 | 270 | 337 | 509 | 517 | 763 |
| | Max. starting current | A | 25 | 25 | 25 | 33 | 41 | 194 | 280 | 288 | 534 |
| Unit with pump | Pump available static pressure | kPa | 160 | 185 | 170 | 115 | 150 | 155 | 165 | 135 | 155 |
| | Water connections | DN | 100 | 100 | 100 | 125 | 125 | 150 | 150 | 150 | 150 |
| Sound pressure | STD version (3) | dB(A) | 68 | 68 | 69 | 69 | 69 | 70 | 70 | 69 | 70 |
| Waighta | Transport weight | Kg | 3040 | 3200 | 3600 | 3700 | 4500 | 5150 | 5500 | 7700 | 8800 |
| vveigins | Operating weight | Kg | 3180 | 3360 | 3810 | 3930 | 4730 | 5400 | 5810 | 8080 | 9250 |

| MODEL | | | 4804-1 | 5004-1 | 2602-2 | 3302-2 | 4002-2 | 4302-2 | 4604-2 | 4804-2 | 5004-2 |
|--------------------|-----------------------------------|---------|--------|--------|--------|--------|----------|--------|--------|--------|--------|
| | Cooling capacity (1) | kW | 1229 | 1443 | 495 | 588 | 696 | 869 | 981 | 1229 | 1443 |
| Cooling | Absorbed power (1) | kW | 357 | 425 | 143 | 171 | 204 | 257 | 280 | 357 | 425 |
| - | EER (1) | | 3.44 | 3.40 | 3.46 | 3.44 | 3.41 | 3.38 | 3.50 | 3.44 | 3.40 |
| Free Cooling avale | Air temperature (2) | 0° | 1.0 | 1.0 | -2.8 | -2.3 | -0.5 | -0.2 | 1.5 | 1.0 | 1.0 |
| Free-Cooling cycle | Absorbed power (2) | kW | 36.0 | 36.0 | 18.0 | 21.6 | 21.6 | 25.2 | 32.4 | 36.0 | 36.0 |
| | Quantity | n° | 4 | 4 | 2 | 2 | 2 | 2 | 4 | 4 | 4 |
| Compressor | Refrigerant circuits | n° | 1 | 1 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| | Capacity steps | n° | | | | | Stepless | | | | |
| | Water flow | l/s | 63.42 | 74.46 | 25.54 | 30.34 | 35.91 | 44.84 | 50.62 | 63.42 | 74.46 |
| Water circuit | Pressure drops | kPa | 256 | 275 | 115 | 155 | 125 | 144 | 188 | 256 | 275 |
| | Water connections | DN | 200 | 200 | 125 | 150 | 150 | 150 | 150 | 200 | 200 |
| Flootrical | Power supply | V/Ph/Hz | | | | | 400/3/50 | | | | |
| characteristics | Max. running current | A | 658 | 1002 | 329 | 337 | 509 | 517 | 650 | 658 | 1002 |
| | Max. starting current | A | 515 | 773 | 186 | 194 | 280 | 288 | 507 | 515 | 773 |
| Unit with pump | Pump available static pressure | kPa | 190 | 125 | 150 | 155 | 165 | 135 | 190 | 190 | 125 |
| | Water connections | DN | 200 | 200 | 125 | 150 | 150 | 150 | 150 | 200 | 200 |
| Sound pressure | STD version (3) | dB(A) | 70 | 70 | 69 | 70 | 70 | 69 | 70 | 70 | 70 |
| Woights | Transport weight | Kg | 10000 | 10300 | 4700 | 5400 | 5700 | 7800 | 9100 | 10200 | 10500 |
| VVEIGILIS | Operating weight | Kg | 10480 | 10790 | 4930 | 5650 | 6010 | 8180 | 9550 | 10680 | 10990 |

| DIME | INSIONS | | 1301-1 | 1401-1 | 1701-1 | 2201-1 | 2601-1 | 3302-1 | 4002-1 | 4302-1 | 4603-1 | 4804-1 | 5004-1 | 2602-2 | 3302-2 | 4002-2 | 4302-2 | 4604-2 | 4804-2 | 5004-2 |
|------|---------|----|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| L | STD | mm | 4000 | 4000 | 5000 | 5000 | 6200 | 7200 | 7200 | 8400 | 10050 | 11100 | 11100 | 6200 | 7200 | 7200 | 8400 | 10050 | 11100 | 11100 |
| W | STD | mm | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 | 2200 |
| Н | STD | mm | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2360 | 2750 | 2750 | 2750 | 2750 | 2360 | 2360 | 2360 | 2750 | 2750 | 2750 | 2750 |

| CLEARANCE AREA | NOTES |
|--|---|
| CHA/TTY/FC 1301-1÷5004-2 500 1800 1000 1800 | Chilled water (with ethylene glycol at 30%) from 15 to 10 °C, ambient air temperature 35 °C. Ambient air temperature at wich the cooling |

 Ambient air temperature at wich the cooling capacity indicated in point (1) is reached.
 Sound pressure level measured in free field conditions at 1 m from the unit. According to ISO 3744.



